## HOUSING LOANS BY BANKS IN KERALA AND THE ASSURANCE ASPECT OF SERVICE QUALITY: HOUSING FINANCE STRATEGIES FOR THE BANKS IN THE DIGITAL ERA

## Dr. Firos Khan<sup>1</sup>, Dr. Shino P Jose<sup>2</sup>, Dr. Biju Joseph<sup>3</sup>, Jisha P V <sup>4</sup> and Dr. Manoj P K <sup>5</sup>

 <sup>1</sup> Vice Principal, Oriental School of Hotel Management Lakkidi, Wayanad District, Kerala, India. ORCID ID: 0009-0003-3822-6291.
 <sup>2</sup> Assistant Professor, Department of Management Studies St. Pius X College,

Kasaragod, Kerala. ORCID ID: 0000-0003-3780-8372.

<sup>3</sup> Head, Department of Management Studies St. Pius X College, Kasaragod, Kerala. ORCID ID: 0009-0000-1187-8888

 <sup>4</sup> Assistant Professor, Department of Commerce Nehru Arts and Science College, Kanhangad, Kasaragod, Kerala, India. ORCID ID: 0009-0006-6892-3121.
 <sup>5</sup> Professor and Head, Department of Applied Economics CUSAT, Kochi, Kerala, India. ORCID ID: 0000-0002-5710-1086. (\*Corresponding Author)

#### DOI: 10.5281/zenodo.10730999

#### Abstract

Housing finance is considered to be the key driver of the credit portfolio of the commercial banks. The high asset quality as evidenced by the very low default rates and also the very high demand make housing loans the most attractive product of the banks in India. There is always the support from the Government and also the regulatory bodies like the National Housing Bank (NHB) and the Reserve Bank of India (RBI) for housing finance. Actually, ensuring housing facilities for all Indians is a national goal of the Government of India. These positive features, however, create fierce competition in the housing finance market. In this context, this paper makes an empirical study of the service quality of housing finance business of banks in Kerala with a focus on the Assurance aspect; and it offers competitive strategies too, duly considering the market realities.

Keywords: Mortgage to GDP Ratio, Linkages, ICT, AI, Digital Kerala, JAM, Mobile Banking.

#### 1. INTRODUCTION

Housing being an essential pre-requisite for life, housing finance is a priority area for any Government across the world. In India too, the successive Governments, both at the Union and State levels, have been encouraging housing finance in a big way in the form huge budget outlays, including various concessions and subsidies for the providers and beneficiaries of housing finance. In the current scenario, the commercial banks (CBs) denote the largest institutional group in the housing finance market in India. The next largest institutional group is the housing finance companies (HFCs). These two groups, CBs and HFCs, together constitute virtually the whole of the organized housing finance market in India; their market shares being roughly 2/3<sup>rd</sup> and 1/3<sup>rd</sup> respectively.

Housing finance is considered to be the key driver of credit portfolio of CBs, and it is also the most prominent component within the retail credit type of bank credit. The high asset quality of housing loans as evidenced by the very low default rates as well as their high demand make housing loans very attractive for the banks. There is always the support from the Government and the regulatory bodies like the National Housing Bank (NHB) and the Reserve Bank of India (RBI), for the housing advances – a top priority for all. These positive features however attract fierce competition in the housing market among the major players including banks, and also within the banks

themselves. In the above context, this paper makes an empirical study of the service quality of the housing finance business offered by the banks in Kerala with a focus on the Assurance aspect, and accordingly suggests competitive strategies that can attract more housing loan business.

#### 2. RELEVANCE AND SIGNIFICANCE

Housing finance seeks to provide one of the basic requisites of human life viz. shelter. So, housing, and so also housing finance (including the providers of housing finance, like, CBs and HFCs) are the Governmental priorities, both at the Central and State levels. Given the intense competition in the housing finance market because of the attractiveness of this market, there is a need to make oneself competitive in the market as a provider of housing finance. Hence, an analysis of the service quality of the players (like, CBs) can reveal as to what the customers really require. This paper seeks to make an analysis of the service quality with reference to CBs in Kerala. ICT has given another dimension to the issue of service quality. The 'Assurance' aspect of service quality is focused in this paper.

#### 3. OBJECTIVES OF THE STUDY AND RESEARCH DESIGN

- To study the service quality in respect of the housing finance business provided by commercial banks in Kerala with a focus on the 'Assurance' aspect service quality;
- (ii) To identify the factors significantly affecting service quality from an Assurance perspective, based on the empirical data collected through a field study in Kerala;
- (iii) To study the impact of ICT on banking, especially on the housing finance business;
- (iv) To suggest strategies for better competitiveness of the housing finance business of banks based on the current market scenario and also findings of the empirical study.

Structured into a descriptive-analytical and exploratory study, this paper relied heavily on empirical data collected from a field study in Kerala among housing loan customers of the banks in the State. Also, authentic secondary data from sources like the reports of the Govt. of India, RBI, NHB and reports of reputed agencies like, JLL, Mc Kinsey etc. The sample home loan customers were chosen from the four Kerala-based OPBs:

- (1) Federal Bank,
- (2) South Indian Bank,
- (3) Catholic Syrian Bank, and
- (4) Dhanalaxmi Bank.

These four OPBs were the leading OPBs functioning in India; all these being those registered in Kerala State.

