

# The Midas touch of branding: banks' brand value, intellectual capital and the optimization of the Interbrand methodology

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## Abstract

**Purpose** – The aim of this paper is to show how a bank's brand value is quantitatively assessed using the Interbrand methodology, taking into account the specifics of the banking market. Therefore, the objective of this paper is to review the ways in which brands contribute to the higher market value of banks by strengthening intellectual capital (IC), as reflected in increased levels of competitiveness and the reputation that the bank maintains in the minds of customers.

**Design/methodology/approach** – This paper applies the Interbrand methodology, which indicates that the assessment of brand value implies the determination of economic profit as the difference between the net operating profit after tax and the cost of capital. The brand profit is then calculated as the product of the economic profit and the index of the brand role. Brand value is obtained as the product of the brand's profit and the discount rate of the brand. In order to further test the results obtained through the application of the Interbrand methodology, linear regression was applied to the panel data in order to provide more efficient econometric estimates of the model parameters.

**Findings** – This research has shown that the Interbrand methodology's empirical foundations lie in the Montenegrin banking market, but also that, out of all of the analyzed parameters, the greatest significance is obtained from the profit of the brand, which influences the value of bank brands.

**Research limitations/implications** – This research is related to the service sector—in this case, financial services—meaning that it is necessary to adjust the calculation of the weighted average cost of capital. Although the banking sector is a very competitive market, a limitation exists in the fact that the research was conducted only in Montenegro. In other words, in order to achieve a more detailed analysis, this methodology should be applied to more countries, such as those within the Western Balkans, as they have a relatively similar level of development.

**Practical implications** – A main contribution of this paper is that the assessment of the banks' brand value could be useful to future investors. Therefore, the improvement of the financial sector—in this case, banks—as institutions that hold a dominant position in the financial market in Montenegro, is a particularly important issue. It is important to point out that the research conducted could serve as a means by which to bridge the gap between theory and practice, since the methodology of the consulting company Interbrand has been optimized and adjusted to the Montenegrin banking market.

**Social implications** – On considering the fact that most countries of the Western Balkans are at a similar level of development, the authors can conclude that, with the help of this adapted form of methodology, this research can be applied to assess banks' brand value in neighboring countries.

**Originality/value** – This paper serves as the basis for further research as the analysis of banking institutions that comprise both marketing and financial aspects, i.e. the application of the Interbrand methodology, was not conducted in Montenegro. Also, this paper overcomes the literal gap between theory and practice as there is little research thus far involving the application of the Interbrand methodology to the field of finance; especially in the field of banking. The authors point out the specifics of the banking sector as a key explanation for this. This is why it is necessary to make certain adjustments to the methodology. The research has positive implications for banks'



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internal and external stakeholders. The originality of this research is reflected in the fact that the Interbrand methodology has been optimized in order to assess the brand of banks, taking into account the specificity of the analyzed market. Brand is analyzed as a component of IC: another factor that exemplifies the value of this research.

**Keywords** Interbrand, Bank, Evaluation, Intangible assets, Brand, Intellectual capital

**Paper type** Research paper

## 1. Introduction

Due to the competitive nature of the market, company management teams strive to build strong brands in order to differentiate themselves, for which more detailed marketing research is necessary. Brand creation, as a segment of intangible assets, i.e. intellectual capital (IC), is important and thus requires special attention. Brand is a key factor in enabling the achievement of long-term competitive advantages for a company (Ratnatunga and Ewing, 2009; Agus Harjoto and Salas, 2017; Bharadwaj *et al.*, 2020).

Building a competitive brand within a market, however, requires assessment in order to obtain a clear picture of how a well-built brand contributes to the positive business results of the company (Möller, 2006; Otubano, 2018; Wang *et al.*, 2018). Brands also play on psychological aspects or symbolic structures in users' minds on the basis of which future expectations about their operation will be generated. This is difficult to measure and capture objectively (Feiz and Moradi, 2019; Khamitov *et al.*, 2020). We can define brand value as the incremental utility or added value to the product by brand name (Rubio, 2016). It should be noted that conducting research on a brand as an intangible asset is demanding, especially when it comes to assessing its value. This is because intangible assets increase in importance as, and for most brands, their value does not lie in tangible, material assets, but rather in intangible ones. This has been confirmed by Cravens and Guilding (2000) and Popovic *et al.* (2015), who show that the brand, as an intangible asset, represents a major part of the total corporate value of successful companies. Thus, questions pertaining to the significance and assessment of such assets are becoming increasingly prevalent – another motivation for this research. The demanding element of assessing the value of a brand not only arises from its intangible nature, but the fact that it is also based on determining future trends and prospects for the development of a particular brand. The research questions are: *Can the Interbrand methodology find an empirical basis for assessing the brand value of banks?* and *Which of the parameters of the Interbrand methodology have the greatest significance when it comes to the value of a bank's brand?*

The objective of this paper is to quantitatively present the ways in which the value of a bank's brand can be measured by applying the Interbrand methodology, thus assisting clients in obtaining a clearer picture of a particular bank, while simultaneously helping management to create strategies that allow them to achieve a greater market share.

