

WESTERN BALKANS BANK WEBSITE COMPARATIVE ANALYSIS USING WAI INDEX

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ABSTRACT

Electronic banking has become very important banking channel in the efforts to reach the Customers. Comparing bank's websites is a tedious job unless one has a standardized and clearly defined methodology of evaluation. Quality of web home pages was determined using an original Web Assessment Index, which focuses on four categories: accessibility, speed, navigability and content. The idea is not to find out which site is better rather than the other, but to identify the mistakes made with a view to correcting them, thus improving the operations conducted through the Internet. Research is focused on the Balkan's countries. In this paper we have developed and presented the WAI index mathematical model. These findings will be useful for both researchers and practitioners who seek to understand the issues relevant to electronic banking.

Key words: *website, WAI, comparative analysis*

1. INTRODUCTION

In the history of Internet in Western Balkans Area, banks were the first institutions that published their websites on the Internet. In the meantime, Websites became a significant place for mass information, marketing and conducting business. Naturally, being aware of its potential, each bank approached website design carefully and made all their efforts to design their website in the best possible way. However, comparing Websites is not recommended unless there is a Standard Evaluation System in place. In this paper, for Website comparison we used WAI (Web Assessment Index) Method. The idea was not to discover which Website is better than the other, but to point out the mistakes which need to be corrected and E-business improved.

2. BANK WEBSITE CRITERIA SELECTION FOR ANALYSES

Since the beginning of the Internet, many researchers were continuously working on the estimation of Website business performances. In 1997, Liu *et al.* [1] was doing Website analyses of the most successful companies in Information Technologies. For commercial profile overview of Web usage, in 1997, Ho *et al.* [2] was doing a study, in which he suggested the Value Matrix. The Matrix included a business scope of Websites classified in categories and types of value created on the Web from the users' perspective.

In 1999, Evans and King *et al.* [3] wrote about the role of marketing in development and management of B2B Websites. They developed following 5 categories for Website estimation: Home Page, overall Website design and performances, text, audio-visual elements and interactions. For comparison of Internet strategies of Japanese and American companies, in 1999, Simeon *et al.* [4] used an approach for measuring the influence of factors such as: Web design, positioning, information presentation and delivery services. Combination of these factors has an impact to a strategic position of Websites and ensures a platform for a development. In 2000, Huizingh *et al.* [5] studied the comparison of Websites based on their source (Yahoo i Dutch Yellow Pages) and industry sector. Content and design of the Website has been considered and measured by different attributes: informative content, transaction content or communication content; navigation design, search options and by objectives i.e. subjectives.

In 2000, Bauer and Scharl *et al.* [6] developed a set of operational criteria for automotive methodology Website classification, and analysed both the content and the structure. In 2002, Palmer *et al.* [7] developed a research for identification of the key metrics for definition of usage elements, design elements and performance elements. Results of the research showed that the success of the Website depended on accessibility speed, navigatibility, content, communication and user feedback.

Most recent approaches were focused on general content management or specific set of final results of the Website. Usually, preferred assessment caould be achieved by using some relevant sample characteristics for the analyses. Some estimated models include subjective factors such as: easy access, clear text, presentation quality, colour appeal, sound appeal, etc. In order to minimise the subjectivity, Website evaluators should be given precise directions for evaluation of each factor, because a large group of factors is needed.

In wanting to avoid main faults of earlier model, in 2001, Buenadicha, *et al.* [8] developed new index for Website estimation (Web Assessment Index ili WAI), which could be used for current comparison of the use of Internet by different organisations. This model is given in Figure 1, and was used for estimation of Spanish Universities Websites. Miranda and Banegil *et al.* [9] used WAI Index in 2004 for their study of 200 biggest Spanish companies. Miranda *et al.* [10] used it for Quality Estimation of Spanish Bank Websites in 2006.

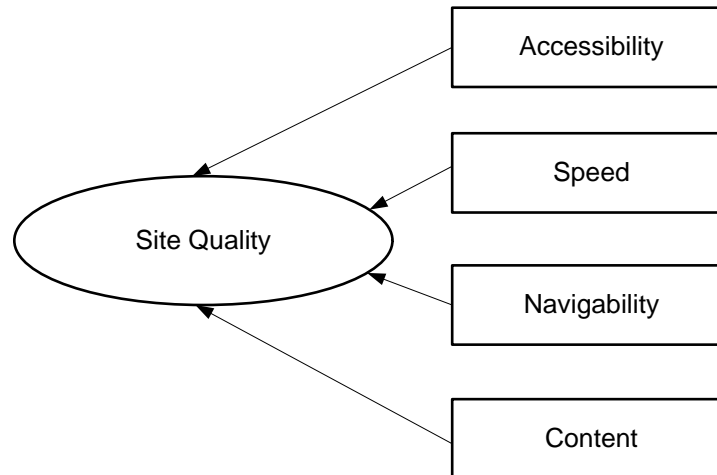


Figure 1. Site Quality Estimation Model

WAI Index has four basic categories for Site Quality: Accessibility, Speed, Navigability and Content. Key factor selection is based on the literacy and users' knowledge of the Internet and it must portrait what is being considered as an important components of the Website from the view of the user.

First category of WAI Index is Accessibility. It is obvious that Site quality is higher when users can easily identify and access the Website. However, counting page visits does not portrait exactly Site quality or Website popularity. In order to indentify accurate Website accessibility, scalable measures must be identified. That is why following two indicators were used for measuring Accessibility: Presence on Search Engines and Link Popularity. Higher Presence on Search Engines allows more access to the Website and therefore increases access level. In this paper, Google will be used as a reference for Presence on Search Engines, because it is the most frequently used Search Engine in the Western Balkans Area.

Second indicator of Accessibility is Website Popularity. The most frequent scale for performance measurement is the number of scores generated by the Website. But, there was still a problem with accuracy of this type of measurement. If Website has graphics each graphic gets new score and there are also some methods for artificial increase of number of scores. This means that number of scores does not necessarily shows the number of Website visits. Taking this fact into the consideration, we decided to use another type of measuring which is related to defining a link popularity as a rank of Alexa Website list (www.alexa.com).

Website Accessibility and Response Time are obviously very important because the time is always a critical factor. Some studies showed that there is a significant relationship between time of opening the Webpage and user satisfaction. Website Accessibility was measured by Online Chronometer, but this type of measuring was influenced by many factors such as: hardware, Internet connection time, Web Traffic etc. In order to minimize the number of errors, measurements were made at the same time, from the same computer, using the most popular Search Engine Internet Explorer 6.0. Cable connection was used for Internet Access. Websites were re-accessed successively for more representative average results, using national central bank address, where all national banks are listed.

Third category of our index is what we call Navigability. Poor design will result in loss of potential customers, because in this case, customers will not be able to find what they need and also there will be a loss of potential revisits because of initial negative experience. Considering the fact that user should never feel lost on the Website, each Webpage must have sufficient information and must contain links for all main contents of the Website. For a good site quality is essential that Index is always visible to the user, allowing users fast access to required location. Following are factors that were used for evaluation of this category:

- Permanent Website Menu that allowing fast access to different parts of each Webpage
- Search by the key word, allowing users to locate items of interest on the bank's Website

Site Content Quality evaluation will be based on all relevant information present for users. The Website must have the content that satisfies needs of the user and it must be updated on regular basis. Bank Websites may have different characteristics, including product information and contact information, which includes User Feedback, General Information about the bank etc. Also, information that are important should be readily available. For example, if 80% of users are looking for 20% of information, then that information should be visible and easily accessed. General contact information of the organisation should be placed on the Home Page Menu and information should be linked rather than scattered on different parts of the Website. Factors selected for content quality quantification were based on the content of the Website and identified in earlier studies and researchers' experience. Banks use Web to achieve three goal:s informing the market, delivering bank products and services and improving a relationship with clients. Based on the level in which banks used these 3 functional possibilities on these Websites there can be Informative Content, Transaction Content or Post-Transaction Content. This means that we considered three set of factors in order to estimate the content of the Website, using binary Yes/No scale.

