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INTERNET BANKING: CONTENT ANALYSIS OF SELECTED INDIAN PUBLIC AND PRIVATE SECTOR BANKS' ONLINE PORTALS

Tejinderpal Singh
Assistant Professor, University Business School, Panjab University Chandiagrh, India
Postal Address: #32, T-II, Panjab University Campus, Sector 25, Chandigarh
Author's Personal/Organizational Website: **www. ubs.puchd.ac.in**
Email: **tejinderubs@gmail.com**

Dr. Tejinderpal Singh is associated with University Business School, Panjab University as an Assistant professor for the last six years. He has number publications in national and international Journals of repute. He has attended and presented more than thirteen papers in National and International conferences. His teaching interest includes Marketing management, Internet marketing, Services Marketing, Consumer Behaviour and e-commerce. He is also serving as Chief Editor of International Journal of Marketing and Business Communication.

Manpreet Kaur
Assistant Professor, Guru Gobind Singh College for Women,
Sector-26 , Chandigarh,
Postal Address: Guru Gobind Singh College for Women,
Sector-26 ,Chandigarh *,India*
Email: **manpreetkaurleo@yahoo.co.in**

Mrs. Manpreet Kaur has been working as Assistant Professor with Guru Gobind Singh College for Women Sector- 26, Chandigarh, for the last 7 years. Overall she is having 13 years of teaching experience. She is pursuing her doctorate in marketing stream from University Business School, Panjab University, and Chandigarh. She has presented number of papers at National level seminars.

Abstract

Advancement in technology has played an important role in the distribution strategy of commercial banks. Banks distribute their products and services not only through a sole channel but instead through a variety of channels such as internet banking, automated teller machines, mobile banking, phone banking, TV baking etc. Internet banking has attracted the considerable amount of interest of researchers in the recent times. Previously research studies had concentrated on the perception about online service quality, adoption of internet banking, impact of information technology in banking, etc. based on customers' opinion. However, on the other side, in depth analysis of bank's online portal without approaching the customers may also provide meaningful insight about the online portals especially when compared with other banks' online portals. The present study aims to compare the pre-login and after login features of selected banks' online portals. For study purpose, two leading banks, one each from public and private sector were selected. A content analysis technique was used to study the listed features of selected websites. Study found that selected banks' online portals differ on various features such as accounts information, fund transfer, online requests and general information. In the end, study suggested to include the good feature of other online portal which would help them to make their sites more secure, informative and user friendly.

INTRODUCTION

In the last few decades, information technology has changed the banking industry and has provided a way for the banks to offer differentiated products and services to their customers. Advancement in technology has played an important role in the distribution strategy of commercial banks. Banks distribute their products and services not only through a sole channel but instead through a variety of innovative channels such as internet banking, automated teller machines, mobile banking, phone banking, TV baking etc. One of the fast growing delivery channels is Internet Banking because of tremendous growth of internet users in India. As of now there are one hundred and twenty one million users in India having 10.3 per cent penetration rate[1]. Google's country head in India, Rajan Anandan, further, predicted India to reach at least three hundred million internet users by 2014 up from now because telecom carriers investing in high-speed wireless infrastructure and smartphones are getting cheaper. Internet Banking also called as online banking is the new age banking system. Internet banking uses the internet as the delivery channel to conduct banking activities like transferring funds, paying bills, viewing account statements, paying mortgages and purchasing financial certificates of deposits, etc. Internet banking has attracted the considerable amount of

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[1] *http://www.internetworldstats.com/*

interest of researchers in the recent times. Previously research studies primarily concentrated on the perception about online service quality, adoption of internet banking, impact of information technology in banking sector, etc. based on customer' opinion. (Mannan, 2010 ; Singhal & Padhmanabhan,2008 **;** Srivastava,2007). However, on the other side, in depth analysis of bank's online portal without approaching the customers may also provide meaningful insight about the online portals especially when compared with other banks' online portals. The present paper aims to compare the pre-login and after login features of selected banks 'online portals. It will help the bankers to make their portal more secure and user friendly by incorporating the good features of other banks portals.

REVIEW OF LITERATURE

Review of various studies on internet banking has been summarized in the following table. It is evident that researchers mainly evaluated the online banking services based on the perception of bank customers.

