

Implementation of Electronic Customer Relationship Management in Banking

M.Sc. Djordje Lazic*, Jelena Lazic**, Brankica Njegus*

*Secondary School of Economics, Bijeljina, Bosnia and Herzegovina - Republic of Srpska

**UniCredit Bank, Mostar, Bosnia and Herzegovina

djordjebn@gmail.com

jelena.lazic @ uncreditgroup.ba

branchyca@gmail.com

Abstract - The Internet as a locomotive of the modern economy directly affects the work and operations of financial institutions. Thanks to the revolution of information and telecommunication technologies from the early nineties up until now, Web technologies as tools enable better implementation of the Customer Relationship Management (CRM) concept as a business strategy and they improve communication with customers aimed at collecting information about customers to increase their satisfaction and loyalty, making the relationship with them better, longer and more profitable.

The scope and purpose of this paper is the development of Electronic Customer Relationship Management (e-CRM) of banks based on the classical concept of CRM in banking operations, which are viewed through the prism of the key generators that affect the development of the concept. To be more exact, the research effort of this paper is focused on defining the architecture of CRM concept in general, the development from CRM to e-CRM, the analysis of conditions for the application of e-CRM, the benefits that are realized by applying this concept and implementation stages of e-CRM.

The results confirm the positive impact of two factors, experience with computers and web technologies, which affect the implementation of e-CRM concept as a strategy in banking. In addition, the results confirm the role of digital points of contact and engagement of clients as a condition of e-CRM concept.

I. INTRODUCTION

The main goal of any company's marketing activities is satisfaction of its end consumers' and business clients' needs. Whether it is a traditional business or e-business, companies should always take into account this fact. This distinctive feature of marketing is especially prominent in modern day business environment, where one of the basic parameters of successful business is the quality of the relationship with clients, whether they are buyers, suppliers or other participants in business procedures. Companies have to know the needs of their customers, their habits, desires, in order to increase their loyalty in dynamic market competition. There are various studies about the need to create customer loyalty and to retain existing customers, and almost all of them refer to the fact that it is necessary to spend much more time, effort and money to acquire a new customer than it is necessary to retain relationship with the existing one. The convergence of computer and telecommunication technologies

improves the development of electronic networks and web sites. These web technologies help overcome many traditional problems connected with marketing services especially when the banks are concerned. Many authors examine websites in the context of integrated marketing that allows a greater understanding of the web as a commercial medium. In their research they (1) suggest that the advertising, sales and customer services over the web are main activities of e-commerce directed at consumers. In their research, they also (2) identified five points where companies can use the web as: market awareness, customer support, sales, advertising and electronic information service. There was also one more model of analysis and classification of e-business strategies proposed, (3) the one from a seller's perspective. The model describes four virtual business spaces: virtual information space, virtual communication space, virtual distribution space and virtual transaction space. I was also suggested (4) that the success of e-commerce will depend on site design, its modeling as an e-customer relationship management. CRM (Customer Relationship Management-CRM) is a business and communication strategy aimed at gathering information used to increase customers' satisfaction and loyalty, making the relationship with them better, longer and more profitable.

The knowledge of strategic marketing and internet technology is necessary for its successful implementation and the ultimate goal is to identify opportunities for establishing profitable relationships with clients, to form relationships and maintain profitable relationship with customers. As the banking industry and related markets inevitably come to the stage of maturity, clients have wider choice and are less loyal to one and the same bank. In order to avoid a price war, banks are left with only one option and that is to improve the level of their services, personalize them, so that the cost of switching to another bank would be unprofitable. CRM represents a key lever in the process of reorientation of the bank from organization -centric into customer-centric, and in that process, the most important part is the organization and analysis of the data and information through the Data Warehouse (Data Warehousing - DW), Data Mining (Data Mining - DM), Online Analytical Processing (On - Line Analytic Processing - OLAP) and Clickstream Analysis. The above mentioned methods are the main development directions of business intelligence. These

methods in interaction with appropriate internet marketing strategies and some other web technologies lead to constant improvements of bank websites through which it is possible to electronically manage client relationship.