Another four leading PSBs functioning at the national level having the highest amount of business in Kerala were chosen, viz.

- (i) State Bank of India,
- (ii) Canara Bank,
- (iii) Punjab National Bank, and
- (iv) Indian Bank.

Customers from these eight selected commercial banks (viz. four PSBs and four OPBs) were chosen randomly on a pro-rata basis based on their relative presence in terms of their banking business. A Multi-Stage Sampling method was used for this research. In the first stage the State of Kerala was divided into three geographical regions (viz. Northern, Central, and Southern). In the second stage, from each of these three geographical regions 200 customers each were selected. From these pro-rata number of customers of each of the eight sample banks were selected; total allocation to each region being 200; thus totalling 600 customers for Kerala as a whole. For assessing the 'Assurance' aspect of the service offered by the banks, seven constructs (AS1 to AS7) were used. (Table I). For detailed analysis Sequential Equation Modelling (SEM) (CFA method) was employed.

AS1	Feeling of Security
AS2	Assured Safety
AS3	Knowledgeable Employees
AS4	Kind and Polite
AS5	Trustworthy
AS6	Assured Execution Time
AS7	Grievance Redressal Time

#### Table I: The Seven Constructs to Measure Assurance

## 4. PREVIOUS STUDIES

Service quality aspect has been thoroughly studied in a very systematic manner by Parasuraman et. al. (1985) [1] whereby the authors have made an elaborate exploratory investigation of four service businesses and have suggested a conceptual model to give directions to future research in service quality. Angur et. al. (1999)[2] has done a service quality in the Indian context, a typical developing economy, and have noted that of the two models SERVQUAL and SERVPERF, the latter has got higher discriminant validity.

Shetty et. al. (2022)[3] have studied service quality of PSBs using a modified form of SERVQUAL. Several studies have noted ICT's key role in economic development, including growth of various segments of the economy, like, rural economy, women empowerment etc. The prospects of the ICT industry too were studied by some scholars. Manoj (2007)[16]"ICT industry in India: a SWOT analysis" *Journal of Global Economy* has done a macro level study of ICT industry in India and noted its vital significance in India's economic development, and has also suggested macro level strategies for its sustained growth. Pickens (2009)[17] has demonstrated as to how a common ICT gadget (mobile phone) could play a pivotal role in rural development and women empowerment in Philippines through 'banking the unbanked' i.e. financial inclusion. Manoj (2010)[18] "Impact of technology on the efficiency and risk management of old private sector banks in India: Evidence from banks based in

Kerala" has noted that ICT-adoption by banks could improve the banks' efficiency.

ICT's growing role in the banking, including housing finance, is also noted in two reports:

- (i) Banking,
- (ii) Real Estate,

of India Brand Equity Federation. (IBEF. 2023) [19]; thus ICT adoption has become an imperative in banking and healthcare sectors in India. Nasar and Manoj (2013)[20] "Customer satisfaction on service quality of real estate agencies: An empirical analysis with reference to Kochi Corporation Area of Kerala State in India" have noted that higher level awareness should be provided to real estate agents; and that transparency and social networking are needed for customer service and business growth. Manoj (2013)[21] "Prospects and Challenges of Green Buildings and Green Affordable Homes: A Study with Reference to Ernakulam, Kerala" has noted the good growth potential of green homes as they can create huge employment avenues and can ensure fast and sustained economic growth. Several studies have focused on the need for sustained economic growth through diverse kinds of interventions, models and tools; right from educational loans to exports and from SEZs to ecotourism. Varghese, K.X, and Manoj, P.K. (2013)[22], "Educational loans and the higher education sector in India" have noted that study loans can improve HR quality in the nation, youth employability and such loans need to be promoted. Manoi, P.K. (2015) [23]"International Container Transhipment Terminal (ICTT) and its impact on coffee exports from India: An analysis" has noted the key role that ICTT plays in exports and hence economic growth. While Manoj, PK (2009)[24], Special economic zones in India: financial inclusion: challenges and opportunities has noted the role of SEZs in faster economic growth, in another paper Manoj, P.K.(2017)[25]"Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism" the author has pointed out that meticulous planning using segmentation of tourists can lead to economic growth through ecotourism. Rajesh and Manoj (2015)[26]"Women Employees work life and challenges to Industrial Relations: Evidence from North Kerala" have observed vital significance in striking a balance between work and life by the women employees for healthier industrial relations.

Manoj (2016)[27]"Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala" has noted the huge capacity of tourism for employment avenues and suggested creation good ICT infrastructure and online services. Manoj (2016)[28] "Real Estate Investment Trusts (REITs) for Faster Housing Development in India: An Analysis in the Context of the New Regulatory Policies of SEBI" has noted financial innovations like REITs are crucial for the faster housing development in India and hence the rapid economic growth of India. Manoi (2016)[29] "Bank marketing in India in the current ICT era: Strategies for effective promotion of bank products" has noted the vital need for ICT-based marketing by Indian banks in this digital era. Lakshmi and Manoj (2017)[30] "Service quality in rural banking in north Kerala: A comparative study of Kannur district co-operative bank and Kerala Gramin bank" have noted better ICT-usage in Gramin bank could make its performance superior to that of a Co-operative bank. Lakshmi and Manoj (2017)[31] "Rural Customers and ICT-based Bank Products A Study with a Focus on Kannur District Co-operative Bank and Kerala Gramin Bank" have noted the better acceptance of ICTbased products of Kerala Gramin Bank (KGB) vis-à-vis KDCB's non-ICT products.