2.1. Informative Content Factors

Basically, most Websites are information oriented, offering both commercial and non commercial information about the bank. It can provide basic information about the company, their business partners, important clients and social politics. One more important segment is description of products/services, including prices, specifications, photos etc. Also, recently, companies started to use their Websites for providing useful financial information to their shareholders. Therefore, we considered following 5 informative factors:

- General Company Information
- Products / Services Information
- Price Information
- Cash Machine Information and Subsidiary Information
- Financial Information

2.2. Transaction Content Factors

The extremely wide use of Internet allowed financial institutions to offer their products and services. We differentiated these factors into two categories. Firstly, organisations that use Internet to offer their products and secondly, organisations that use Internet as an information channel only. Transaction content of tested Websites can be divided into 4 categories: E-Communication, General Requests (Bank Statement of Account Balance), Special Requests, Money Transfers, Broker Activities, Investment and Saving Advices, Accounts and Payment Cards, Loan Applications, Tax Payments, Mobile Pre-Paid Cards.

2.3. Communication Content Factors

Considering the fact that Websites are often the first place where information about the company can be viewed and that visitors usually want to immediately access bank information, contact information should be placed on the Home Page Menu allowing easy access. In order to evaluate communication capacity of each Website, we identified the following items:

- Contact Email
- Contact Phone
- Contact Address
- User Feedback Tools

After defining all categories and factors, we evaluated them based on 100 sum total). Considering the fact that the content of the Website is the most critical aspect of the Website, because it is the content that allows the access to relevant information and services, we gave 55 points to this category and 15 points only for each of remaining 3 categories as shown in table 1. These measurements were based on recent study analyses, and were based on the insight of different E-Banking experts. Also, to ensure the credibility of this assignment, 3 users were engaged to evaluate the Website. Each user gave comparative importance to different category in the instrument. First of all, users distributed 100 points within 4 categories, and then further distributed points to each subcategory. Delphi Analyse allowed us to determinate the final list of items and its importance. The use of the subjective importance could be considered as a main limit of our study. Values of different categories and sub categories are given in as shown in Figure 2.

Table 1. Website Estimation Criteria

CATEGORY	VALUE	CATEGORY	VALUE
ACCESIBILITY	15	NAVIGATION	15
Presence on Search Engines	5	Site Map	10
Popularity	10	Key Word Search Engine	5
SPEED	15		
Website Access Speed (in sec's)	15		
CONTENT QUALITY	55		
Informative Content	20	Transaction Content	20
General Bank Information	4	E-Banking	10
Product/services Information	4	E-Communication	1
Price Information	4	General Requests	1
ATM & Subsidiary Information	4	Special Requests	1
Financial Information	4	Money Transfers	1
Communication Content	15	Broker Services	1
User Feedback	6	Investment & Savings Services	1
Contact Phone	3	Accounts and Payment Cards	1
Contact Address	3	Loan Applications	1
Contact Email	3	Tax Payments	1
		Mobile Pre Paid Cards	1
		TOTAL	100

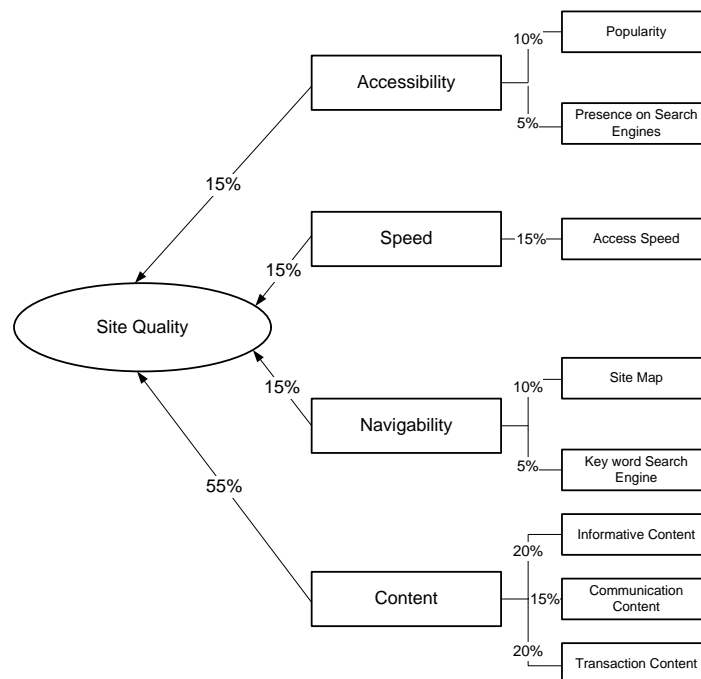


Figure 2. Site Quality Estimation Categories and Sub Categories

2.4. Analysis & Results

As any other financial institutions, all Western Balkans banks have their own Website, because financial institutions take great advantage in e-business. According to WAI index, the most quality Western Balkans Websites originate from Serbia and Croatia. Two most popular are Websites of Erste Bank A.D. Novi Sad with 97.80 points and Société Générale banka Srbija A.D. Beograd with 97.24 points, being the best Websites in Serbia. Following are Erste & Steiermärkische Bank d.d. with 97.22 points, the most popular Croatian Website, and Hypo Alpe-Adria-Bank A.D. Beograd with 97.10 points. 90-100 Index includes 11 banks from Serbia and 3 banks from Croatia, i.e.

14 banks, making a total of 125 banks in the Region (11.2%) - Scheme 1. 80-90 Index includes 18 banks (14.40%) with (10 banks from Serbia, 4 banks from Croatia 1 bank from Montenegro (Hypo Alpe-Adria Bank AD Podgorica) with 85.63 points, the best Website in Montenegro, and 2 banks from Macedonia (Stopanska Banka AD Skopje with 85.41 points and Izvozna i Kreditna Banka AD Skopje with 83,55 points. 70-80 Index includes 23 banks (18.40%), 7 banks from Serbia and Croatia, 3 banks from Montenegro, 4 banks from Macedonia and 2 banks from Bosnia & Herzegovina (Hypo Alpe Adria Bank d.d. Mostar with 74.87 points and NLB Tuzlanska banka d.d. Tuzla with 71.64 points, which are the leading banks in the Republic. 60-70 Index includes 24 banks i.e. 19.20% from all banks (9 from Croatia, 7 from Bosnia & Herzegovina, 3 from Serbia i 2 from Montenegro). 50-60 Index includes 20 banks (16%), 8 from Bosnia & Herzegovina, 6 from Croatia, 3 from Macedonia, 1 from Serbia and 1 from Montenegro). 50 and below Index includes 26 banks (20,8%) (11 from Bosnia & Herzegovina, 6 from Macedonia, 5 from Croatia and 4 from Montenegro) as shown in Figure 3.

In Figure 4, Below 30 Index is related to 1 bank from Macedonia (Alpha Bank AD Skopje 28.05 points and 2 banks from Bosnia & Herzegovina: Postbank BH dd with 27.60 points and Investiciono-komercijalna banka d.d. Zenica with 23.33 points.