Summary of Review of literature on internet Banking

Author/Year	Title	Purpose	Findings
Srivastava, Rajesh Kumar,(2007)	Customer's perception on usage of Internet banking	To know consumer's perception about Internet banking and drivers that drive consumer towards better perception.	Education, gender, income and training play an important role in usage of internet banking. Inhibitory factors like trust, gender, education, culture, religion, security and price can have minimal effect on consumer mind set towards internet banking.
Maenpaa Katariina et.al,(2008)	Consumer perceptions of Internet banking in Finland	To examine the effect of expertise on perceptions of internet bank services.	Consumers' perceptions differed in four of seven dimensions of internet bank services when examined along the criterion of expertise. Results revealed that security was not a concern for any of the user groups.
Singhal Divya and Padhmanabhan V.,(2008)	A study on customer perception towards Internet banking: Identifying major contributing factors	To explore the major factors responsible for internet banking based on respondents' perception on various internet applications.	Major factors responsible for internet banking were 'utility request', 'security', 'utility transaction', 'ticket booking' and 'fund transfer'. More than 50 per cent of total respondents agreed that internet banking is convenient and flexible ways of banking and it also have various transaction related benefits.
Mohammed Hossain & Shirley Leo, (2008)	Customer perception on service quality in retail banking in Middle East: the case of	To evaluate the service quality in retail banking in the Middle East (Qatar), customers' perception	Customers' perception was highest in the tangibles area and lowest in the competence area.

	Qatar	regarding service quality.	
Naana Adams Abigail&Odartey Lamptey Adnan, (2009)	Customer perceived value in Internet banking in Ghana	To examine customer value perceptions in Internet banking in Ghana.	Banks need to promote internet banking by having an active stake in the development of internet infrastructure and offering more incentives to customers.
Mannan Syed Abdul,(2010)	Technology in Indian banks and customer perception: An empirical study in Maharashtra	To analyse the implementation of technology in Indian banks and understanding the customers' perception.	Customers were satisfied with technology oriented banks products and services. Different parameters and guidelines were suggested to bankers on which they need to improve and spread the awareness of electronic banking products and services.

The evaluation of online banking portals on the basis of their contents is so far neglected area of research. The present study aims to fill that gap.

RESEARCH METHODOLOGY

For study purpose, two banks one each from public and private sector were selected on the basis of online user base in each category. The selected banks were State Bank of India and ICICI Bank from public and private sectors respectively. The domain names for online banking services of State Bank of India and ICICI Bank are www.onlinesbi.com and www.icicibank.com respectively. For the purpose of information collection, registration for internet banking service of both the banks was done. After surfing more than a period of month, researchers identified various features which seemed to be important for secure, informative and user friendly portals. To collect the information about various features of online portals, a content analysis technique was used. Features of online portals were studies and compared based on 'Pre Login' and 'After Login' features. 'Pre –Login' features includes the features like presence of virtual key board, direct access from bank's main home page etc. 'After login' features were further divided into five sub categories i.e. Account Information, Fund Transfer, Online Requests, Bill payment & e-commerce payments and General information.

RESULTS OF THE STUDY

Pre-login features
To use the Internet Banking services, a customer can login to his internet banking account by typing his User Id and password to the login page which are provided by the bank as a part of 'Welcome Kit' at the time of account opening. The comparison of pre-login features has been shown in Table no.1

Table: 1
Comparison of Pre-login features of online portal of selected banks

Sr. No.	Pre-Login Features	SBI Bank	ICICI Bank
i.	Direct access from Banks' main home Page	X	√

ii.	Compulsion of 'One Time Password' if login from different locations/browsers	X	√
iii.	Availability of Virtual Keyboard	√	√
iv.	Alert of leftover attempts in case of wrong passwords	X	X