Joju, Vasantha, and Manoj (2017)[32] "Future of brick and mortar banking in Kerala: Relevance of branch banking in the digital era" have noted that even when ICT is imminent and so also virtual banking, there is a need for a 'human touch' in 'brick and mortar' banking. Joju, Vasantha, and Manoj (2017)[33] "Financial technology and service quality in banks: Some empirical evidence from the old private sector banks based in Kerala, India" have noted that financial technologies (fin-techs) can greatly improve service quality and are vital or success in modern days. Manoj (2017)[34] "Construction costs in affordable housing in Kerala: Relative significance of the various elements of costs of affordable housing projects" wherein cost elements are prioritised for selective cost control, ICT being an effective tool for the same. Manoj (2017)[35] "Cost management in the construction of affordable housing units in Kerala: A case study of the relevance of earned value analysis (EVA) approach" has proved EVA as an effective tool for managing construction costs.

Joju, Vasantha, and Manoj (2017)[36] "Electronic CRM & ICT-based banking services: An empirical study of the attitude of customers in Kerala, India" have pointed out vital relevance of electronic (ICT) enabled modern practice in banking viz. Electronic-CRM (e-CRM) for efficiency and competitiveness of the banks and also noted favourable customers' opinion towards such modern ICT-enabled products in their study. Another CRM study in the banking context Manoj (2018)[37] "CRM in old private sector banks and new generation private sector banks in Kerala: A comparison" points out that new private sector banks (NPBs) rank superior to the old private sector banks (OPBs) in adopting CRM especially in high-tech platforms (like, E-CRM) and hence NPBs have a better command among the customers by providing high-tech services. Manoj (2019)[38] "Social banking in India in the reforms era and the case of financial inclusion: Relevance of ICT-based policy options" makes suggestions on ICT-enabled policies to boost social control in banking in the ongoing ICT era. Manoj (2019)[39] "Dynamics of human resource management in banks in the ICT era: A study with a focus on Kerala based old private sector banks" has noted the need for ICT-based HRM policies for the competitiveness of banks.

Manoj (2019) [40] "Competitiveness of manufacturing industry in India: need for flexible manufacturing systems" has noted the need for adopting ICT and modern technologies like FMS (flexible manufacturing systems) for the better competitiveness for the manufacturing industry in India. Joju and Manoj (2019)[41]"Digital Kerala: A study of the ICT Initiatives in Kerala state" have analysed Kerala-based ICT initiatives- Kerala being the one with the highest internet penetration and universal literacy and have suggestions to best utilise ICT in Kerala for its fast growth. Joju and Manoj (2019)[42] "Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala" noted that as ICT in banks enhances quality and it needs to be promoted. Ali and Manoj (2020) [43] "Impact of Falling Price of Rubber-A Case Study of Kothamangalam Taluk in Ernakulam District" has pointed out that due to frequent price falls affect the livelihood of farmers and that governmental interventions like minimum support prices are vital. Manoj (2015)[44] "Prospects of Responsible Tourism in Kerala: Evidence from Kumarakam in Kottavam District" has noted that responsible tourism (RT) has vast potential for supporting economic growth, if sustainably promoted. Manoj (2016) [45] "Determinants of sustainability of rural tourism: a study of tourists at Kumbalangi in Kerala, India" has identified the key factors affecting the sustainability of rural tourism, and improving ICT infrastructure is one such factor. Manoj (2015)[46] "Impact of Rural Tourism on the Environment and

Society: Evidence from Kumbalangi in Kerala, India" has noted the definite adverse effects of rural tourism and the vital need to control such effects. Manoj (2019)[47] "Tourism Sector in Kerala in the Post-Flood Scenario: Strategies for its Sustainable Growth With a Focus on Responsible Tourism" has noted the key role of RT in reviving the flood-hit Kerala economy.

Famiyeh et. al. (2018) [48] "Service quality, customer satisfaction, and loyalty in the banking sector: The moderating role of organizational culture" has noted the significant positive influence of reliability, ambiance, and social factors on customer satisfaction; but assurance and responsiveness were noted not to have any significant association with customer satisfaction. It was also noted that organizational culture could strengthen the positive relation between the service quality dimensions and satisfaction of customers. Wang et. al. (2023)[49] "The Effects of Service Quality Performance on Customer Satisfaction for Non-Banking Financial Institutions in an Emerging Economy" have done a study of the relation between service-quality dimensions and customer satisfaction in Bangladesh context, and noted that four dimensions (assurance, tangibility, reliability, and responsiveness) significantly affect customer satisfaction. Karat et. al. (2022)[50]studied the disastrous impact of Corona virus-19, and its impact on the volatility of India's top pharma companies, and have noted that technical analysis is worthwhile for prudent investment decisions. Saritha and Manoj (2023) [51], "Social inequalities in IT sector: Evidence from Kerala State in India" *Environment and Social Psychology*, have noted that prevalence of inequality in Kerala's IT sector and the need to remove it for Kerala's faster and equitable economic growth.