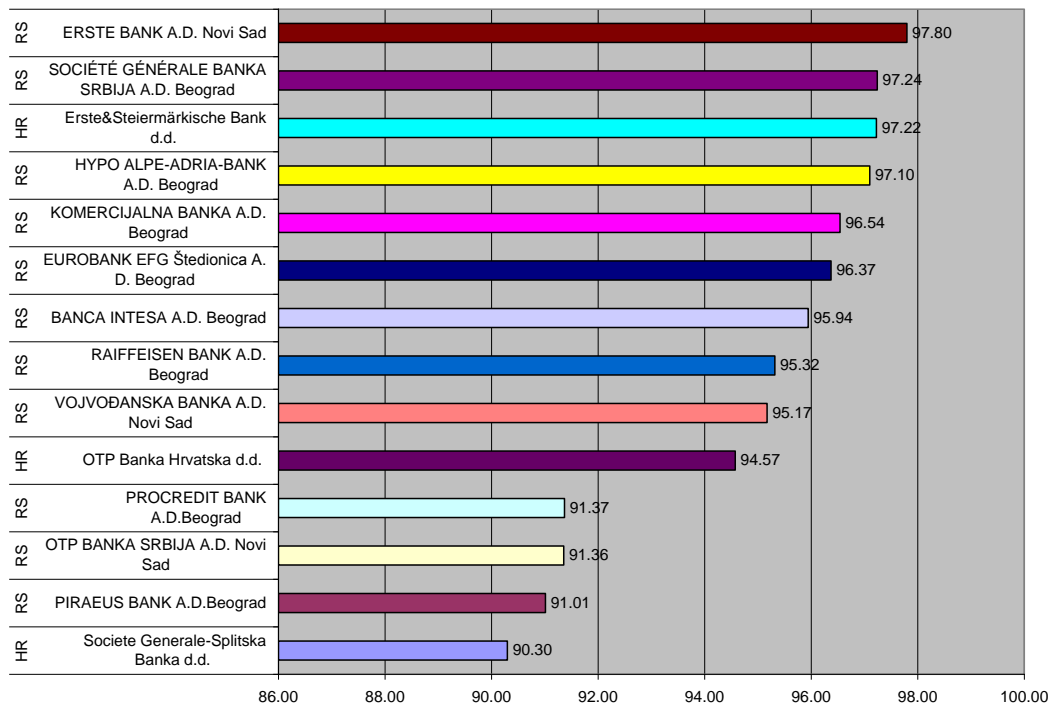


Figure 3. WAI Evaluation of Western Balkans Banks Website with 90-100

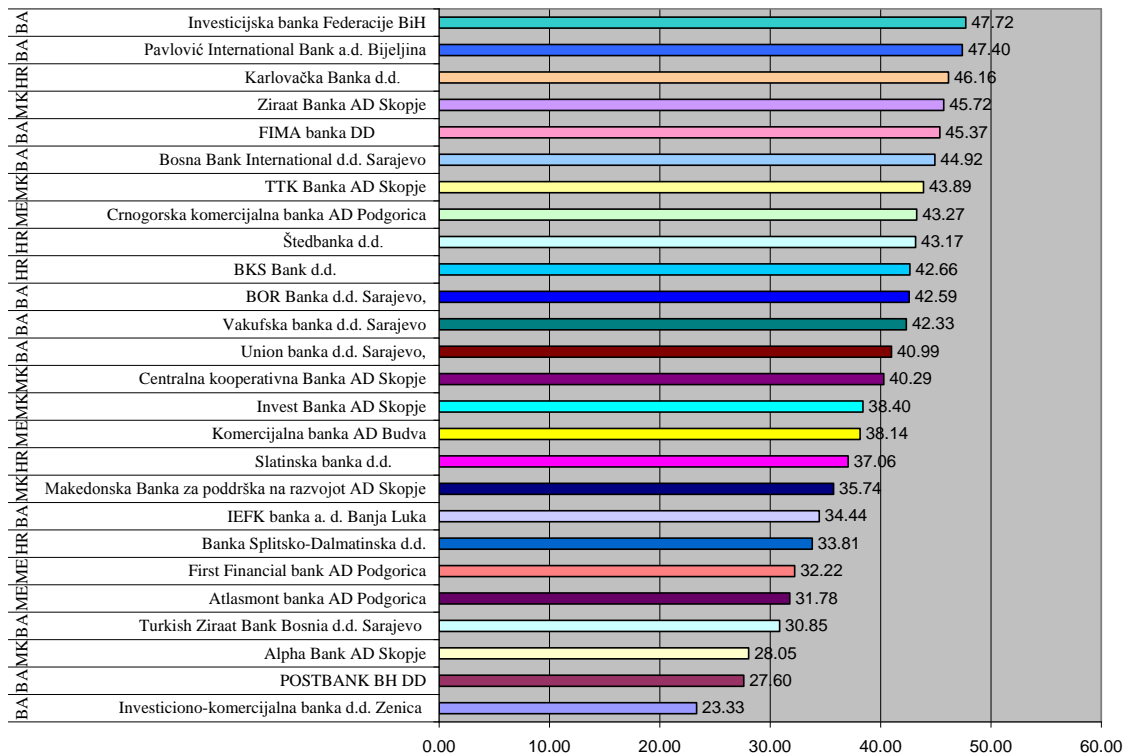


Figure 4. WAI Evaluation of Western Balkans Banks Website with 50 and below Index

2.5. Accessibility

In this category, accessibility of Bank Websites with 90-100 Index is the highly rated. In figure 5 Analysis shows that a Website of Komercijalna banka A.D. Belgrade, Serbia with 14.96 points is the most accessible according to both criteria, Presence on Search Engines and Link Popularity. Next is Hypo Alpe-Adria-Bank d.d. from Croatia with 13.97 points, Website of Erste banka A.D. Novi Sad, Serbia with 13.94 points, Website of Societe Generale-Splitske bank d.d. from Croatia (Scheme 3). This means that there is one (0.8 %) bank only has morethan 14 points. In the group of 12-14 points there are 19 banks (15.20%): 11 from Croatia, 6 from Serbia, 2 from Bosnia & Herzegovina. Over one quarter of Western Balkan banks (33 or 26.40%) are placed within 10-12 Index and includes 13 banks from Serbia, 11 from Croatia, 8 from Bosnia & Herzegovina and 1 from Montenegro. The largest number of Websites are within 8-10 index, there 43 (34,40%) Websites: 13 from Bosnia & Herzegovina, 10 from Macedonia, 9 from Croatia, 8 from Serbia, 3 from Montenegro. According to WAI Index, the lowest positioned are Websites on the back, with 8 points only. From total 29 (23.20%) of banks, 8 banks are from Macedonia, 7 from Croatia, 7 from Montenegro, 6 from Bosnia & Herzegovina and 1 from Serbia. Websites of Stopanske banke AD Bitola are hardest to access (0 points), and Hipotekarna banka AD Podgorica, Opportunity Bank AD Podgorica, First Financial Bank AD Podgorica (2,65 points per each only).

According to the Popularity Link Criteria, there is a huge gap between Alexa Website rank, from 38.515 (Zagrebačka banka d.d. Croatia) to 28.210.990 (Stopanska banka AD Bitola, Macedonia). The highly rated Western Balkans banks in the world are following: Zagrebačka banka d.d. (38.515), Privredna banka Zagreb d.d. (60.454), Volksbank d.d. (75.122), Raiffeisenbank Austria d.d. Zagreb (79.163) and Erste&Steiermärkische Bank d.d. (85.615) from Croatia, then there are Komercijalna banka A.D. Beograd (144.726) and Raiffeisen banka A.D. Beograd (247.090) from Serbia, which is significantly below the rank of best Spanish banks (La Caixa 1.325. in the world and Banco Español de Crédito 11.959. in the world). Most Western Balkans banks, 75 (60%), are ranked within interval from 1.000.000 to 10.000.000.

According to the criteria of Presence on Search Engines, taking the most popular Western Balkans Search Engine Google as a reference with most popular bank keywords such as: account, card, loan, rate, money transfer, the best rated are Komercijalna banka A.D. Beograd, Serbia with average value 36.4, and Erste banka A.D. Novi Sad, Serbia with average value 116.4 and Hypo Alpe-Adria-Bank d.d. Serbia 121.4 from Croatia. There are 11 (8.8%) banks only (6 from Serbia and 5 from Croatia) with average value 100-200, i.e. they are present on Google pages 10 to 20.

On Google pages 20 to 30 there are 16 (12.8%) Websites present (8 from Serbia, 4 from Croatia, 3 from Bosnia & Herzegovina and 1 from Montenegro), and on pages 30 to 40 there are 24 (19.2%) Websites present (6 from Serbia, 10 from Croatia, 7 from Bosnia & Herzegovina and 1 from Montenegro). The largest number of Websites are present on pages 40 to 50, 39 (31.2%) (9 from Serbia, 12 from Croatia, 13 from Bosnia & Herzegovina and 5 from Montenegro), but all Websites from Macedonia (18) are present after page No 50, where there are total 34 (27.2%) Western Balkans Banks Websites: 3 from Serbia, 3 from Croatia, 6 from Bosnia & Herzegovina and 4 from Montenegro.