II. DATA AND VARIABLES

A. Research objectives

The scope and purpose of this paper is the development of electronic customer relationship management (e-CRM) of banks based on the classical concept of CRM. Many authors suggest that the attitudes and motivations of consumers are the key factors which influence the acceptance of new technologies based on internet as a global service. Therefore, the objectives of this study focus on the research of:

- Engagement of clients as the basic precondition of e-CRM concept using web technology;
- The impact of demographic, psychographic and behavioral characteristics which affect the adaptation of e-business in the spirit of implementing e-CRM concept;

The methodology and research approach are based on qualitative and quantitative research. Qualitative research was conducted by surveying 128 people in four cities in Bosnia and Herzegovina from November 2009 to March 2011. The respondents were asked to answer the questions about the use of electronic banking. The questions in the survey are based on the use, attitudes and adaptation of citizens to e-banking and mobile banking as part of e-business activities which develop through the web and digital points of contact with customers through which e-CRM can develop. The comparison of attitudes of users and non-users of electronic and mobile banking relying on factors such as technology, safety, convenience, experience with online transactions, the possession of credit and debit cards are the digital points of contact with customers, and through them it is possible to implement the complete architecture of CRM and e-CRM concept. Guided by the architecture of customer relationship management Fig.1. main points for the development of e-CRM were analyzed through the following questions:

- Convenience of electronic banking;
- Simplicity of use of internet transactions;
- Access to the website of the bank;
- Location of internet access;
- The security of internet transactions;
- The use of debit / credit card;
- Experience with computers;
- Experience on the world wide web;
- Personal banking experience;
- Influence of reference groups

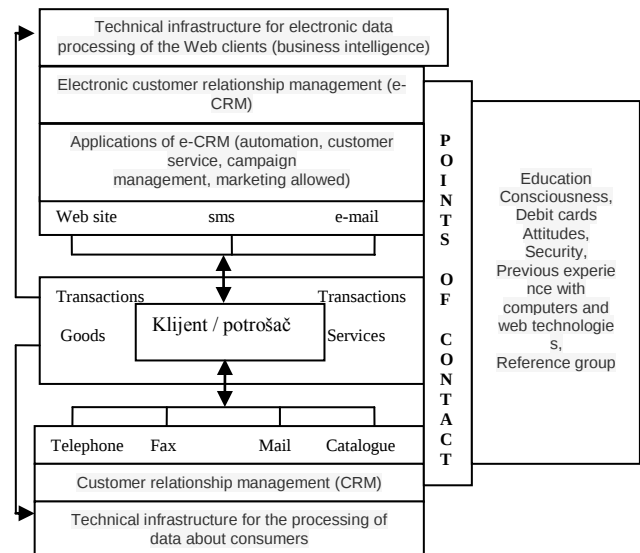


Figure.1. The architecture of customer relationship management

Source: Author's interpretation

The responses in the survey were evaluated by five points of Likert scale from Fully agree to Totally disagree. Data were collected by statistical random sampling technique and by analyzing the degree of interdependence of one and several factors - regression and correlation, t-test, using statistical software STATISTICA7.

The proportion of male and female subjects was approximately the same in this poll, with 53% male and 47% female respondents. Most responses were collected in the age group of 25-34 (participation in the survey, 57%) with secondary education (as employees 65%), age group 35-44 (participation in the survey, 20%) higher education (managers and senior managers 94%). The survey shows that a high rate of younger population has shown willingness to use the electronic banking services in comparison to older population who answered the same questions. One third of respondents are users of electronic banking (33%) of which 71% are male and belong to the age group of 25-34 years (71%). Factors and the current attitudes that affect the use of electronic banking as part of e-business are emphasized according to the basic issues that constitute the survey.

Education. The results have shown that education as a category does not significantly affect the use of electronic banking and the attitude on electronic commerce.

Consciousness. The Results of the survey pointed out confirmed differences between users and non-users of electronic banking in terms of their level of awareness about this banking service. The results have shown that people who do not use electronic banking, are not aware of what this service can provide. So, one third of respondents were aware of the benefits of electronic banking, while two thirds were not aware of the benefits that electronic banking can offer.

Owning credit / debit cards. The results have also shown and proven the difference between users and non users of electronic banking in terms of possession and use of debit / credit cards. Debit / credit cars are elements

which lead to use of more advanced electronic services such as Internet banking and Mobile banking.

Views of users and non-users of electronic banking. The views of users and non-users of electronic banking were compared on the basis of attributes that were identified in the literature as convenience, simplicity of use, service access from any place and at any time, trust, security and hacker attacks. Judging from the t-test, there were no significant differences, except in the categories of confidence and security. These factors have confirmed a significant difference between users and non-users of online banking.

Security. Hackers and fraud were a major obstacle in using electronic banking and online banking products.

Previous experience with web technologies and personal banking. Literature suggests that the previous experience with computers and new technologies preceded the positive banking experience which led to adaptation of online and mobile banking. The results have confirmed two factors, experience with computers and web technologies. T-test has showed and confirmed the differences between online banking users and non-users in terms of results that were based on previous experience with computers and web technologies.