Shino et. al. (2023)[52], Corporate Decisions and Stock Price Movements: The Case of HUL in India, *Migration Letters* have studied how HUL's corporate decisions affected the company's share prices. Manoj, P.K. (2015) [53] Housing Microfinance: A Study on Quality, Cost and Default Rate with Respect to Bhavanashree in Kerala has noted that microfinance home loans have lower quality (higher NPAs) and also that their transactional costs are higher.

Nripendra Narayan Das et. al. (2022) [54] have studied in detail about Sars-Cov-2 Novel Corona Virus, its origin and also about the vaccination survey, based on the experience Covid-19.Manoj (2023)[55] "Affordable Healthcare and Affordable Housing: Need for an Integrative Approach for the Holistic Growth of the Digital Economy of Kerala, India" Community Practitioner, has noted that a knowledge society like Kerala must encourage housing and healthcare sectors holistically using ICT. Manoj (2023)[56] "Health Expenditure in Covid-19 Times and the Need for Affordable Houses that Nurture Healthy Citizens: A Roadmap for Digital Economy of Kerala" *Migration* Letters has noted that learning from the Covid19 experience Kerala should focus on homes that duly take care of the 'health' aspect as this aspect could add high social value to housing units. Manoj, P.K. (2023)[57]ICT for Sustained Community Development in India in the 5G Era. Community Practitioner has noted the vital need of high-end ICT resources to provide better internet connectivity for fast and equitable growth. McKinsey (2023) [58] has noted the vital role of ICT in bringing about sustainable and inclusive growth in the G20 nations, like, India. UN Report (2016)[59] Digital Financial Inclusion has also noted tremendous potential of ICT for digitally empowering the masses across the world, citing many global success stories also.

#### 5. SERVICE QUALITY IN HOUSING FINANCE BUSINESS OF BANKS: THE CASE OF ASSURANCE

For the purpose of assessing the service quality the SERVQUAL model (Figure I) is used and the construct 'Assurance' is sought to be focused in detail in this paper.

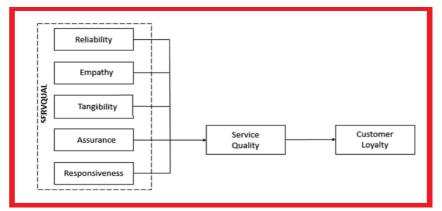


Figure I: The SERVQUAL Model and Its Seven Constructs

Source: As part of the Research Design

First, before proceeding with the analysis, the data collected from 600 home loan customers were tested for: (i) Normality, and (ii) Reliability. For this purpose K-S test for normality and Reliability analysis using Cronbach's Alpha were used. Accordingly, it was noted that the p values are all more than 0.05. So the data are normal. (Table II).

Variable	Ν	Mean	Std. Deviation	K-S 'Z' Value	p value
Assurance	600	21.31	3.98	1.381	0.084
Tangibility	600	19.17	5.01	0.895	0.186
Responsiveness	600	18.77	4.19	0.659	0.255
Empathy	600	19.81	3.77	1.188	0.118
Reliability	600	15.81	3.53	1.362	0.087
CRM Quality	600	18.45	4.09	1.509	0.066
Loyalty	600	17.00	3.80	0.707	0.240

## Table II: K-S Test for Normality

Source: Survey Data

## Table III: Reliability Analysis

Variable	Cronbach's Alpha	No. of Items
Assurance	0.887	7
Tangibility	0.870	7
Responsiveness	0.865	7
Empathy	0.844	7
Reliability	0.831	7
CRM Quality	0.905	7
Loyalty	0.863	7

#### Source: Survey Data

Regarding the reliability of the data, the Cronbach's Alpha values of the constructs are more than 0.7. In respect of 'Assurance' construct – the one under detailed study it is as high as 0.887. So, the available data are reliable. Hence, we can proceed further with data analysis and interpretation.(Table III). Now, following the SERVQUAL model

and focusing on the Assurance aspect of service quality, we can proceed as follows. Accordingly, initially an effort is made to take into account the measurement model for the purpose of testing the convergent validity. The case of 'Assurance' is taken first, and the following hypothesis is sought to be tested using the data collected from the sample of bank customers through a field study:

Null Hypothesis, H<sub>0</sub>: ConstructsAS1 to AS7have no significant effect on Assurance.

Alternative Hypothesis,  $H_1$ : ConstructsAS1 to AS7 have significant effect on Assurance.

	χ2	DF	Р	Normed χ2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Assurance	9.237	7	.236	1.320	.996	.982	0.996	0.997	0.999	.007	.023

#### Table IV: Model Fit Indices for CFA – Assurance

The relevant attributes are all loaded significantly upon the latent constructs. The fit indices values show a reasonable fit of the model for measurement with data. (Table V).

Table V: Constructs (Assurance) and their Co-efficients Significance

Dependent Variable	Constructs (Independent Variables)	Regression Co-efficients	CR(Critical Ratio)	Ρ	Variance explained (%)
	AS1	0.697	21.048	<0.001	48.6
	AS2	0.836	29.509	<0.001	69.8
	AS3	0.707	21.530	<0.001	49.9
	AS4	0.677	20.122	<0.001	45.8
Assurance	AS5	0.702	21.287	<0.001	49.2
Assurance	AS6	0.833	29.268	<0.001	69.3
	AS7	0.622	17.794	<0.001	38.7

Source: Regression Results (SEM Analysis).