The Interbrand methodology is used by the British marketing agency of the same name – Interbrand. The method is based on the observation of the entire continuous flow of investment in the brand and the process of managing it as an intangible asset (Interbrand methodology, 2019). This methodology is grounded in the understanding that the core value of a brand is its economic value, i.e. the net present value (discounted) of future profits made exclusively by the brand. This is the methodology that first complied with the monetary requirements of ISO 10668 in 2010 (Janoskova and Krizanova, 2017). Unlike other methods of assessing brand value, the Interbrand methodology covers both financial and marketing elements of brand evaluation, providing clearer insights into the brand-bank relationship. This served as another motivation for the application of this methodology. Alongside the Interbrand methodology, there are other methods with which to assess brand value, such as Aaker's Brand Equity Ten, the Brand Finance Method, BAV (Brand Asset Valuator method), and more, depending on the approach chosen. These methods, however, do not emphasize both aspects of brand valuation observation. It is also difficult to apply them to large numbers

of markets due to the specifics of financial reporting and unadjusted financial statements. This also applies to the market analyzed in this study. Another objective of this study was to show that the Interbrand methodology, in addition to its standard application for ranking the most valuable brands in the world in the fields of production, trade, services, technology and telecommunications, can be applied to the banking sector and financial services.

The complexity of the assessment process is also contributed to by the fact that the measurement of brand value is carried out in the service sector; in this case the financial service sector, which is one of the factors that makes this paper original. In particular, an assessment of the banks' brand value in the Montenegrin market was conducted using the Interbrand methodology. According to the Interbrand methodology, the brand valuation process is based on three steps. The first step is the determination of economic profit, the second step is the calculation of brand profit, and the third step is brand evaluation. An additional objective of this paper is to show that the Interbrand methodology can be applied to the banking sector and financial services sector alongside its standard application, in which it ranks the most valuable brands in the world in technology and telecommunications, manufacturing and trades or services. This research will show the ways in which banks can be ranked from a marketing perspective through the assessment of the brand value of banks using the Interbrand methodology.

There are not enough researchers involved the application of the Interbrand methodology in the field of finance; particularly in banking. The authors have concluded that the specifics of the banking sector are a key reason for this and that this is why it is necessary to make certain adjustments to the methodology. In Montenegro, the value of brand banks has not been assessed using any method, serving as a further motivation. Specifically, the authors sought to assess the brand value of banks doing business in Montenegro while testing the Interbrand methodology, which is used today as a reference point on a global level. The competitiveness of commercial banks—fifteen in Montenegro—is of great importance to this analysis. This is a large number when we consider the fact that Montenegro is a relatively small market. Competition between banks develops the need for managers to discover how loyal their customers are and, in this way, determine how much their bank, as a kind of brand, contributes to that loyalty.

This paper seeks to observe brand through the context of IC, adding further value to this study. This is because the brand represents a significant item of IC. The brand is associated with IC through its analysis as an element of IC. Therefore, the brand belongs to the relational component of IC (Roos *et al.*, 2001; Seetharaman *et al.*, 2004). Hence, the brand and elements of brand identity have a significant impact on the strengthening of the IC of the company (Seetharaman *et al.*, 2004). It is therefore not surprising that research on brand as an intangible asset—and thus an element of IC—is an increasingly prominent topic in modern business. This paper seeks to shed new light on IC in transition countries by outlining the assessment of its important relational component, thus offering clearer insights into complex methods for assessing IC as a whole. The banking sector is ideal when applying research on the development of IC because it is primarily based on knowledge, as demonstrated by Tran and Vo (2018). In order to provide the best service to their clients, banks must invest in human resources, brands, systems and knowledge processes (Tran and Vo, 2018). In addition to the work of the aforementioned authors, the importance of IC for competitive business has been confirmed by previous studies too (El-Bannany, 2008; Goh, 2005; Mavridis, 2004; Muhammad and Ismail, 2009; Kamath, 2007). These researchers have analyzed IC using the example of financial institutions, i.e. banks. In accordance with previous research, we conducted an analysis of brand valuation as a component of IC in the Montenegrin banking market in order to see how much a bank, as a brand, contributes to successful business. This paper provides a summary of existing scholarship on the elements of IC; the adequate assessment of which strengthens the market position of banks in Montenegro and in other countries, as characterized by a high concentration of banks in the financial market. In this way, the importance and role of IC in creating additional corporate value in banks is further

emphasized in an attempt to build sustainable strengths to further the bank's competitive position in the market. The paper consists of six parts. The introduction highlights the role and importance of the brand and its assessment when it comes to modern ways of conducting business. The second part provides a review of previous research in this area and outlines the specifics of the application of the Interbrand methodology in the field of financial services, i.e. in banks as financial institutions. The third part shows the Interbrand methodology and the results of the application. The discussion of the results is shown in the fourth section. The fifth part provides the conclusions and implications of the paper and the sixth part presents the limitations of the research and gives the authors' recommendations for future researchers.