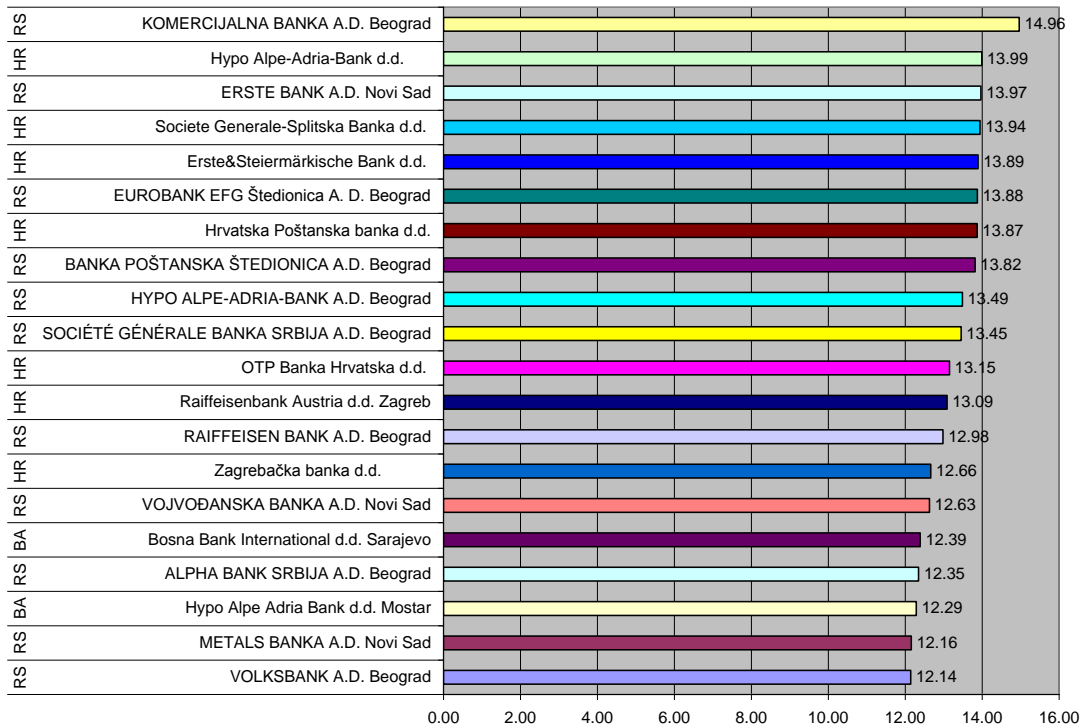


Figure 5. Accessibility of Western Balkans Banks Websites with total of 12-15 points

2.6. Speed:

Typically, those Websites that were easy to access were also easy for the navigation as shown in Figure 6. The fastest access speed is on the Website of Alpha banke A.D. Beograd from Serbia (1.34 sec), and the slowest access speed is on the Website of Turkish Ziraat Bank Bosnia d.d. Sarajevo from Bosnia and Herzegovina with 37.64 sec. First seven ranked Websites are from Serbia and 5 banks have access speed below 2 seconds (Alpha banke A.D. Beograd (1.34 sec), AIK banka A.D. Niš (1.7 sec), Erste banka A.D. Novi Sad (1.74 sec), Čačanska banka A.D. Čačak (1.86 sec) and Banca Intesa A.D. Beograd (1.94 sec). Following are Websites of banks from Croatia with opening time 3 to 4 seconds. If we view the Website opening rank, we will notice that 25 (20%) of banks has opening time between 1 and 5 seconds (12 from Serbia, 6 from Croatia, 3 from Bosnia & Herzegovina, 3 from Macedonia and 1 from Montenegro). Also, there are at most 45 (36%) of banks with opening time between 5 and 8 seconds (12 from Serbia, 13 from Croatia, 5 from Bosnia & Herzegovina, 9 from Macedonia and 4 from Montenegro), then 32 (25.6%) banks have opening time between 8 and 12 seconds (8 from Serbia, 6 from Croatia, 10 from Bosnia & Herzegovina, 4 from Macedonia and 4 from Montenegro). 23 (18.4%) bank Websites are the slowest with opening time over 12 seconds 23 (18.4%): 1 from Serbia, 9 from Croatia, 11 from Bosnia & Herzegovina, 2 from Macedonia. Considering the fact that the rate is in seconds, Internet users that have cable connection have fast access to bank Websites, such is the case here (Figure 6). Maximum number of points (0-15) were given according to the Website opening speed in figure 7