Here, all the constructs have their coefficients of regression greater than 0.4. Hence, all these constructs have got significant influence on Assurance.

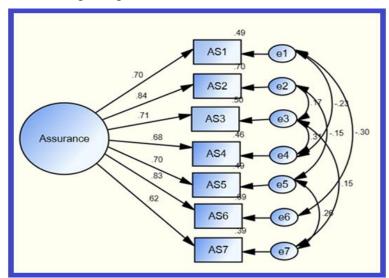


Figure II: SEM Results – Assurance Aspect of Service Quality in Banks Source: Based on SEM Analysis of Survey Data of 600 Customers.

## **Testing of Hypothesis**

\_ . . . . . .

From Table V, it may be noted that all the co-efficients of regression which are greater than 0.4. This means that all these constructs have significant influence on Assurance. Thus, the Null Hypothesis is not accepted and the Alternative Hypothesis is accepted.

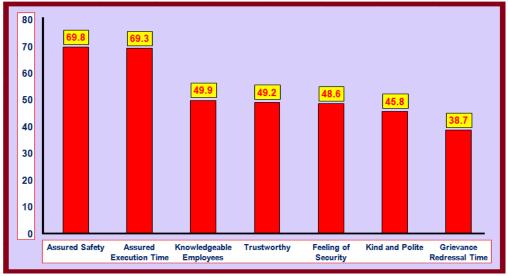
Now, based on Table V, the constructs can be arranged on the basis of their relative importance in terms of their explaining power as shown in Table V. Accordingly, Assured safety is the most vital factor that contributes to Assurance, and is followed by Assured Execution Time. These two most vital factors are followed by Knowledgeable Employees as the third factor which is closely followed by Trustworthiness as the fourth. The fifth in importance is the Feeling of Security factor, and is followed by the Kind and Polite approach of the bank staff as the sixth factor. The last factor, the least significant among the seven is Grievance Redressal Time. (Table VI). (Figure II).

Table VI: Constructs	(Assurance)	) in the Order	of their Significance

Constructs (in the order of Ranks)	Variance Explained (%)	Ranks
Assured Safety	69.8	I
Assured Execution Time	69.3	II
Knowledgeable Employees	49.9	III
Trustworthy	49.2	IV
Feeling of Security	48.6	V
Kind and Polite	45.8	VI
Grievance Redressal Time	38.7	VII

Source: Based on Regression Results given in Table V

. .



# Figure III: Various Constructs Influencing Assurance in the Order of Significance

Source: Based on the Ranked Constructs as given in Table V.

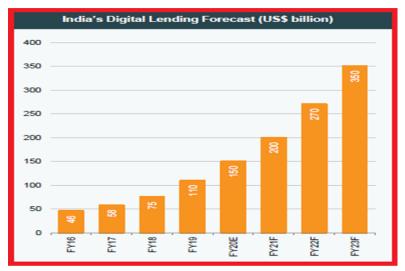
Thus, it may be observed that based on the relative significance of the seven constructs that affect Assurance (Table VI and Figure III), the individual banks have to design their policy towards servicing of home loans, in a scientific and informed manner.

#### 6. INFLUENCE OF ICT IN BANKING, ESPECIALLY IN THEIR HOUSING FINANCE BUSINESS

Fast advances in ICT is fast transforming the entire globe, and banking is no exception. ICT advances, including artificial intelligence (AI). In this regard, it may be noted that ICT adoption is aggressively being promoted by the Govt. of India (GOI) wherein *Digital India* and so many other GOI schemes like *JAM* (Jan Dhan, Aadhaar, Mobile) are encouraging ICT-based transactions. In fact, in many cases only ICT-based dealings alone are allowed to ensure better transparency, and that only the intended beneficiaries receive the benefits and that too without any intermediary in between the two parties. Thus, ICT can improve transparency and promote good governance. Besides, ICT helps to protect the environment (trees) as its use reduces the use of paper-based transactions, and the use of plastics and other non-degradable materials. This can particularly be noted in the case of ICT-based promotions, like, E-marketing, Digital marketing etc. E-banking is an imperative in the banking and financial services industry, especially in respect of retail banking products like housing finance.

The new generation customers are very much attracted by the online and hassle-free banking products that require the least paper works and other procedural formalities, including the customers from rural backgrounds. Thus, falling in line with the GOI priority of ICT adoption through its *Digital India* and also many other schemes that seek to promote the *JAM* trinity, like, for instance, the DBT (Direct Benefit Transfer) mechanism to transfer the funds due to the intended beneficiaries directly through Aadhaar-linked bank accounts (e.g. MGNREGA wages), banks should go for ICT-based process, service delivery and promotion of their products. The case of housing finance, the most. So, adopting the latest technologies and also regularly updating the right technology has become a key factor for the faster growth of housing finance business of banks in India. It may be noted that there has been steady growth in India in respect of:

- (i) Digital lending (Figure IV)
- (ii) Digital Payments (Figure V)
- (iii) DBT (Figure VI) etc.





Source: IBEF (2023), Banking, Aug.

Progressive organizations are increasingly into the adoption of cloud compatible technologies in the financial sector and also artificial intelligence (AI) based services and products. Actually, the adoption of cloud technologies could bring in vitally significant agility in the launching of the products and their scalability also as per the requirements.