The influence of reference groups. Respondents in one part of the survey were asked to evaluate the degree of the importance of reference groups, with five-points of Likert scale. The results showed that the reference groups did not have a major impact on the adaptation and use of online banking products as e-banking segments.

III. RELATIONSHIP OF CRM CONCEPT WITH OTHER MARKETING APPROACHES

A. Marketing and CRM concept

Building a long term relationship with customers is essential for sustainability of any business and the same is true for online business. During the last decades, the direct marketing, relationship marketing, one to one marketing and database marketing were combined to create a powerful new marketing paradigm. This paradigm is often called customer relationship management - Customer Relationship Management (CRM). Direct marketing provides marketing tactics for the delivery of marketing communications and sometimes the product itself to individual consumers. Relationship marketing theory is the concept about market sharing on the level of the individual. One to one marketing is a unique dialogue between companies and individual customers or customer groups with similar needs. Approach known as one to one marketing, in theory, is regarded as management on individual basis. But due to the cost of management relations at the individual level, many companies will apply CRM using approaches that automate services, develop relationships with specific clients or groups rather than with individuals. Today, adapted messages can be sent via e-mail, recommendations and promotions through the website. Delivering relevant messages includes companies in the development of long-term relationship with each client in order to understand better the customers' needs and then provide services that meet these individual needs. The interactive nature of the internet,

together with e-mail communication provides an ideal environment in which relationships with clients can be developed.

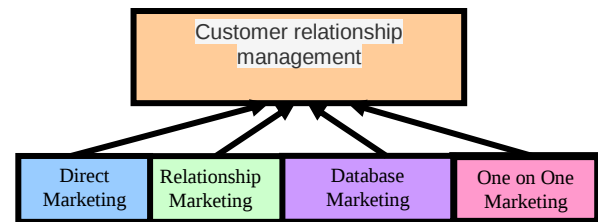


Figure 2 Relations between CRM and other approaches of marketing relationships.

Source: Dave Chaffey, Fiona Ellis-Chadwick, Richard Johnston, (2009), *Internet Marketing*, fourth edition Prentice Hall, pp. 330.

Marketing database predicts technological solutions, allowing access to the vast amount of data related to customers that enhance the strategic and tactical marketing opportunities. Databases provide the basis for storing information about the relationship and provide information for improvement of personalized services. This online approach to CRM is often known as electronic customer relationship management e-CRM. Customer relationship management (CRM) is an approach in building and maintaining long-term business contacts with clients.

IV. CHARACTERISTICS, TECHNICAL INFRASTRUCTURE AND APPLICATIONS OF E-CRM

A. Basic features of e-CRM

E-CRM is based on the use of digital communication technologies to increase sales to existing customers and encourage further use of online services. Electronic customer relationship management involves plans on how digital technology and digital data can support the management of customer relationship management. Some authors argue that those engaged in e-commerce should follow this concept as the basis of their work because it provides adequate benefits. From the perspective of banks, benefits of e-CRM are reflected in, at least, three aspects, and those are:

- achieving greater cost efficiency,
- achieving wide customization of marketing messages
- improving and increasing the depth and wideness of relations with clients.

Achieving cost-effectiveness is evident in accessing client's address. Traditionally, targeting customers through the mail is often based on the mailing list which is prepared in accordance with the appropriate criteria, but that means that all clients are contacted in the target market. For example, companies that want to acquire new customers can use zip codes to target the area with the appropriate demographic structure, but population can vary within one postal district. The result of such targeting can be poor response rate, perhaps even lower than 1%. Internet has the advantage that the contact list can be created on its own through bank website visits where customers express interest in the products and

services. During the process, customers can register and leave their name and address. The website visit and content search indicate target customers. Thus, the concept of gaining new clients and establishing relationships is essentially different from the traditional concept of CRM because it involves attracting customers to the web sites, where the bank offers registration and it continues to maintain relationships with those clients.

Mass customization of marketing messages is achieved through technology that allows you to send customized e-mails at a much lower cost than direct mail and personalization, customization of web pages can be done to meet customers' requirements.

Improving and increasing the depth and wideness of relations with clients is based on additional information supplied when needed. For example, through their websites, banks may provide more information on financial trends in future periods, on investments both local and global. The nature of the relationship with clients may be changed through frequency of contact.

