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RESEARCH ARTICLE

IMPACT OF M-BANKING ON THE PROFITABILITY OF COMMERCIAL BANKS IN INDIA

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Abstract

Banking sector has always been the lifeblood of any economy and specifically of developing economies.With advent developments and technological advancements this sector has seen a transformation from its conventionalform to e-banking and recently to m-banking. The present study is an attempt to describe the current state of Mobilebanking in India. This paper is an assessment towards the impact of m-banking on the profitability of scheduledcommercial banks in India. The data pertaining to the usage of mobile banking and profitability measures of allscheduled commercial banks in India has been collected through RBI website and CMIE Database for the period from 2010 to 2020. Itwas found in the study that although the usage of m-banking has tremendously increased during the period of study,it has not played any significant role towards improvisation in the profitability of these banks. Also, m-banking hasbeen suffering from network effect as currently it is in its developing stage and most of the banks have recentlyincluded the concept of m-banking in the portfolio of their services. It has been opined in the paper that if all thebanks could proceed to the path of m-banking in a proper manner, the overall profitability due to m-banking willimprove in coming years.

Introduction:-

Mobile banking is categorized as the latest development in electronic banking and it is a kind of electronic banking that applies Short Message System (SMS) and WirelessApplication Protocol (WAP) services to facilitate customers in making onlinetransactions (Lee & Benbasat, 2003).Mobile banking offers customers an easy access to financial services by minimizing time and distance to the nearest retail bank branches associated with traditional banking. Mobile banking has been beneficial to both the banks and customers as it reduces the banks overheads and transaction- related costs and its convenient and cheap as lesser fees are charged on mobile transactions.Profit is the goal of commercial banks and all the strategies designed andactivities performed thereof are meant to realize this objective. Commercial banks play akey role in the economic resource allocation of any country as they channel funds fromdepositors to investors on a day-to-day basis. This role is possible when they cangenerate necessary income to cover operational cost they incur in the whole process.Furthermore, for a sustainable intermediation role of commercial banks, they need to beprofitable since profits rewards investors for their investments in turn encouragesadditional investment and brings about economic growth of a country. On the other hand,poor banking performance can lead to banking failure and crisis which have negativeimpact on the economic growth of a country (Marshall, 2009).Profits of banks are majorly from the fees they charge for services provided and frominterest earned on the bank's assets such as loans and securities they hold. To drivecustomer

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loyalty and bank profitability, banks will have to understand customerwillingness to pay by looking keenly on proper pricing of their products and services atthe same time provide secure, accessible, and differentiated products and services to servedifferent customer needs. The common measures of banks profitability include return onassets (ROA), return on equity (ROE), Net Interest Margin (NIM), Market power,efficiency, and capitalization (Murthy & Sree, 2003). The ability of banks to deliverproducts and services in the most effective and efficient manner, will therefore be the keyto performance. Mobile banking serves to give the customers a new easier, convenient,and quick approach to banking which most commercial banks are competing on to attractthe largest customer base and in turn be able to increase profits.A key consideration relating to bank profit maximization relates to the concepts of riskand diversification. Banks performance is related to changes in the environment and thebehavior of competitors. Mobile banking is being viewed by the Commercial Banksmanagers and other stakeholders as being the long-term solution to the increasing numberof customers, changes in demand and customer preferences in terms of service delivery,competition, cost reduction and revenue management and improved generalperformance. However, cost reduction is only realizable with an increase in customeradoption (Bradley and Stewart, 2003). Financial Institutions which have had difficultyproviding profitable services through traditional channels which were more laborintensive see an opportunity in mobile banking as a form of branchless banking (Ivaturyand Mas, 2008). The new entrants in the market especially the non-depository and nonfinancial institutions have increased competition for consumer deposits as they areoffering services substitutable to those offered by commercial banks (Goro, 2003). Suchinstitutions include micro finance institutions, Saccos and telecommunication industrysuch as Safaricom and Airtel.