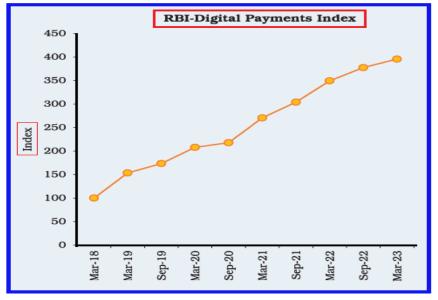
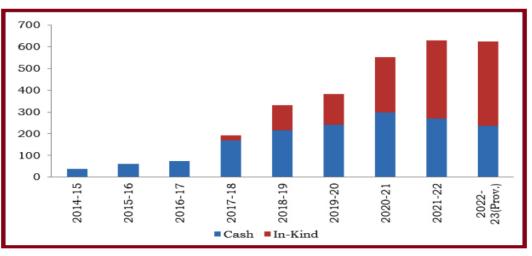
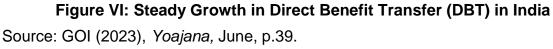


Figure V: Steady Growth in Digital Lending in India

Source: RBI (2023), Trend and Progress of Banking in India. [60], p.41.

Over the years there has been constant and steady growth in the RBI's Digital Payment Index. This suggests steady growth in digital payments in India over the years, and this is in line with the 'Digital Push' drive that the GOI has been pursuing for the last one or two decades or more. This is also a testimony to the success of GOI's digital initiatives, like, *Digital India* and also the policies like promotion of *JAM* trinity, DBT mode of disbursement of payments under diverse GOI schemes, like, MGNREGS. In fact, the success of the DBT scheme has made it a global role model.





ICT adoption in the realm of housing finance and other retail banking products (like, auto loans, educational loans etc.) ensures the competitive advantage of scalability which is beneficial to both the service producers (like, banks) and also the beneficiaries. ICT ensures operational efficiencies, like, low operational (transactional) costs despite large volume as well as quicker and cost-effective scalability to diverse businesses. However, even though ICT advances (like, cloud technologies) offer several benefits, banks and other financial service organisations must invariably focus on maintaining sound digital security framework, so as to control security risks, data leakage, and so on.

#### 7. SUGGESTIONS AND CONCLUDING REMARKS

Based on the findings of the empirical study, it may be suggested that Assured safety is the key factor that ensures Assurance, and then comes the Assured Execution Time. These two vital factors are followed by the third factor Knowledgeable Employees, and this closely followed by the fourth factor, Trustworthiness. Fifthly comes the factor, Feeling of Security, which is followed by the Kind and Polite behavior of the staff – the sixth factor. Finally comes, Grievance Redressal Time, the seventh factor. So, banks have to accord topmost priority to assuring the safety, and also prompt delivery (execution) of housing loans. Through constant training and other HRD, banks have to ensure that its employees are highly knowledgeable, and further than customers feel the trustworthiness of their products and services. Ensuring that customers sense a feeling of security is good, and likewise bank employees should have higher order interpersonal skills so that their approach to customers becomes 'Kind and Polite' as desired by them. Grievances be kept at the least level, and so also the time required for grievance redressal.

In the current scenario, adoption of ICT and other advances like cloud technologies including AI-based products and services, is an imperative rather than a choice. This is particularly applicable in respect of retail banking products, including housing finance. ICT ensures enhanced digital capability in the advance (credit) business of banks, and offers lots of benefits to the banks especially in customer service and decision-making. Last but not the least, whatever may be the level of digital transformation (ICT adoption) banks have to ensure adequate 'Human Touch' in all their products and services as well as customer touch points. This ensures long-standing relationships and customer loyalty. Further, this enables easier adoption of modern philosophies like CRM, TQM, SCM etc.

#### References

- 1) Parasuraman, A., Zeithaml, V.A. and Berry, L. (1985) A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49, 41-50. http://dx.doi.org/10.2307/1251430
- 2) Angur, M.G., Nataraajan, R. and Jahera, J.S. (1999), "Service quality in the banking industry: an assessment in a developing economy", *International Journal of Bank Marketing*, Vol. 17 No. 3, pp. 116-125. https://doi.org/10.1108/02652329910269211
- DasharathrajK Shetty, Nikhil Perule, Srinivasa Rao Potti, Maulik Jain, Namesh Malarout, Sonal D evesh, Sonia F Vaz, Babita Singla & Nithesh Naik (2022) A study of service quality in Indian public sector banks using modified SERVQUAL model, *Cogent Business & Management*, 9:1. DOI: 10.1080/23311975.2022.2152539
- 4) Govt. of India (GOI) (2023), Yojana, March. (publicationsdivision.nic.in)