√= *Feature is Present, X=Feature is not present*

Table 1 shows that in case of ICICI Bank a customer can login to online portal of the bank directly from home page of bank's main website (www.icicibank.com) whereas in case of SBI Bank, no such option on the main website of the bank is available. In this case, to access the portal, a customer has to login through another domain name i.e. www.onlinesbi.com. However, it is suggested that it would be easier for the customers to login if he accesses the online portal from home page of main website itself. Another important point to be noted here is with regard to mandatory entry of 'One Time Password' if customer wants login from different locations or from different browsers. The presence of this feature on portal makes it more secure. This feature is available only in case of ICICI Bank not in SBI bank. First time login to ICICI bank from a different browser or different computers, after entering password, the access will not be granted. Instead, a screen showing one time password with an input able box appears on the screen and access will be granted only after entry of OTP (One Time Password) which comes in the form of SMS on registered mobile. Another security feature related with login is the presence of virtual key board on the site. Virtual key board secure the websites from key-loggers where customer has to enter authentication details (User Id and Password) by clicking the onscreen keyboard instead of hard keyboard. The option of virtual key board is available on both bank's sites which provides more security to websites. In case of wrong entry of password there must be alert for the customers about leftover attempts that will warn the customer to enter wrong password and avoid inconvenience because of password block. Surprisingly, this feature is not available in none of the banks.

After Login Features
After Login feature are those features which are actually available within the online portal and customer is actually login to the portal. These features are studies and compared based on five sub categories i.e. Accounts Information, Fund transfer, Online Bill Payments and e-commerce payments, Online Requests and General information.

1. Account Information
Most of the time internet banking is used for the purpose of accounts related information such as balance query, mini statement, summary of account, etc. The comparative position of both banks has been shown in Table 2.

Table 2
Comparison of Account Information related features of Selected Banks, online portals

Sr. No	Accounts Information Features	SBI Bank	ICICI Bank
i.	On screen Display of Account statement	√	√
ii.	Number of transactions in mini statement	10	10
iii.	Maximum Time/Transaction range of Accounts	6 months	300

	statement		Transactions
iv.	Mode of Entry of Period	Inbuilt Calendar	Manual
v.	Download Format of Account Statement	MS Excel, PDF	MS Money, MS Excel, Plain Text
vi.	Print of Accounts Statement	√	√

√= *Feature is Present*

Table 2 shows that both bank's websites show last ten transactions in mini statement. When requested, detailed account statement is shown on screen in both the cases. However, SBI Bank puts the limit on account statement period-wise whereas ICICI Bank restricts it on the basis of number of transactions. A customer from SBI Bank can view or download the account statement maximum for the period of six month for any period whereas in case of ICICI Bank, he can view or download maximum 300 transactions for any range of period. Here, it seems that a customer of ICICI Bank has option for more detailed Account statement in one shot. To insert the specific date range for account statement there is inbuilt calendar at SBI banks portal where as it is manual in case of ICICI Bank. From researchers' personal experience it seems that entering of date range manual is much easier as compare to use of inbuilt calendar because entering the date by inbuilt calendar is time consuming process which irritates customer. Sometimes, calendar is shown in minimised window which confuses the customer. Printing of account statement for personal or any other use is another very good option which is being provided by both the banks. But study found that both the banks differ on account of the format in which a customer can download the statement for printing purpose or for future reference. ICICI bank provides the option to download the account statement in three formats i.e MS Money, MS Excel and Plain Text. On the other hand SBI bank provides the same in two formats only i.e. MS Excel and Pdf.

2. Fund Transfers
This is the most important area of any online banking portal, both for customers as well as for bankers because any mistake by the customer may land them in huge financial losses. Generally, banks provide the option to transfer the funds to customer's own account within the bank, to third party of same bank and inter bank transfers. Inter Bank Transfer enables electronic transfer of funds by using RTGS and NEFT system of electron fund transfer. The comparative position of various features regarding the fund transfer has been highlighted in Table 3.