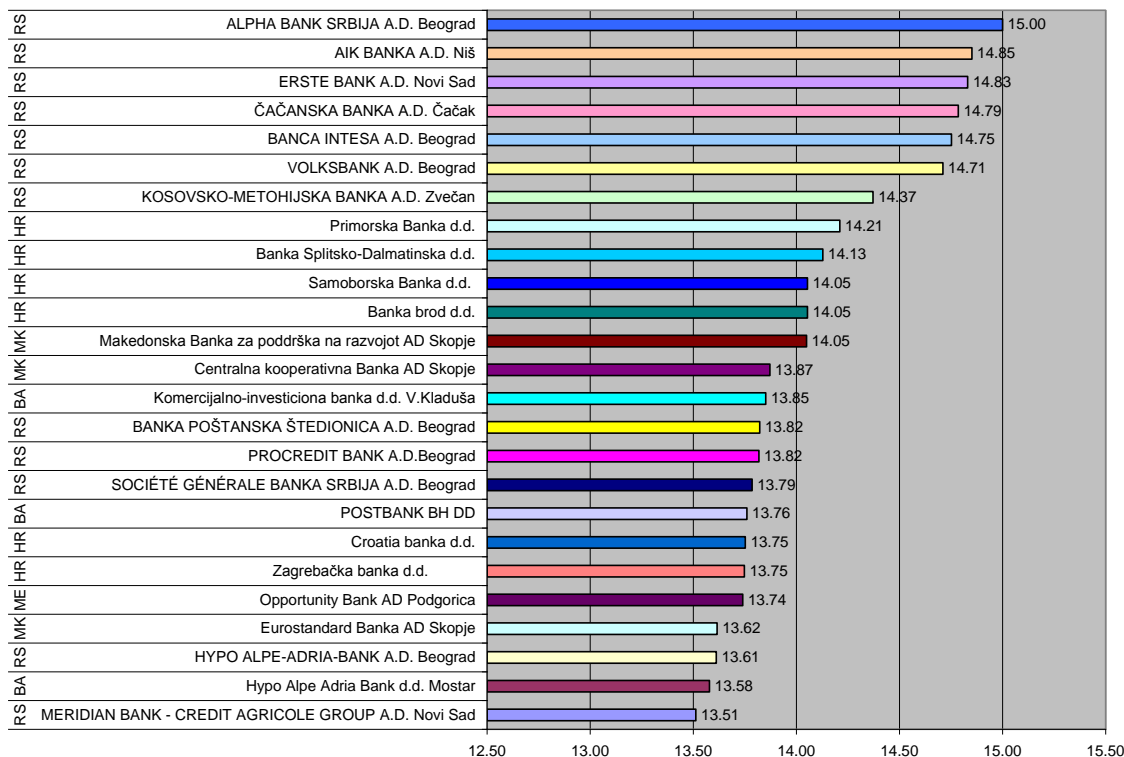


Figure 6. Website Opening Speed on Western Balkans Banks Websites

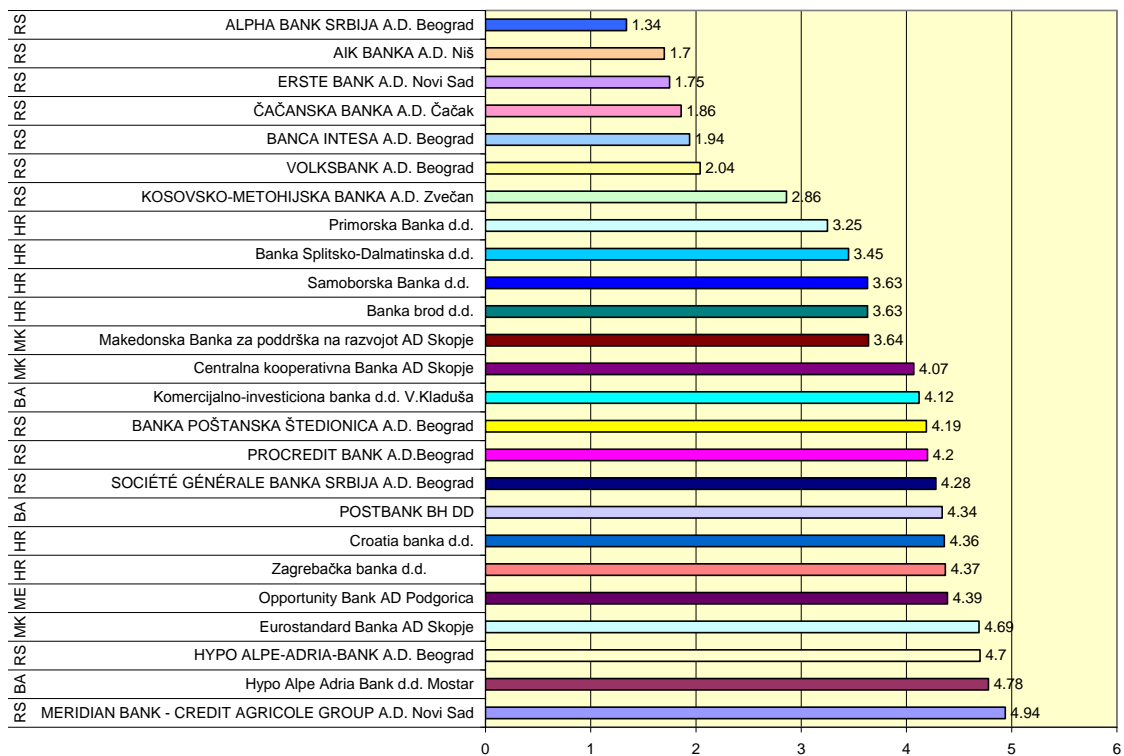


Figure 7. WebSite Opening Time (in sec's)

2.7. Navigability

Being aware of the importance of accessibility Marketing Departments of banks implemented on their Website a Site map and Key Word Search Engine. Most of Websites belong to Western Balkans Banks: 47 (37.6%), Figure 8. However, this is not equally per each country. The leading position belongs to banks of Serbia and Croatia because there are 19 banks from Serbia (57.58% of banks) and in Croatia there are 15 banks (44.12% of banks). In Montenegro, there are 4 banks (36.36% of banks), in Macedonia there are 4 banks (33.33% of banks) and in Bosnia & Herzegovina there are 3 banks only (10.35% of banks), Scheme 6. Considering the fact that there is a huge number (41 banks i.e. 32.8%), of Websites that have no Site Map nor Key Word Search Engine, something should be done in order to change this, especially for banks in Bosnia and Herzegovina, Montenegro and Macedonia. There are 18 banks (14.4%) that implemented Site Map (6 from Serbia, 4 from Croatia, 4 from Bosnia and Herzegovina, 3 from Macedonia and 1 from Montenegro) and Key Word Search is being implemented in 19 banks (15.3%): 2 from Serbia, 9 from Croatia, 4 from Bosnia and Herzegovina, 3 from Macedonia and 1 from Montenegro as shown in figure 8.

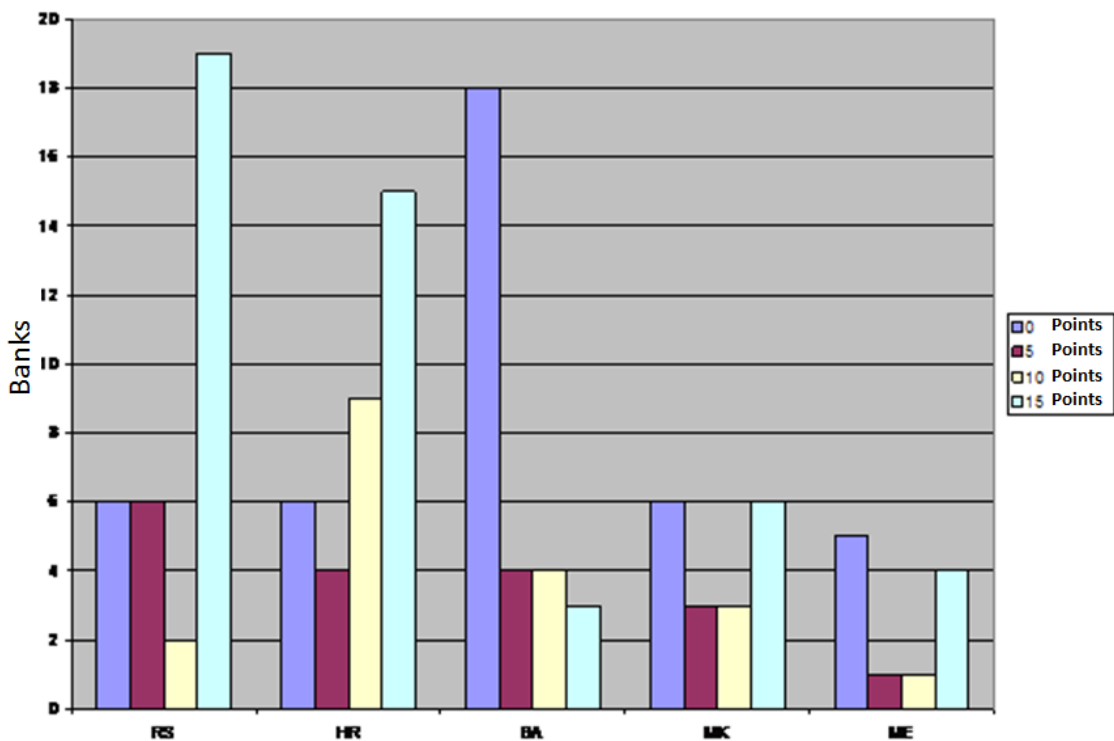


Figure 7. Site map and keyword search implementation

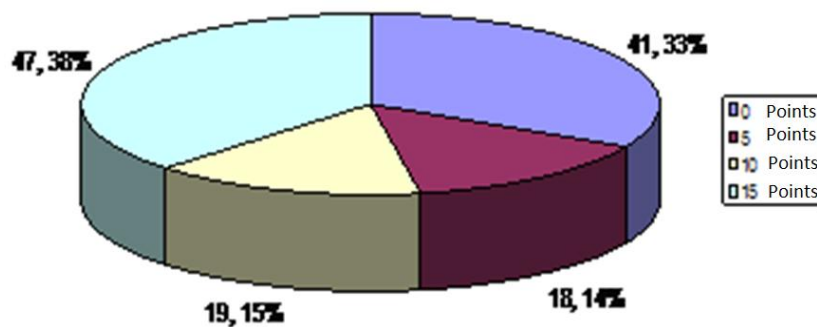


Figure 8. Site navigation distribution, as per the number of banks

2.8. Content

Site Content evaluation was based on relevant information that should be placed on the Website of the bank with a purpose to satisfy needs of the potential users. When we took each of 3 content categories into the consideration for evaluation of bank site index, the result displayed as on Table 2..

10 banks (8%), 9 from Serbia (Banca Intesa A.D. Beograd, Komercijalna banka A.D. Beograd, Eurobank EFG Štedionica A. D. Beograd, Vojvođanska Banka A.D. Novi Sad, Raiffeisen Banka, Soci t  G n rale Banka, Findomestic banka A.D. Beograd, Hypo-Alpe-Adria banka i Volksbank A.D. Beograd) and 1 from Croatia (Erste&Steierm rkische Bank d.d.), implemented all criteria, so users could have all necessary content for bank services available, with maximum 55 points achieved. 20 banks (16%) rated for Quality sites with 50-55 points (15 from Serbia, 4 from Croatia and 1 from Macedonia). 32% of banks (i.e. 40 banks) rated with 40-50 points (16 from Serbia, 8 from Croatia, 8 from Bosnia and Herzegovina, 3 from Macedonia i 5 from Montenegro). 31 banks (24,8%) rated with 30-40 points (1 from Serbia, 12 from Croatia, 10 from Bosnia and Herzegovina, 6 from Macedonia i 2 from Montenegro). 20 banks rated with 20-30 points (1 from Serbia, 7 from Croatia, 7 from Bosnia and Herzegovina, 4 from Macedonia i 1 from Montenegro). 15 banks (11.2%) rated with less then 20 points (3 from Croatia, 4 from Bosnia and Herzegovina, 4 from Macedonia i 3 from Montenegro). Also, there are banks with less then 10 points: Postbank BH dd 9, Štedbanka d.d. 9 and Investiciono-komercijalna banka d.d. Zenica 1 (Figure 9 and Figure 10).