It is important to emphasize that e-CRM can not be separated from the traditional CRM, the two need to be seamlessly integrated. The CRM and e-CRM are not just about the technology and database, it is not just a process or a way to order some parts, they require a complete analysis of the client's culture throughout his life. Based on the variables which were examined in this study, we have come to conclude that three basic types of customer data should be considered and those are:

- Information on personal profile. This data include contact details and characteristics for profiling customers, such as age and gender (B2C), industry sector and individual roles in the purchase (B2B).
- Details of transactions. These data represent a record of each purchase-transaction, including purchases of specific products, quantity, category, location, date, time and channel where it was purchased.
- Data about communications. These data represent a record of customers who were targeted by the campaign.

B. Technical infrastructure and applications e-CRM

For e-CRM architecture, electronic technical infrastructure integrates requirements for customer relationship management through the use of bank website, quality management of e-mail lists, data mining, quality control and management of online customer service experience.

Using the site increases the number of bank clients and manages relationships with clients through the conversion from offline to online customers. Quality Management of e-mail list refers to the coverage of e-mail address and the integration of customer profile information from other databases, which allows targeting. Data Mining improves targeting and customizes the online services which are intended for the customers. Quality Management of Online Services Clients who make a certain transaction for the first time, should have a good experience in order

to repeat it. Managing multi-channeled customer experience involves the use of different media as part of the transaction process in certain points of customer's life cycle. Basic e-CRM applications in banking are based on: sales force automatization (application of tools for organizing and recording site visits by clients), management of customer service (the representative in the contact center responds to customer requests based on internet accessed information data base, products and services, interests and previous queries), campaign management (management of advertising, direct mail, e-mail and other campaigns) Fig.1. Taking into account the record of site visits to banks by their customers, track of all transactions via electronic cards, result in one more key element of e-CRM concept, and that is customer engagement. Taking into account the rapid increase in fragmentation of online media, customer engagement in the implementation of online services or transactions is one of the leading elements in the implementation of e-CRM concept. To engage customers in an online context, it would be wrong to limit the understanding of engagement in the context of how much one spends time on the internet or turns into some other activity. An engagement represents a repeated customer interaction that fosters emotional, psychological or physical investment of a client in the product or the service. Client engagement has three parts that can be measured in online and offline form, such as participation, interaction and influence.

Participation is reflected in the visit to a particular website, time spent on the website, number of web pages visited etc. In our study participation as the first phase of client engagement is mirrored through the contact points with customers achieved on the basis of previous experience with web technologies, personal banking and attitudes of banking customers.

The interaction is formed by commenting on blogs, the frequency of reviews written on the website about a product or a service, comments about the service based on previous experience. In our study, the interaction has been confirmed as the second phase of the customer engagement through the use of web technology for online transactions.

The influence relates to measures which provide recommendations, content forwarded to friends, etc. In this study, the influence of reference groups is the third address, which is used to enhance customer engagement.

Permission marketing is a concept that supports e-CRM throughout customer's life cycle and as such, represents an application of e-CRM.

Permission marketing is a concept of marketing in which customers agree to be involved in the marketing activities of the bank, usually as a result of incentive. Consumers are usually bombarded with an average of 500 marketing messages per day, with occurrence of the internet and digital TV systems, this number has grown to over 3000 per day. From the point of marketing organization, this leads to dilution of effectiveness of messages which are sent by the company. Therefore customers pay less attention to the supply of companies, they lose patience and expect a

reward for their attention, time and information. In practical situations, we imagine that users / potential customers want to connect to the company via internet technology and to agree to accept further communication with the company, this approach is called an opt-in. Access to opt-in is a legal requirement in many countries. When customers / potential customers do not want to share information with companies and do not want to be part of the marketing activities of the company, such an approach is known as an opt-out. Selection of an opt-in communication is based on the client, because:

- the client selects content (news, information about products and services, events, etc.)
- the client determines the intensity of information received (daily, weekly, monthly, quarterly, annually),
- the client determines the channel through which to receive information (e-mail, direct mail, telephone, SMS),
- the client sets the text format (HTML or plain text).

V. CONCLUSION

E-business offers much more possibilities than the traditional business, as well as opportunities to create relationships with customers using the concept of CRM. It is true that this concept has its own uniqueness reflected in certain prejudices and a certain amount of uncertainty. The paper presented an example of just one segment of the customer relationship to CRM concept in the field of electronic banking which is also the most fertile ground for the development of e-business. The current electronic market in B&H is relatively small. The research shows that even in urban population use of e-banking is 33%. The findings from the survey show that the awareness of end consumers and business consumers in B&H about e-commerce is extremely small, viewed through the prism of financial industry. The finding also shows big difference in development of electronic commerce between B&H and EU. Consumers regard the use of e-business as risky, they fear hackers in particular, and frauds. There are also the questions of trust, use of plastic cards, awareness, experience with computers and experience with web technologies. In line with these findings, e-business in B&H must be developed in the spirit of applying standard and electronic CRM. The use of customer relationship management - CRM model using web technologies represents a fundamental advantage. CRM and e-CRM integration in the architecture of long-term business strategies of the company should give visible results in low costs, repeated transactions, the transition from offline to online visitors and becoming loyal customers of the company's online products or services. A key activity for the implementation of CRM model is to enhance client engagement through points of contact, both offline and online. Banks can influence the awareness about products and services and other elements that will improve retention of clients which is one of the main bases of efficient business.

