CHARACTERIZATION OF e-BANKING TECHNOLOGICAL SOLUTIONS IN PORTUGAL

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Abstract: Economic activities are part of everyday life since always. The banking sector has a large dimension that exists for a long time, doing a major contribution to economic growth in Portugal. In this new millennium the advent of Internet has had a significant impact on the banking service that is traditionally offered by banks to customers. With help of the Internet, customers can access its banking services anytime, anywhere, since Internet access is available. This service is called Electronic Banking (EB), being in explosive growth in many countries, transforming the traditional banking practices. With this paper, we intend review, evaluate and characterize the technological solutions of EB in Portugal.

1 INTRODUCTION

The banking sector has a large dimension that exists for a long time, doing a major contribution to economic growth in Portugal. In this new millennium the advent of Internet has had a significant impact on the banking service that is traditionally offered by banks (Liao and Cheung, 2003). With help of the Internet, customers can do their banking anytime, anywhere, since Internet access is available. This service is called Electronic Banking (EB), being in explosive growth in many countries, transforming the traditional banking practices (Liao and Cheung, 2003). By offering services with EB, the financial institutions seek to reduce operating costs, improve banking services, retain consumers and expand customers share (Lichtenstein and Williamson, 2006). This article has the main purpose of review, evaluate and characterize the technological solutions of EB in Portugal.

This paper is organized as follows. Section 2 characterizes the concept of banking on the Portuguese market. Section 3 presents the issues related to the concept of EB. Section 4 is the main contribution of this article, identifying a sample of EB platforms, the parameters evaluated and assess according to the defined criteria. Section 5 concludes the paper.

2 BANKING

Although the concept of banking is directed to the financial area, involving the movement of capital, its definition can lead to several subjectivities. Many sociologists believe that the financial and banking market is a system of social interactions, where banks are the key intermediaries.

2.1 Portuguese Financial System

The Portuguese financial system has been subject to major structural reforms, which contributed to the increasing of its efficiency, with the privatization of existing banks, the liberalization of markets, in deregulation and alignment of existing regulations in Portugal to other economies, and increasing modernization of the institutions, mainly driven by the adoption of new technologies.

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Between 1985 and 2003, while the national GDP has increased, in terms of market prices, more than 6 times, the assets of banks grew more than 12 times, representing twice the growth. Although the Portuguese economy has suffered some progress, not all of its developments have been positive. Through Figure 1 is possible to obtain an approach of Portuguese economic situation in historical perspective. Portugal has recently suffered a slowdown in economic growth relative to richer countries of the EU, leading the national banking institutions development to constraints on their growth (Blanchard, 2006).

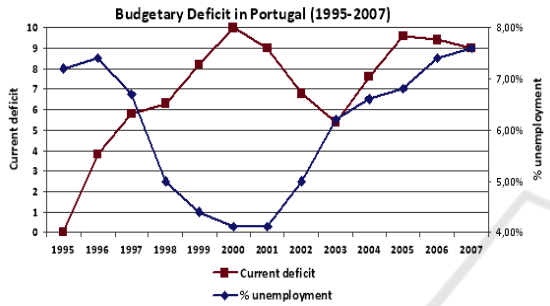


Figure 1: Budgetary deficit between 1995 and 2007. Adapted from: (Blanchard, 2006).

3 e-BANKING

For centuries, many financial transactions required human presence. This peculiarity has been amended with the emancipation of ICT. Currently, a customer can make several financial activities without entering a bank branch. This phenomenon is known as EB (Beck, 2001), offering a range of services and activities by digital means, usually provided through a bank.

3.1 Appearance of EB

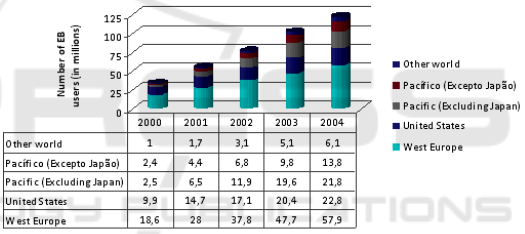
It is estimated that EB via Internet began in 1995, indicating the use of Internet as a channel for delivery to remote banking services (Gopalakrishnan et al., 2003), however, some banks have had informational Web sites before using phone as EB channel. In Portugal a first step in EB was given by BCP, with the release of several multimedia kiosks providing the customer with bank information (Beck, 2001).

3.2 Factors that Influenced the Adoption of the EB

Several converging areas of reference and theories suggest many influences on the adoption of EB, including theories of costumer behavior in the choice and use of the media, diffusion of innovation, acceptance of the technology, service and transaction costs, among other (Lichtenstein and Williamson, 2006).

3.3 Adoption and Use of EB

Since EB's appearance, there have been some constraints in its usage and adoption. In Europe, differences between countries appeared to be largely explained by differences in the availability of Internet access. Recently, EB users are relatively satisfied with the quality of banking online (as can be seen through Figure 2, where the number of users of EB has increased on several countries over several years).



	2000	2001	2002	2003	2004
Other world	1	1,7	3,1	5,1	6,1
Pacifico (Excepto Japão)	2,4	4,4	6,8	9,8	13,8
Pacific (Excluding Japan)	2,5	6,5	11,9	19,6	21,8
United States	9,9	14,7	17,1	20,4	22,8
West Europe	18,6	28	37,8	47,7	57,9

Figure 2: Number of EB users. Adapted from: (Perumal and Shanmugam, 2004).

In Portugal, according to data from the study Netpanel and Marktest in May 2008, 1072 thousand accesses were made on the banking websites, representing a growth of 3.2% when compared to April 2007, and 4.3% from the same month of 2007.