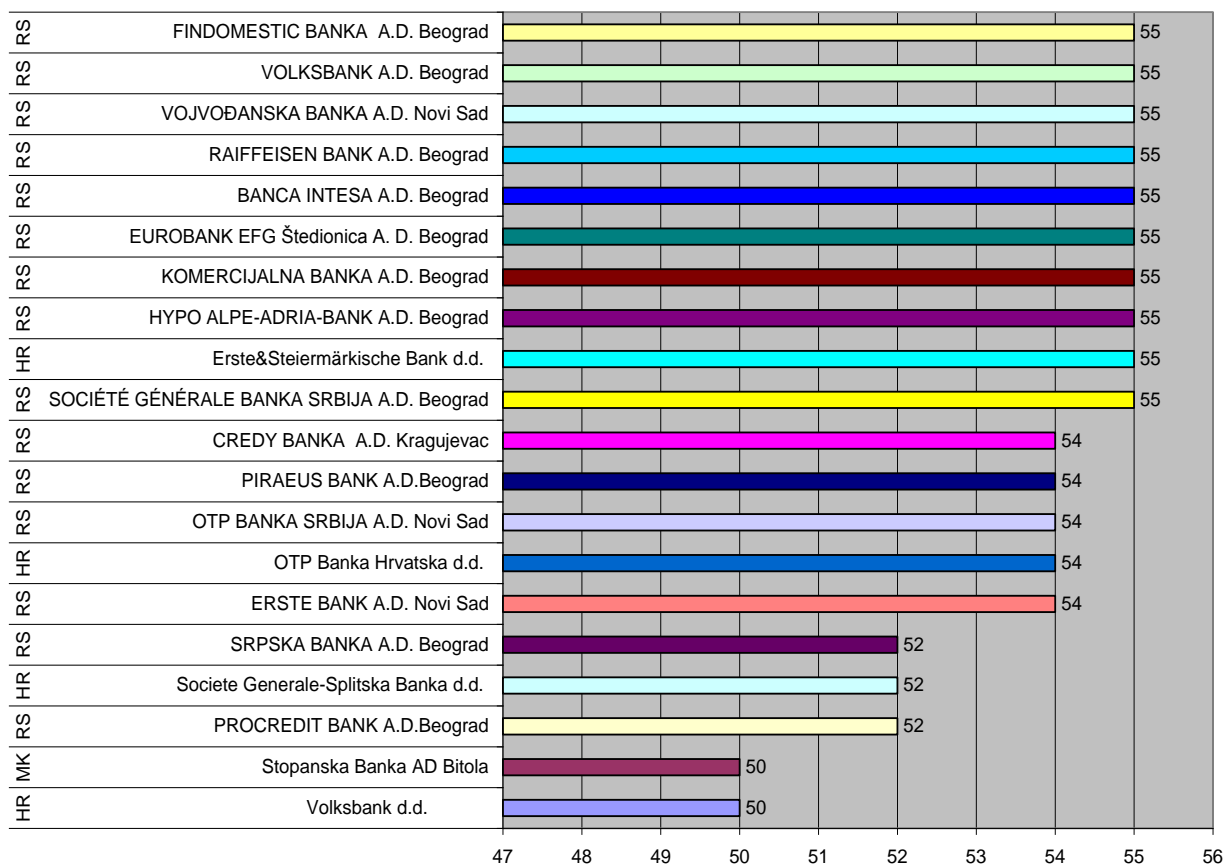


Figure 9. Site Quality of bank with the highest value

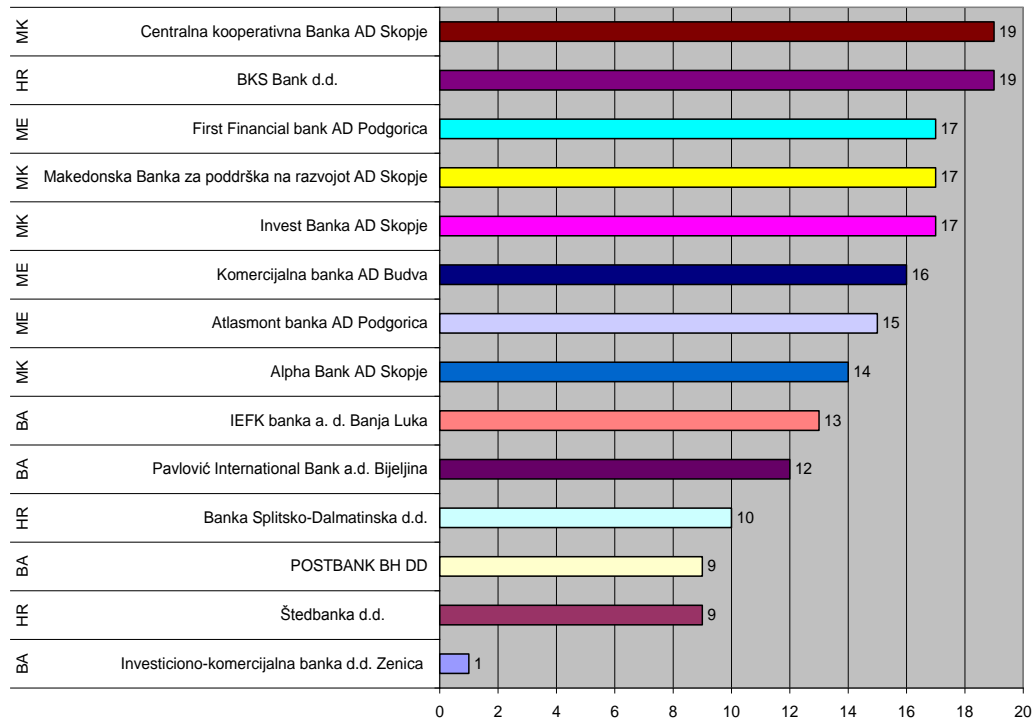


Figure 10. Site Quality with the lowest value

If a presence of each category would to be viewed with a maximum value for banks in some countries of the Region, than it should allocate as in Table 2. There are 27.27% banks from Serbia with maximum number of points (55 points) for Content Site Quality, and 2.94% are their banks from Croatia. Bosnia & Herzegovina, Montenegro and Macedonia do not have their representative banks in this category. That is why they should work on increasing the quality of the content on their Websites, especially in subcategory Transaction Content, and also to make their services available on the Internet.

Table 2. Content Presence with maximu value for some Western Balkans countries

	RS(%)	HR(%)	BA(%)	MK(%)	CG(%)
CONTENT CATEGORIES	27.27	2.94	0.00	0.00	0.00
Informative Content	72.73	29.41	24.14	5.56	9.09
Communication Content	45.45	17.65	10.34	22.22	9.09
Transaction Content	27.27	2.94	0.00	0.00	0.00

All bank information important for clients i.e. sub category Informative Content, were covered from all aspects within 72.73% of bank sites in Serbia, 29.41% of bank sites in Croatia, 24.145% of bank sites in Bosnia & Herzegovina and 9.09% of bank sites in Montenegro and 5.56% bank sites in Macedonia as shown in figure 11. Communication between banks and clients was covered by all aspects within 45.45% of bank sites in Serbia, 22.22% of bank sites in Macedonia, 17.65% of bank sites in Croatia, 10.34% of bank sites in Bosnia & Herzegovina and 9.09% of bank sites in Montenegro only. In order to achieve the best communication possible between banks and their clients, this category should have higher rates of realisation, including all banks in the Region. Very few banks in the Region were able to fully transfer Transaction Content on the Internet. Only 27.27% of banks from Serbia and 2.94% of banks in Croatia, only, used transaction content to the fullest, while in other countries in the Region there are no such banks.