In the future, the concept of CRM will be much broader and more comprehensive in order to keep pace with increasingly sophisticated clients, and clients who are willing to participate in creation of final products and services. This concept will be extended to manage relationships with consumer communities, suppliers, state, business partners and other organizations. Banks will have to consider options and strategies that will sustain in the market and be competitive at the same time, to achieve satisfaction of all parties in the relationship.

REFERENCES

- [1] Kalakota, R. and Whinston, A. B. (1996), *Frontiers of electronic Commerce*, Addison- Wesley, Reading, MA.
- [2] Cappel, J. J. and Myercough, M.A. (1996), "World Wide Web uses for electronic commerce: toward a classification scheme", <http://hsb.baylor.edu/ramsower/ais.ac.96/papers/aisor1-3.htm>.
- [3] Angehrn, A. (1997), "Designing mature Internet business strategies: the ICDT model" *European Management Journal*, Vol.15, No.4, pp. 361-369.
- [4] Agrawal, V., Arjona, V. and Lemmens, R. (2001) E-performance: the path to retail exuberance, *McKinsey Quarterly*, No. 1, 31-43.
- [5] Slywotzky, A. J. (2000), "The future of commerce" *Harvard Business Review*, January- February, p.39.
- [6] *Internet marketing*, fourth edition, Dave Chaffey, Fiona Ellis-Chadwick, Richard Johnston, Prentice Hall 2009. pp 108.
- [7] Jayawardhena C., Foley, P.(2000.). "Changes in the banking sektor – the case of Internet banking in the UK", *Internet Reserch: Electronic Networking Application and Policy*, (10), 1: 19-31.
- [8] Jagersma, P. K. (2003), "The competitive advantage of global banks", *The Future of Global Banking*, Hilton, London.
- [9] MacMillan, I. C. and McGrath, R. G. (1996) "Discover your products' hidden potential" *Harvard Business Review*, Vol. 74, pp. 58-73.
- [10] Lloyd, S.M.: *Loyalty.com: Customer Relationship Management in the New Era of Internet Marketing*, *Journal of Consumer Marketing*, Vol. 18., No. 4., 2001, str. 368-376.
- [11] Kellett, A., "Integrated Business Intelligence", Butler Group, April 2003.
- [12] Liautaud, Bernard, "e-Business Intelligence: Turning Information into Knowledge into Profit" McGraw-Hill, New York, NY, 2001.
- [13] Vujović, S., *Informacioni sistemi u poslovanju i menadžmentu*, Slobomir P Univerzitet, 2005., str. 439.
- [14] Kumar, V., Werner, J.R.: *Customer Relationship Management a Databased Approach*, John Wiley & Sons, Inc., USA, 2005.
- [15] *Elektronsko poslovanje i poslovna inteligencija*, Univerzitet "Braća Karić", Fakultet za trgovinu i bankarstvo, Beograd, 2005, str. 266.
- [16] Watson, R. T., Akselsen, S. And Pitt, L. F. (1998), "Attractors: building Mountains in the flat Landscape of the World Wide Web", *California Management Review*, Vol. 40No.2, pp. 36-56.
- [17] Griffith, D.A. and Krampf, R.F. (1998), "An examination of the Web-based strategies of the top 100 US retailers", *Journal of Marketing: Theory and Practice*, Summer, pp. 12-22.
- [18] Godin, S., (1999), *Permission Marketing*, Simon and Schuster, New York, pp. 285.
- [19] Dave Chaffey, Fiona Ellis-Chadwick, Richard Johnston, (2009) *Internet marketing*, fourth edition Prentice Hall, pp. 340
- [20] Dave Chaffey, Fiona Ellis-Chadwick, Richard Johnston, (2009) *Internet marketing*, fourth edition Prentice Hall, pp. 346.
- [21] Djordje Latic, (2010) *Online marketing in the banking*, master's thesis, Faculty of Economics Pale, University of east sarajevo