Table-3
Comparison of Fund Transfer Related Features of Selected Banks' Online Portals

Sr. No	Fund Transfer Features	SBI Bank	ICICI Bank
i.	Display of account balance on fund transfer screen	√	√
ii.	Mandatory 'Profile Password' to add new payee	Required	Not Required
iii.	Basis to add payee account	IFSC code & Location	IFSC code & Location
iv.	Option to search for IFSC code	**X**	X

		Drop down Menu	Search and Drop down Menu
v.	Adding of Bank, State & bank Branch payee	Drop down Menu	Search and Drop down Menu
vi.	Mandatory 'URN' to add new payee	√	√
vii.	Mandatory 'URN' at the time of transfer of funds	√	√
viii.	Assigning Maximum fund transfer limit to an account	√	X
ix.	Virtual Keypad at the time of entering OTP	√	X
x.	Schedule later option	√	√
xi.	Mandatory 'OTP' at time of fund transfer	Required	Not Required
xii.	Debit Card Grid Authentication	Not Required	Required

√= *Feature is Present, X=Feature is not present*

Table 3 shows that both the banks' web sites display the account balance in the customer's account when customer is on fund transfer page. It facilitates the customer to plan accordingly when he is required to transfer funds from own account to another account. Before transferring to particular account, customer has to add payee's account in the list of payee's which requires information such as IFSC (Indian Financial System Code), name of the state, name of bank, name of branch and of course account number. In case of SBI Bank, to initiate this process Profile Password is required and mandatory but in case of ICICI Bank such password is not required. In the next step, customer has to add the account payee details by providing either IFSC code or by providing location of the payee. Most of the customers add the customer does generally not know payee account on location basis as IFSC code. Interestingly, no such option to search for the IFSC code on the page itself is provided by either of the bank's portal. When customer exercises the second option to enter the customer details on the basis of location, again here both banks differ on account of display of the information. The way with which SBI Bank displays the information it seems to be more user friendly, as different option are available in drop down menu, a customer just has to select the option. However, in case of ICICI Bank, same activity requires more steps when compared with SBI Bank. Other features regarding funds transfer such as mandatory URN (Unique Registration Number) at time of adding new payee and at the time of transfer of funds are required in case of both the banks. For security reasons, in case of SBI Bank, at the time of entering of OTP/URN, there is a virtual keypad on the screen, but this is not the case with ICICI Bank. Further, OTP is mandatory in case of SBI Bank while transferring funds but it is not required in case of ICICI Bank. In case of transfer of funds to third party (even if ICICI a/c), Debit card grid authentication is required. In case of SBI Bank, only OTP is required. In debit card grid authentication, the website, for authentication purposes asks the user to enter certain digits given on his debit card. Lastly, SBI internet banking portal offers customers to schedule their payments for future date whereas this feature is not present in case of ICICI bank.

3. Bill Payments and e-commerce payments
A customer may make the payment of various bills online by using online portal of the bank such as telephone, electricity, insurance, credit card and etc. These payments can be made either manually when the payment is due by adding biller or by set up 'Auto Pay' instructions. Further, e-commerce related payment may also be made through online portal. The comparative position of various features regarding the bill payment and other payment has been shown in Table 4.

Table 4
**Comparison of Bill payment and e-commerce payments related Features of
Selected Banks' Online Portals**

Sr. No	Bill Payment and e-commerce Payments Features	SBI Bank	ICICI Bank
i.	Display of List of Billers	City wise	State wise
ii.	Grouping of Billers	X	√
iii.	Display of payment alerts on Home page	√	X
iv.	Payment History option	√	√
v.	Facility of Prepaid Recharge	X	√
vi.	Debit Card Grid Authentication	Not Required	Required

√= Feature is Present, X=Feature is not present

Table 4 shows that at the time of adding a particular biller to the list of billers, a SBI Bank's customer can search for biller city wise for this purpose, which seems to be more user- friendly. On the other hand, ICICI Bank's customer has to search the biller state wise. However, ICICI bank groups the billers on the basis of their nature which is additional feature available with this portal. A customer can view the history of all the payments in case of both the banks. For quick reminder, bill payment alerts along with due date are displayed on home page in case of SBI Bank but this feature is not available in case of ICICI Bank. Table further shows that pre-paid recharge facility is available in ICICI bank only which makes the mobile and DTH (Direct-To-Home) Television recharge more convenient. In ICICI Bank, debit card grid authentication is required in case of bill payment through payment gateway, while it is not there in SBI.

4. Online Requests
A customer can request for a number of transactions online. The comparative position of various features regarding online requests has been shown in Table 5.