Review of Literature:-

Use of financial innovation can contribute to improved bank performance by increasingbanks market share, expand products range and customized products, improving servicedelivery, reducing banks overheads and transaction related costs, and increasing thegeographical reach all which contribute to profitability (Lee, Lee and Kim,2009). Simpson (2002) suggested that e-banking is driven largely by the prospects ofoperating costs minimization and operating revenues maximization. A comparison ofonline banking in developed and emerging markets revealed that in developed marketslower costs and higher revenues are more noticeable. The application of information and communication technology concepts, techniques, policies, and implementation strategies to banking services has become a key concern to all banks and indeed a requirement for local and global competitiveness banking (Sullivan, 2000). The degree of competition in the banking industry matters for the efficiency of production of financial services, the quality of financial products and the degree of innovation in the sector (Claessens, 2009). Banks need to have sufficient capital and be diversified enough to absorb major shocks whilst remaining sufficiently competitive to provide consumers with reasonably priced services. They also mustensure that they improve their network coverage, have quality connections and reducedcosts as a way of gaining a competitive advantage in the market (Kigen, 2010).Malhotra and Singh (2009) investigated the influence of online banking on performance and risk tracing in Indian commercial banks during June 2007 and discovered that profitability and internet banking offerings had no meaningful relationship, which is consistent with De Young (2005) and Arnaboldi and Claeys (2010). Sumra (2011) The efficiency of banks has grown as a result of the introduction of e banking, and labour expenses have decreased. Because of electronic means, fewer employees are required to deliver services; the accuracy of transactions and maintenancehas also been supplemented as computers have taken the place of humans, reducing human errors; procedures, processes, and services are now fast and reliable, saving time, effort, and money; and the procedures, processes, and services are now fast and reliable, saving time, effort, and money. M. S. Saluja and T. Wadhe (2015), Using Multiple Regression Analysis, this study examines the relationship between e-banking and profitability of 31 Indian scheduled commercial banks from 2006 to 2014. The findings show that e-banking has a beneficial impact on the profitability of both nationalised and traditional private sector banks. R. K. Uppal (2011), In his work, he uses ratio analysis to evaluate the performance of commercial banks in India. According to the findings, branch and labour productivity increased significantly during the e-banking period as compared to the pre-e-banking period. Foreign banks' labour and branch productivity is also shown to be considerably higher. Overall, the data show that there is an increase in the profitability after arrival of e-banking services. A study by Vikas Gautam (2012), examines the impact of e-banking on 14 Indian banks' profitability, efficiency, and service quality. It has been shown that e-banking has considerably boosted profitability while also lowering costs. A study by Pooja Malhotra and Balwinder Singh (2007) attempts to analyse factors affecting adoption of e-banking of 88 banks in India during 1998 to 2005. The findings revealed that size, deposit, and expense ratio all influence the likelihood of e-banking adoption, whereas age and market share had a substantial negative impact. Overall, private banks have found that e-banking capabilities have been more efficiently employed to expand their branch network. Kanika (2017) the impact of e-banking factors on bank performance is shown to be substantial in public sector banks but minor in private and international banks, according to empirical findings. The findings also revealed that e-banking had a little impact on bank performance. Meihami et al (2013) According to research on the use of IT in banking, we can reduce the number of financial transactions by employing various IT tools. It means that we can save money by using E-banking instead of the traditional banking system. Using IT in banking reduces risk taking, increases security, and reduces time waste. Siddik et al (2016) show that e-banking has had a favourable influence on bank performance in Bangladesh, as assessed by ROE.

Objectives of the study:-

The study sought to determine the effect of mobilebanking on the financial performance of bankinginstitutions in India. The specific objectives were toestablish the effect of mobile banking transactionsvolume and mobile banking products on the financialperformance of commercial banks.

Research Questions

The following research question guided the study:

1. What are the effects of mobile banking transactions volume on the financial performanceof commercial banks?
2. To what extent do mobile banking products influence the financial performance of commercialbanks?

Research Methodology:-

This research being descriptive in nature, it used secondary data. Secondary data is the information that has been collected by others (Saunders, Lewis, and Thornhill, 2009). Thedata was collected from published audited financial statements of Commercial Banksfrom the year 2010 to 2020 and CMIE database to enable inmeasuring profitability ofcommercial banks. The data was then edited, coded, andcleaned. To validate the instruments a thorough scrutiny was conducted to ensure that thefindings truly represent the phenomenon measured.Bryman and Bell (2003) defined data analysis as a technique used to make inferencesfrom data collected by means of a systematic and objective identification of specificcharacteristics. The dependent variable was measured to see how it varies with changes inindependent variables. The dependent variable in the model specified was theprofitability of commercial banks which was measured by using ratios since they areinflation invariant. The total amounts transferred through mobile banking for the period2010-2020 was analyzed and the number of mobile banking users was regressed againstbanks performance as measured by the ROA.