- 5) GOI (2023), Economic Survey, Ministry of Finance, Jan. (www.indiabudget.gov.in)
- 6) NHB (2023), *Trend and Progress of Housing in India 2022,* National Housing Bank (NHB), New Delhi, March. (www.nhb.og.in).
- 7) Govt. of India (GOI) (2022), *Kurukshetra*, Feb. (www.publicationsdivision.nic.in)
- 8) Govt. of India (GOI) (2022), *Press Information Bureau (PIB)*, Press Release, March. (www.pib.gov.in/indexd.aspx).
- 9) Manoj, P.K. (2022). ESG Reporting for Business Sustainability: Role of CMAs in Internal Audit. *The Management Accountant.* 57 (7). 68-71.
- 10) Manoj, P.K. (2005). Cost accounting systems in Banks-for strategic advantage through effective cost management. *The Management Accountant.* 40(7). 534-537.
- 11) Manoj, P.K. (2005). Scientific pricing of bank products through cost accounting-a vital need in the LPG regime. *The Management Accountant.* 40 (11). 890-896.
- 12) Manoj, P.K. (2014).Role of ICT in Women Empowerment: A Study with a Focus on 'Kudumbashree' Programme in Kerala State of India. *International Journal of Information Technology & Computer Sciences Perspectives*. 3(2). 938-947.
- 13) Manoj, P. K. (2023). Corporate Decisions of RIL: Impact on Share Prices and Policy Implications. *Migration Letters*. 20. 12S (2023), 568-577.
- 14) IFC (2019), Green Buildings a Finance and Policy Blueprint for Emerging Markets. (www.ifc.org).
- 15) K.K Nasar& P.K Manoj (2014). Factors influencing the purchase of apartments: some empirical evidence. *Clear International Journal of Research in Management, Science and Technology*. 4 (8). 1-11.
- 16) Manoj PK (2007). ICT industry in India: a SWOT analysis. *Journal of Global Economy*, 3(4): 263–282. (doi: 10.1956/jge.v3i4.143.)
- 17) Pickens, M (2009). Window on the unbanked: Mobile money in the Philippines. https://www.cgap.org/sites/default/files/CGAP-Brief-Window-on-the-Unbanked-Mobile-Money-inthe-Philippines-Dec-2009.pdf
- 18) P.K. Manoj (2010"Impact of technology on the efficiency and risk management of old private sector banks in India: Evidence from banks based in Kerala". *European Journal of Social Sciences*, 14(2), 278-289.
- 19) India Brand Equity Federation (IBEF) (2023). Banking report and Real Estate report. Aug.
- 20) K.K Nasar and P.K Manoj (2013).Customer satisfaction on service quality of real estate agencies: An empirical analysis with reference to Kochi Corporation Area of Kerala State in India. *International Journal of Management, IT and Engineering*. 3 (6). 213-227.
- 21) Manoj P.K.(2013). Prospects and Challenges of Green Buildings and Green Affordable Homes: A Study with Reference to Ernakulam, Kerala. Global Research Analysis. 2(12).45-49.
- 22) Varghese, K.X, and Manoj, P.K. (2013), "Educational loans and the higher education sector in India", SS International Journal of Business and Management Research (SSIJMR). 3(1).12-21.
- 23) Manoj, P.K. (2015). International Container Transhipment Terminal (ICTT) and its impact on coffee exports from India: An analysis. *International Journal of Trade and Global Business Perspectives (IJTGBP)*. 4(3):1872-1875.
- 24) Manoj, PK (2009). Special economic zones in India: financial inclusion: challenges and opportunities. First Ed., Serials Publications. New Delhi.
- 25) Manoj, P. K. (2017). Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism. *South Asian Journal of Socio-Political Studies*. 18 (1).112-119.
- S Rajesh and Manoj P.K (2015). Women Employees work life and challenges to Industrial Relations: Evidence from North Kerala. *IPASJ International Journal of Management (IIJM)*. 3.(4).1-8.

- 27) P.K. Manoj (2015). Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala. International Journal of Applied Services Marketing Perspectives (IJASMP), 4(4),1880-1888.
- 28) P.K. Manoj (2016). Real Estate Investment Trusts (REITs) for Faster Housing Development in India: An Analysis in the Context of the New Regulatory Policies of SEBI. International Journal of Advance Research in Computer Science and Management Studies, 4(6), 152-167.
- 29) P.K Manoj (2016). Bank marketing in India in the current ICT era: Strategies for effective promotion of bank products. International Journal of Advance Research in Computer Science and Management Studies, 4 (3), 103-113.
- 30) Lakshmi and Manoj, P.K. (2017). Service quality in rural banking in North Kerala: A comparative study of Kannur district co-operative bank and Kerala Gramin bank. International Journal of Applied Business and Economic Research, 15(18), 209-220.
- 31) Lakshmi and Manoj, P.K. (2017). Rural customers and ICT-based bank products: A study with a focus on Kannur district co-operative bank and Kerala Gramin Bank. International Journal of Economic Research, 14(14), 423-434.
- 32) Jacob Joju, Vasantha, S. and P.K. Manoj. (2017). Future of brick and mortar banking in Kerala: Relevance of branch banking in the digital era. International Journal of Civil Engineering and Technology, 8(8), 780-789.
- 33) Jacob Joju, Vasantha, S. &Manoj, P.K. (2017). Financial technology and service quality in banks: Some empirical evidence from the old private sector banks based in Kerala, India. International Journal of Applied Business and Economic Research, 15(16), 447-457.
- 34) Manoj, P.K. (2017). Construction costs in affordable housing in Kerala: Relative significance of the various elements of costs of affordable housing projects. International Journal of Civil Engineering and Technology, 8(9), 1176-1186.
- 35) Manoj, P.K. (2017). Cost management in the construction of affordable housing units in kerala: A case study of the relevance of earned value analysis (EVA) approach. International Journal of Civil Engineering and Technology, 8(10), 111-129.
- J Joju, S Vasantha, PK Manoj (2017). Electronic CRM & ICT-based banking services: An empirical study of the attitude of customers in Kerala, India. International Journal of Economic Research, 14 (9), 413-423.
- 37) Manoj, P.K. (2018). CRM in old private sector banks and new generation private sector banks in Kerala: A comparison. Journal of Advanced Research in Dynamical and Control Systems, 10 (2 Special Issue), 846-853.
- 38) Manoj, P.K. (2019). Social banking in India in the reforms era and the case of financial inclusion: Relevance of ICT-based policy options. Journal of Advanced Research in Dynamical and Control Systems, 11(7 Special Issue), 1654-1666.
- 39) Manoj, P.K. (2019). Dynamics of human resource management in banks in the ICT era: A study with a focus on Kerala based old private sector banks. Journal of Advanced Research in Dynamical and Control Systems. 11(7 Special Issue), 1667-1680.
- 40) Manoj, P.K. (2019). Competitiveness of manufacturing industry in India: need for flexible manufacturing systems. *International Journal of Innovative Technology and Exploring Engineering*. 8(12). 3041-3047. (DOI: 10.35940/ijitee.K2452.1081219).
- 41) J Joju and Manoj PK (2019).Digital Kerala: A study of the ICT: Initiatives in Kerala state. International Journal of Research in Engineering, IT and Social Sciences; 9: 692-703.
- 42) J Joju and P K Manoj (2019). Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala, International Journal of Recent Technology, 8 (4), 12098-12103.
- 43) Ali, O.P. and Manoj, P.K. (2020). Impact of Falling Price of Rubber-A Case Study of Kothamangalam Taluk in Ernakulam District. *Indian Journal of Economics and Development*, 16(1), 118-124.