## 2. Literature review

### 2.1 Theoretical framework for intellectual capital assessment – brand relationships

A number of previous researchers have pointed out that, decades ago, well-developed companies did not base their competitiveness on tangible assets, but on intangible ones, focusing on the development of IC as a type of intangible asset (Teece, 1998; Loyarte *et al.*, 2018). IC is an important component of intangible assets and it can significantly contribute to the competitive advantage of a company and, thus, the growth of its market share (Chen *et al.*, 2005; Mondal and Ghosh, 2012; Jurczak, 2008). This enhances and highlights the need to measure the performance of IC, which allows for comparisons to be drawn between other companies in the marketplace and facilitates the monitoring of developments and improvements over a certain period of observation (Jurczak, 2008). There are three techniques with which to measure IC: balanced scorecard, intangible asset monitor and Scandia Value Scheme (Seetharaman *et al.*, 2004). Unlike previous authors, Chan (2009) identifies five approaches for measuring IC: the Market Capitalization approach, the Direct IC Measurement approach, the Scorecard approach, the Economic Value-Added approach and the VAIC methodology. On the other hand, Fiano *et al.* (2020), identifies four approaches to the valuation of IC: direct intellectual capital (DIC) methods, market capitalization methods (MCM), return on assets (ROA) methods and Scorecard methods (SC). Table 1 shows the most common methods used to measure and analyze IC and its components.

Based on this table, we can see that some of the methods used to measure the value of IC can be applied to brand valuation, such as the EVA method, the method based on the weighted average cost of capital and return on equity (ROE), which is not surprising given the fact that brand is a relational component of IC. The role and the importance of the brand can be observed through the lens of IC. IC includes knowledge, brand, patents, human capital, research and development. It is considered the main resource with which to generate economic growth and wealth (Forte *et al.*, 2017). Moreover, investments in IC are important to companies that want to achieve increased productivity and efficiency and thus represent a key item with which to improve business processes (Forte *et al.*, 2017). Intangible assets are a main source of wealth, prosperity, economic growth and innovation (Loyarte *et al.*, 2018). The basic components of IC are: human, structural and relational (see Figure 1). The connection between the brand and IC can be observed. Brand and elements of brand identity represent important segments of IC. Therefore, the brand belongs to the relational component of IC in terms of reputation, strategic alliances, customers, licensing, agreements and distribution channels. All of these elements are interconnected and they form a whole that largely determines the competitiveness of companies operating in the market.

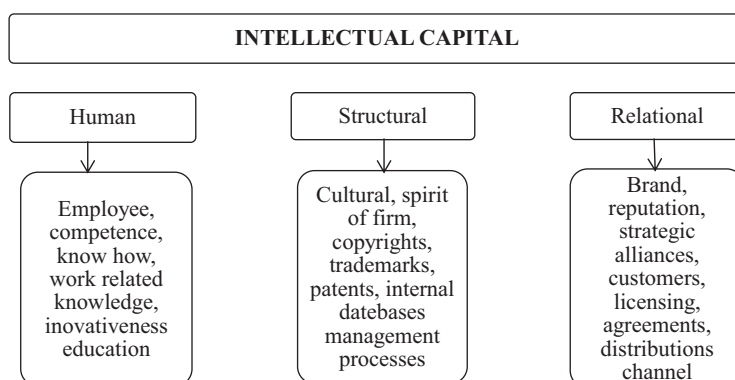
However, if we take into account that, in order to create a good and recognizable brand, it is necessary to have knowledge and skills; additional emphasis is placed on the connection between these two types of intangible assets. Specifically, the creation of a competitive brand implies adequate knowledge. This is even more important if we take into account the fact that contemporary knowledge is seen as the most important resource and factor by which companies differentiate themselves from others in the market (Del Giudice and Maggioni, 2014). As shown in Figure 1, knowledge is one of the essential elements of IC, as confirmed by