Hypothesis

H0: Mobile Banking do not put the greatest effect on profitability of commercial banks in India.
H1: Mobile Banking put the greatest effect on profitability of commercial banks in India.

Data Analysis & Interpretation

The researcher conducted a multiple regression analysis using the following regression model.
Y Bo B1X B2 X B3 X **(1)**
Where;
Y=Banks performance as measured by ROA
X1=Annual amounts moved through mobile banking platform
X2=Number of active users of mobile banking
X3=Contribution of agency banking to income generated by commercial banks
ε = Error term
Bo=Constant
B1, B2, B3= slope that will show the relationship between dependent and independent variables.

The study used excel and Statistical Package for Social Sciences version to aid in data analysis. The t-test was used to determine the relative sensitivity of each variable inaffecting the performance of banks and as a test of significance which will be at 5% levelof significance. This model is supported by Kigen (2010) who analyzed the impact ofmobile banking on transaction costs of microfinance institutions by looking at mobilebanking adoption and the behavior of transaction costs where he established that mobilebanking reduced transaction costs considerably though it was not felt by banks directlydue to the small number of mobile banking customers then.

Regression Analysis

In this study, a multiple regression analysis was conducted to test the relationship amongpredictor variables. The research used statistical package for social sciences (SPSS V21.0) to code, enter and compute the measurements of the multiple regressions.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.847	0.717	0.707	0.573

R-Squared is a commonly used statistic to evaluate model fit. R-square is 1 minus theratio of residual variability. The adjusted R2, also called the coefficient of multipledeterminations, is the percent of the variance in the dependent explained uniquely orjointly by the independent variables. 70.7% of the profitability of commercial banks inIndia could be attributed to the combined effect of the predictor variables.

Summary of One-Way ANOVA results between profitability and thepredictor variables

predictor variables

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.215	2	2.241	6.342	0.016
	Residual	28.497	12	0.673		
	Total	34.712	14			

The probability value of 0.016 indicates that the regression relationship was highlysignificant in predicting how mobile banking affect profitability of commercial banks inIndia. The F calculated at 5% level of significance was 6.342 since F calculated isgreater than the F critical (value = 3.885), this shows that the overall model wassignificant.

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.

1	(Constant)	1.074	0.216		2.891	5.32E-04
	Annual amount of money moved through mobile banking	0.674	0.151	0.615	5.311	1.51E-05
	Number of users of Mobile Banking	0.741	0.183	0.151	3.212	2.10E-04
	Contribution of agency banking to income generated	0.575	0.198	0.236	4.257	6.18E-05

The regression equation above has established that taking all factors into account (annualamount of money moved through mobile banking, number of users of mobile banking,capital adequacy and contribution of agency banking to income generated) constant atzero profitability of commercial banks in India will be 1.074. The findings presentedalso show that taking all other independent variables at zero, a unit increase in the annualamount of money moved through mobile banking would lead to a 0.674 increase in thescores of profitability of commercial banks in India, a unit increase in the scores ofnumber of users of mobile banking would lead to a 0.741increase in the scores ofprofitability of commercial banks in India, a unit increase in the scores of contributionof agency banking to income generated would lead to a 0.575 increase in the scores ofprofitability of commercial banks in India.Overall, number of users of Mobile Banking had the greatest effect on profitability ofcommercial banks in India.

Findings and Conclusion:-

From the above regression model, the study found out that there were mobile bankingvariables influencing the profitability of commercial banks in India. They includeannual amount of money moved through mobile banking, number of users of mobilebanking and contribution of agency banking to income generated. They influencedmobile banking positively. The study found out that the intercept was 1.074 for all years.The three independent variables that were studied (annual amount of money movedthrough mobile banking, number of users of mobile banking and contribution of agencybanking to income generated) explain a substantial 70.7% of profitability of commercialbanks in India as represented by adjusted R2 (0.707). This therefore means that the threeindependent variables contribute 70.7% of the profitability of commercial banks in India.

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