- 44) Manoj (2015). Prospects of Responsible Tourism in Kerala: Evidence from Kumarakam in Kottayam District. *International Journal of Research in Management & Social Science*. 3(1) II. 54-59.
- 45) Manoj (2016). Determinants of sustainability of rural tourism: a study of tourists at Kumbalangi in Kerala, India.International Journal of Advance Research in Computer Science and Management Studies. 4(4). 17-30.
- 46) Manoj (2015). Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India. International Journal of Advance Research in Computer Science and Management Studies. 4(2). 148-159.
- 47) Manoj(2019).Tourism Sector in Kerala in the Post-Flood Scenario: Strategies for its Sustainable Growth with A Focus on Responsible Tourism. *Think India Journal*. 22(33).167-174.
- 48) Famiyeh, S., Asante-Darko, D. and Kwarteng, A. (2018), "Service quality, customer satisfaction, and loyalty in the banking sector: The moderating role of organizational culture", *International Journal of Quality & Reliability Management*, Vol. 35 No. 8, pp. 1546-1567. https://doi.org/10.1108/IJQRM-01-2017-0008
- 49) Wang, Cheng-Kun, Mohammad Masukujjaman, Syed Shah Alam, Ismail Ahmad, Chieh-Yu Lin, and Yi-Hui Ho. 2023. The Effects of Service Quality Performance on Customer Satisfaction for Non-Banking Financial Institutions in an Emerging Economy. *International Journal of Financial Studies*. 11: 33.https://doi.org/10.3390/ijfs11010033.
- 50) Manoj, P.K. (2023). Housing Sector in India: An ESG Route into a Greener Future. *The Management Accountant*. 58 (3). 51-55.
- 51) Saritha, C.K & Manoj, P.K (2023). Social inequalities in IT sector: Evidence from Kerala State in India. *Environment and Social Psychology*. 8 (2). 1-13. DOI: 10.54517/esp.v8i2.1644.
- 52) Jose, S. P. et. al. (2023). Corporate Decisions and Stock Price Movements: The Case of HUL in India. *Migration Letters*. 20.S1(2023). 305-315.
- 53) Manoj, P.K.(2015). Housing Microfinance: A Study on Quality, Cost and Default Rate with Respect to Bhavanashree in Kerala. *International Research Journal of Finance and Economics*. 139. 7-20.
- 54) Nripendra Narayan Das, Pradeep P, Prasanth C.B., and Manoj P.K. (2022), Sars-Cov-2 Novel Corona Virus: Origin and the Vaccination Survey. *Journal of Pharmaceutical Negative Results*. 13 (1), Oct., 1032-1040. DOI: 10.47750/pnr.2022.13.S01.123.
- 55) Manoj, P. K. (2023). Affordable Healthcare and Affordable Housing: Need for an Integrative Approach for the Holistic Growth of the Digital Economy of Kerala, India. *Community Practitioner*. 20(9). 412-435.
- 56) Manoj, P.K. (2023). Health Expenditure in Covid-19 Times and the Need for Affordable Houses that Nurture Healthy Citizens: A Roadmap for Digital Economy of Kerala. *Migration Letters*. 20. S4(2023). 43-61.
- 57) Manoj, P.K. (2023) ICT For Sustained Community Development in India in the 5G Era. *Community Practitioner*. 20 (12). 340-356
- 58) McKinsey (2023). Driving sustainable and inclusive growth in G20 economies. Aug.
- 59) United Nations (2016). *Digital Financial Inclusion*. Issue Brief Series. International Telecommunication Union (ITU) 2016.
- 60) RBI (2023). *Trend and Progress of Banking in India 2023.* Reserve Bank of India (RBI). Mumbai. Dec. (www.rbi.og.in).