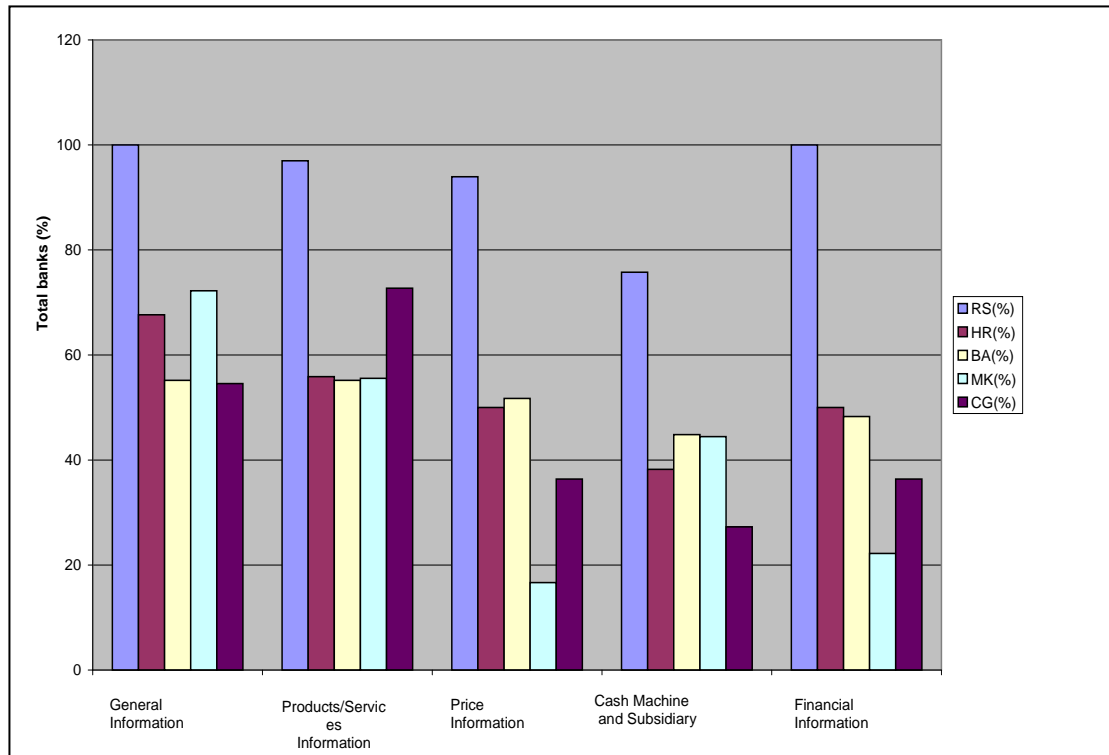


Figure 11. Informative Content

Table 3. Informative Content Presence in Western Balkans Bank within the Region

Informative Content	RS(%)	HR(%)	BA(%)	MK(%)	CG(%)	Prosek
General Information	100	67.65	55.17	72.22	54.55	69.92
Products/Services Information	96.97	55.88	55.17	55.56	72.73	67.26
Price Information	93.94	50.00	51.72	16.67	36.36	49.74
Cash Machine Information and Subsidiary Information	75.76	38.24	44.83	44.44	27.27	46.11
Financial Information	100	50.00	48.28	22.22	36.36	51.37

All information about banks could be found on 43 bank Websites, i.e. 34.40% of banks in the Region. Informative Content Presence in Western Balkans Bank within the Region is presented in Scheme 10. Banks of Serbia are in the leading position when it comes to implementation of each category (100%), while all other categories are present with less %, as shown in Table 2. The average of each category of Informative Content on bank sites of the Region is as follows: General Information in 69.92% of banks, Products/Services Information in 67.26% of banks, Financial Information in 51.37% of banks, Price Information in 49.74% of banks and Cash Machine Information and Subsidiary Information in 46.11% as shown in figure 11.

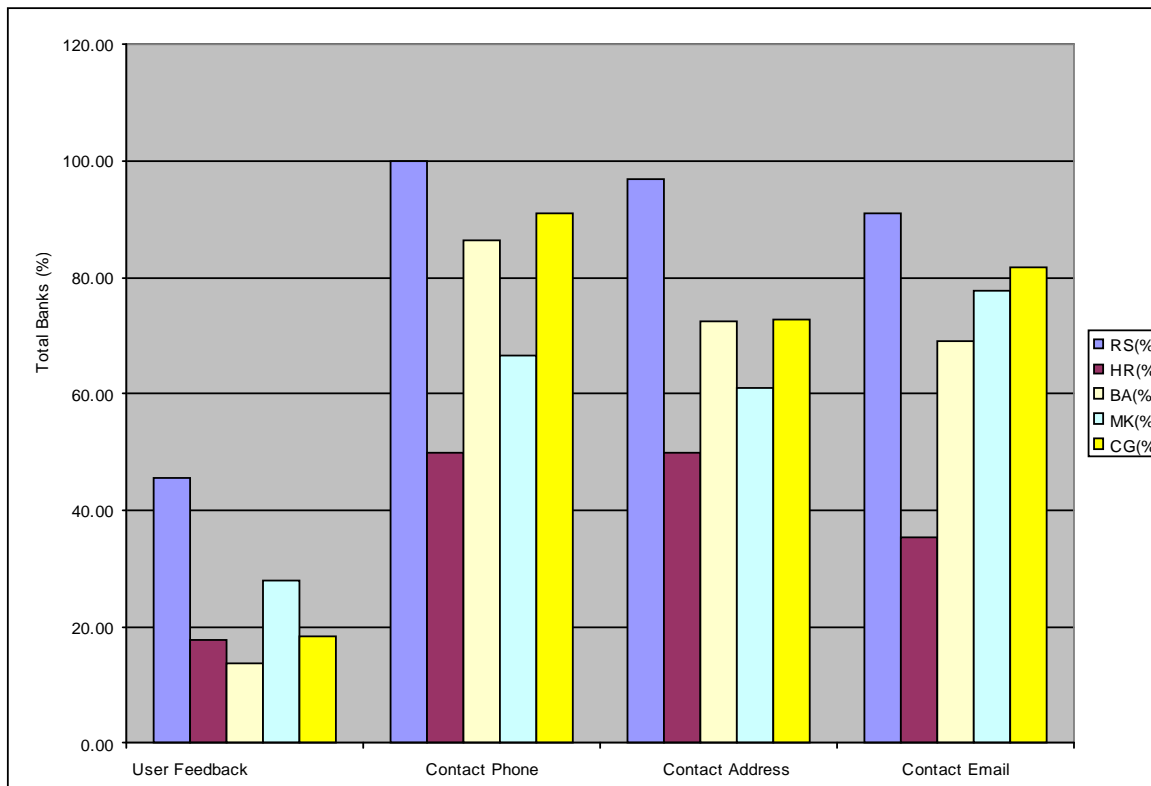


Figure 12. Communication Content

Table 4. Communication Content Presence in Western Balkans Bank within the Region

Communication Content	RS(%)	HR(%)	BA(%)	MK(%)	CG(%)	Prosek
User Feedback	45.45	17.65	13.79	27.78	18.18	24.57
Contact Phone	100	50.00	86.21	66.67	90.91	78.76
Contact Address	96.97	50.00	72.41	61.11	72.73	70.64
Contact Email	90.91	35.29	68.97	77.78	81.82	70.95

Only 29 (23.20%) banks in the Region have all categories of content available on their Websites and allow their clients to select a model of communication with the bank. As it can be seen in Scheme 12 banks of Serbia take a leading position in implementation of all content categories. According to results of the research 78.76% of banks considered that a phone number is the most important information, 70.95% of banks have Email address and 70.64% of banks have contact address available on their Website. The smallest percentage of Websites (24.57%) had User Feedback Tool available (Table 4 and figure 12).