4 CHARACTERIZATION OF TECHNOLOGY SOLUTIONS FOR EB IN PORTUGAL

4.1 Survey of Financial Institutions

For a further analysis and characterization of platforms and consequently the EB in Portugal a survey of financial institutions currently operating in Portugal was conducted, having been prepared in accordance with the data of financial institutions

entered the Bank of Portugal. The analysis concluded that the number of financial institutions with online presence is considerable big – most of the financial institutions have a website. This majority of EB platforms have a large percentage of EB services.

4.2 Analysis and Presentation of Parameters to Assess

To make the analysis and evaluation of a EB platforms sample, it was necessary to conduct a survey of different parameters to assess. Several authors (Guru et al., 2003; Awamleh and Fernandes, 2005; Goi, 2006; Miranda et al., 2006; Al-Mudimigh, 2007) consider essential the existence of information, transactional and communicative services, or relationship with the customer in the platforms of EB. Based on the analysis of features to be included in solutions of EB in the prospects of the mentioned authors, were set the following parameters for further evaluation:

- Quality of website;
  - Accessibility
  - Performance
  - Navigability
  - Content
- Informative functionalities;
- Transactional functionalities;
- Communicational functionalities.

4.3 Definition of Platforms Sample to Evaluate

The sample defined of EB platforms consists of the 5 largest banks operating in Portugal in terms of financial assets and market share – CGD, BCP, BES, BPI and Banco Santander Totta (APB, 2007; BP, 2008) and the bank BEST, a bank exclusively online.

4.4 Evaluation of the Sample

All EB platforms analyzed consist of two parts – a public part, available to any user, with informative content about the institution, its products and services available, and a private side, available only to customers with private credentials. To evaluate the accessibility and performance of platforms, were used some tools such as Total Validator, ATRC, World Wide Web Consortium, among others. In Figure 3 we can view the results of accessibility evaluation made with resource to the mentioned tools.

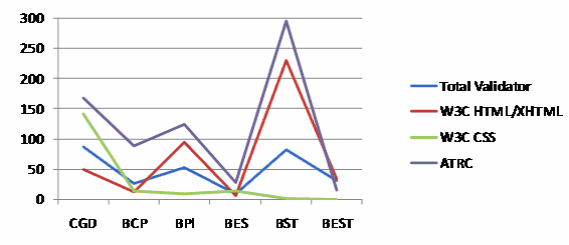


Figure 3: Quality of platforms – accessibility.

By analyzing the Figure 3 it is possible to check that the platform with the largest number of accessibility issues is Banco Santander Totta (BST) platform. To assess the navigability of platforms, some operations were carried out in order to gain sensitivity towards the various aspects while browsing in them. Regarding the platform's quality, other parameters such as performance, navigability and content were evaluated, as shown in Figure 4.

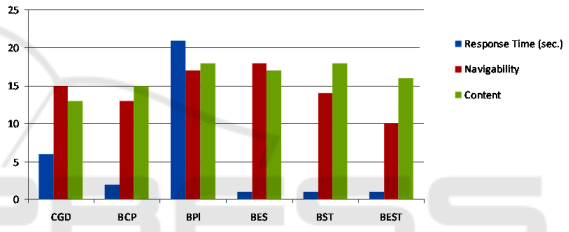


Figure 4: Quality of platforms – performance, navigability and content.

To evaluate the response time, Total Validator was executed five times. As shown in the chart, the platform that presents a greater response time is the BPI's, being the BEST, BES and Banco Santander Totta's platforms those with a shorter response time, followed by the BCP and CGD platforms.

In terms of navigability, it was attributed a quote (from 1 to 20) for each platform to the problems or constraints encountered along the navigation on the platforms. Regarding the content, each platform has its own layout, existing several similarities between them in terms of designation of operations and disposition of contents. After evaluating the quality of the sample, their functionalities were evaluated. Figure 5 reflects the results of these evaluations.

Most of the evaluated platforms dispose the necessary functionalities for EB practices, respecting the defined evaluation parameters of the present study.

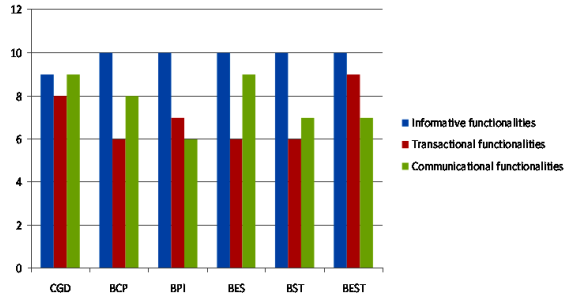


Figure 5: Evaluation of informative, transactional and communicative functionalities.

5 CONCLUSIONS

According to data presented during this article, we may conclude that the usage of EB in Portugal is on growth, following the international developments and demystifying the adoption to these types of services and platforms. It is clear the leadership of EB services by CGD, with the largest number of access. In terms of features and/or characteristics, the majority of technological solutions studied have the necessary features for the achievement of most banking operations for this type of service. The final evaluation of the various parameters is positive, being Portugal and accomplishing the international technological advances.

ACKNOWLEDGEMENTS

It is hoped that this work will serve as basis for the financial institutions under study to make improvements in their EB platforms, offering a better service, fitting as most as possible the needs of its customers. It can also serve as a resource for customers who seek a robust reference of EB platforms classification operating in Portugal, to achieve a qualitative perspective, allowing them to meet the major strengths and weaknesses of these platforms, and demystify the uncertainty aspects of EB services.

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