Table 5
Comparison of Online Request Features of Selected Banks' Online Portals

Sr. No	Online Request Features	SBI Bank	ICICI Bank
i.	Instant Transaction Password Generation(ITPG)	X	√
ii.	Request for change in communication address	√	√
iii.	Apply for debit card	X	√
iv.	Cheque book request	√	√
v.	Stop cheque request	√	√
vi.	Cheque status enquiry	√	√
vii.	Limit for mobile alerts	√	√
viii.	TDS Enquiry	√	√
ix.	Smart Money Order	X	√
x.	Reset Transaction Password online	X	√
xi.	Opening of Account	√	√
xii.	Demand Draft	√	√

√= Feature is Present, X=Feature is not present

Table 5 shows that majority of online requests are available in both the banks except 'Instant Transaction Password Generation (ITPG)', 'Apply for debit card', 'Smart Money Order',' Reset Transaction Password online' request which are present only in case of

ICICI Bank. Therefore, it is clear that ICICI Bank's portal offers more facilities as compare to SBI Bank.

5. General Information

General information which may be of the consumer interest includes help desk, bank contacts , demo of service ,search option, details of services, phishing attack warning, information regarding the safe use of internet banking etc. Study found that selected banks do not differ on display of general information on the site.

CONCLUSION

From the above analysis, it is clear that both the banks attempted to make their online portals more secure, informative and user-friendly but still they differ on one account or another. ICICI bank's portal has good features such as direct access from home page, Mandatory 'One Time Password' if login from different locations/browsers, large number of transaction in mini statement, More Download Formats of Account Statement, grouping of billers, facility of prepaid recharge, Debit Card Grid Authentication, etc. On the other hand, SBI bank's portal has few good features like mandatory profile password for number of transaction, drop down menu, display of biller city –wise, display of payment alerts on Home page etc. From the comparative position, it is clear that ICICI bank's online portal has upper hand as compare to SBI Bank. However, ICICI bank may also lack on few features when its online portal will be compare with other banks in the industry. So, the present study is just beginning in this line to compare the online portals. Research in future which may be focused on comparison more and more online portals can come out with the best features enabled model online banking portal which will be helpful to the bankers and customers using internet banking.

REFERENCES

Chi Bo Wong (2011, Perception of customer satisfaction, Switching cost and Customer Retention: An empirical study of basic and advanced Internet Banking users in Hong Kong. Global Journal of Management and Business Research, 11 (2),pp.57-65.

Divya, Singhal and Padh V., (2008), A study on customer perception towards Internet Banking: Identifying major contributing factors. The Journal of Nepalese Business Studies, 5(1),pp.101-111

Ibrahim EE, Joseph M, Ibeh Kin (2006) Customers' perception of electronic service delivery in the UK. International Journal of Bank Marketing, 24(7), pp.475-493.

Maenpaa, Katariina et.al (2008), "Consumer perceptions of Internet banking in Finland: The moderating role of familiarity, available at <http://epublications.bond.edu.au/business_pubs/89> accessed on 2nd March,2012.

Mannan, Syed Abdul,(2010). Technology in Indian banks and customer perception: An empirical study in Maharashtra. International conference on Business & Information technology. available at http://www.kln.ac.lk/uokr/ICBI2010/30.pdf accessed on 2nd March,2012.

Mohammed Hussain and Shirley, Leo,(2008). Customer perception on service quality in retail banking in Middle East: the case of Qatar. International Journal of Islamic and Middle Eastern Finance and Management, 2 (4), pp.338 - 350

Naana, Adams Abigai and Odartey, Lamptey Adnan,(2009). Customer Perceived value in Internet banking in Ghana, Master thesis, Continuation courses, Luela University of Technology.

Redelinghuis, A. & Rensleigh, C., (2010), Customer perceptions on Internet banking information protection, *SA Journal of Information Management* 12(1), Art. #444, 6 pages. DOI: 10.4102/sajim.v12i1.444

Shrivastava, Rajesh Kumar,(2007).Customer's perception on usage of Internet Banking.*Innovative Marketing,* 3(4),pp.67-73

www.icicibank.com, ICICI bank Portal, accessed on Jan, 2012

www.onlinesbi.com, State Bank of India online Portal accessed on Jan, 2012.