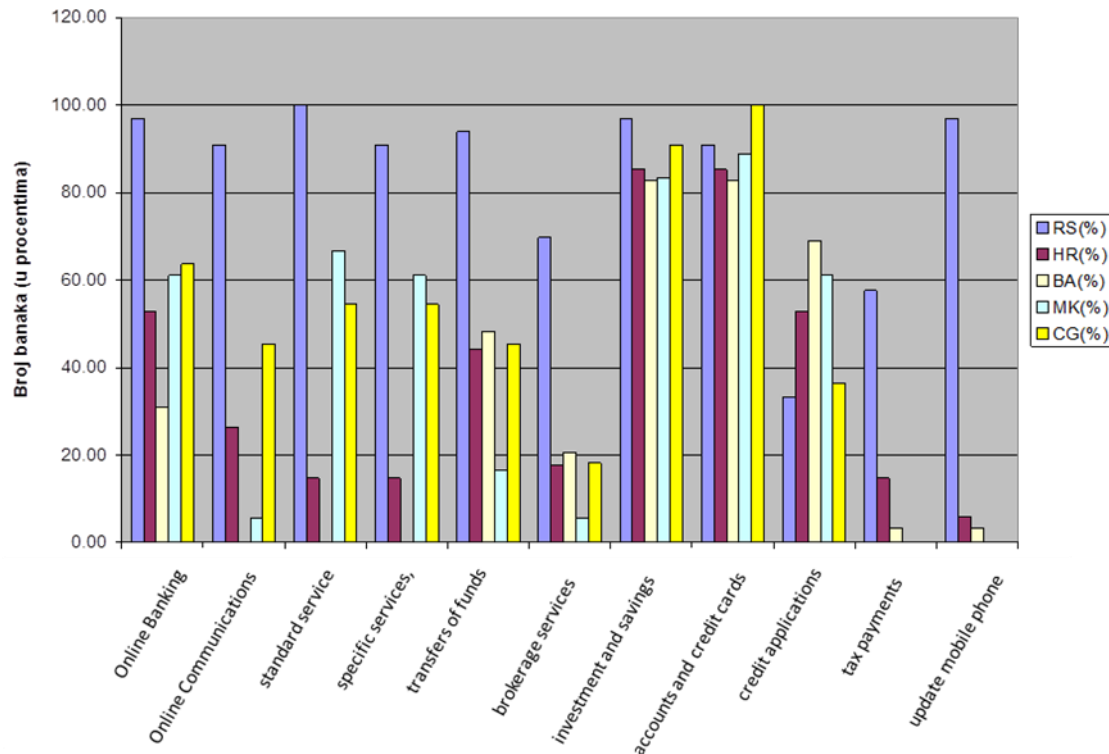


Figure 13. Transaction Content

Table 5. Transaction Content Presence in Western Balkans Bank within the Region

Transaction Content	RS(%)	HR(%)	BA(%)	MK(%)	CG(%)	Prosek
E-Banking	96.97	52.94	31.03	61.11	63.64	61.14
E-Communication	90.91	26.47	0.00	5.56	45.45	33.68
General Requests	100	14.71	0.00	66.67	54.55	47.18
Special Requests	90.91	14.71	0.00	61.11	54.55	44.25
Money Transfers	93.94	44.12	48.28	16.67	45.45	49.69
Broker Services	69.70	17.65	20.69	5.56	18.18	26.35
Investment & Savings Services	96.97	85.29	82.76	83.33	90.91	87.85
Accounts and Payment Cards	90.91	85.29	82.76	88.89	100.00	89.57
Loan Applications	33.33	52.94	68.97	61.11	36.36	50.54
Tax Payments	57.58	14.71	3.45	0.00	0.00	15.15
Mobile Pre Paid Cards	96.97	5.88	3.45	0.00	0.00	21.26

Only 8% of analysed Websites that were Transactional, i.e. only 10 banks in the Region covered all aspects of the evaluated category. These results show that E-Commerce is new in the Western Balkans Region and that relevant actions will to be taken in order to develop it in the Region.

Banks in Serbia covered all aspects of Internet services, except in the category Accounts and Payment Cards which is the most representative in Croatia and Loan Applications which is the most representative in Bosnia & Herzegovina (Scheme 11). Banks in Bosnia & Herzegovina, Macedonia and Montenegro have not yet managed to offer their clients all aspects of E-business through their Websites, which is the area where they should improve their business. Most of the banks offered following services: Bank Accounts and Credit Card payments (on average 89.57%), Investment and Savings (on average 87.85%), E-Banking (on average 61.14%) and Loan Applications (on average 50.54%). Other services cover on average 50% banks in the Region, Money Transfer 49.69%, General

Requests 47.18%, Special Requests 44.25%, E-Communication 33.68%, and the least present are Broker Services (26.35%), Mobile Pre Paid Cards (21.26%) and Tax payments (15.15%). (Table 5 and figure 13).

Activity rate of E-Banking is in direct proportion with the size of the bank. Bigger banks offer more services because they have more money to invest in their Websites.

Finally, a language analyses were made for each Website. Each Website is translated in English language, and some of them offer languages of National Minorities, which is of great importance for our diaspora and also English Language is an official language on the Internet.

In order to finalize the analysis correlation between different Index factors was made, evaluating the connection between 4 categories: speed, accessibility, navigability and content. Website Content is significantly related to accessibility and navigability. Each correlation shows that best designed Websites rich with content are also easy to access and easy to navigate. Also, it is interesting that navigability is in close relation with accessibility, which means that easily accessible sites are also easy to navigate. (Figure 14)

As a technology of Website design improves, relation between speed and content is not as weak as in recent researches. More complicated Websites with more informative, communication and transaction content used to be slower. This situation was overcome with content distribution on different pages and by making Home Page as simple as possible. One way of managing the relation between the speed and the content is to make a plan of links within the Website with separated categories. Therefore, a visitor interested in virtual visit of the bank can click on a specific link and see the loading time, and based on that decide if he/she is interested in this category. On the other hand there is no special correlation between the speed and accessibility or between the speed and navigability.

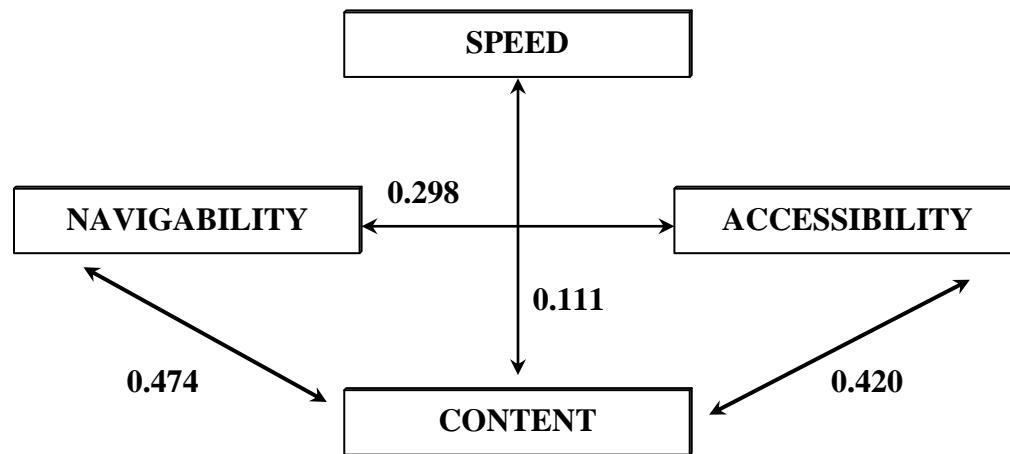


Figure 14. Category Correlation

3. CONCLUSION

In this paper we focused on Western Balkan Banks Websites and evaluated their potential by WAI Index. This method allows researchers and managers to compare attributes and components of Websites, in order to discover both limitations and potential of their Websites. The greatest challenge was to find a way how to avoid subjective factors in composition of Indexes, which dominated in previous estimation tools. This index was based on four categories: Content, Speed, Accessibility and Navigability, which were quantified in both objective and logical way. The results of Western Balkans Banks Website analysis with WAI Index showed its high level of flexibility and main limitations of analysed Websites. WAI Index results show that in the domain of functionality Websites of banks from Serbia and Croatia follow the trend of other European bank Websites, but Websites of banks from Macedonia, Bosnia & Herzegovina and Montenegro must improve the functionality of their Websites. Finally, statistic correlations of quality factors of Websites are being identified, in order to help banks decide which characteristics to develop.

It is worth mentioning that there are some limitations to this Analysis. First of all, all data have been collected based on limited access to each Website in certain time, regardless of the fact that Web is highly dynamic and changeable media. Similar analysis in different period can produce different results. However, this kind of evaluation will reveal if there is any divergence or convergence of Web activities. Secondly, there was a problem with subjective nature of factor evaluation, which made subjective analysis even though they were based on results of former analysis. After critical categories and WAI factors being identified, the next step is testing of this tool in different categories and evaluating the value index in relation with the success of E-Banking. Evaluation Team can easily use this

instrument even without any specific training or knowledge, and also, the estimation time is much shorter than in other models of evaluation. As the information on Web design and its usability become available, here presented evaluation index can be improved and empirically approved tool for a design.

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