References	Sample	Methodology	Object of research
<a href="#">El-Bannany (2008)</a>	UK banks	Value-Added Intellectual capital (VAIC) Multiple regression analysis	Investigation the determinants of intellectual capital performance in the UK banks
<a href="#">Goebel (2015)</a>	6,627 firms listed on the German stock exchange	MtB ratios Tobin's q LRVTB (The long-run value component)	Investigation the determinants of IC value and IC valuation
<a href="#">Mondal and Ghosh (2012)</a>	65 Indian banks	Value-added intellectual coefficient (VAIC) Return on assets (ROA) Return on equity (ROE) Multiple regression	Investigation the relationship between intellectual capital and financial performance
<a href="#">Meditinos <i>et al.</i> (2011)</a>	96 Greek companies	VAIC Regression models Descriptive statistics Correlation analysis	Examination the impact of IC on firms' market value and financial performance
<a href="#">Kamath (2007)</a>	98 Indian banks	Value-Added Intellectual Coefficient (VAIC)	Measuring the value-based performance of the Indian banking sector
<a href="#">Mavridis (2004)</a>	141 banks	VAIC Predictive analysis Descriptive analysis	Analyzing the intellectual capital of the Japanese banking sector and discussion about its impact on the banks' value-based performance
<a href="#">Shakina and Barajas (2012)</a>	420 Russian and 332 European companies	Cross-sectional and panel data analysis; The instrumental variables method Strategic performance indicators (EVA and FGV).	Evaluation of intellectual capital methods for discovering the drivers of company growth
<a href="#">Yalama and Coskun (2007)</a>	18 banks listed on Istanbul Stock Exchange (ISE)	Value-Added Intellectual Coefficiency (VAIC) Data Envelopment Analysis (DEA)	Measuring the intellectual capital (IC) performance of quoted banks on the ISE and testing the effect of the intellectual capital performance on profitability
<a href="#">Muhammad and Ismail (2009)</a>	18 companies were chosen to be analyzed which encompasses of banks, insurance companies and brokerage firm.	Value added intellectual capital coefficient Multiple regression analysis Return on assets (ROA); profitability	Investigation the efficiency of intellectual capital and its performance in Malaysian financial sectors
<a href="#">Goh (2005)</a>	16 commercial banks in Malaysia	VAIC Indicator	Measuring the intellectual capital performance of commercial banks

**Table 1.**  
An overview of research methods for measuring values of intellectual capital

**Source(s):** Authors

the research of a number of scholars ([Seetharaman \*et al.\*, 2004](#); [Goh, 2005](#); [Taherparvar \*et al.\*, 2014](#)). The role of knowledge, and thus the role of human capital, is particularly expressed in the service industry and especially in banks as financial institutions. The reason behind this is that service providers—in this case, bank employees and managers across all levels of the decision-making process—must have additional knowledge and skills in order to properly respond to the challenges of modern business. This was confirmed in a study on banks



**Source(s):** Seetharaman *et al.* 2004; Abdolmohammadi, 2005; Roos *et al.* 2005; Joia, 2000; Guthrie, 2001

**Figure 1.**  
Components of intellectual capital

conducted in Portugal by [Cabrita and Bontis \(2008\)](#), in which it was pointed out that human capital has a positive effect on the components of IC and, thus, on the brand as well. It can therefore be concluded that higher levels of knowledge and skills affect more competitive brands and that a recognizable brand strengthens IC as a whole ([Seetharaman \*et al.\*, 2004](#)). This leads to the conclusion that investing in IC contributes to better company performance, which confirms the significant relationship between the performance of companies and IC, including its basic components ([Phusavat \*et al.\*, 2011](#); [Salehi \*et al.\*, 2014](#)). For further analysis of IC, and thus the brand as a relational component of this, it is important to understand the balancing of this type of intangible asset in financial statements. Therefore, [Petty and Cuganesan \(2005\)](#) demonstrate that the degree of presentation of IC in financial statements is still low, but this also depends on the size of the company and the branch to which the company belongs.

*2.1.1 Theoretical framework for brand value assessment.* Brand is one of the most important elements of IC. It is therefore not surprising that brand and brand valuation are increasing in importance, given the fact that IC is now recognized as an important element when strengthening the competitiveness of companies in the market ([Chen \*et al.\*, 2005](#); [Seetharaman \*et al.\*, 2004](#)). However, researching a brand is challenging, especially when it comes to assessing its value. The complexity of quantifying intangible assets does not arise only from their non-monetary nature, but also with regards to future flows and perspectives of the development of a certain brand. The extent to which the value of the brand and, therefore, its assessment, is important in modern business when improving business performance, which is demonstrated by this research and outlined in [Table 2](#).

As shown in the table, we can conclude that, in addition to the Interbrand methodology, other methods can be used to assess the value of the company brand, such as: Forbes, Brand Finance, Millward Brown and the Damodaran method, by using statistical methods to depict the relationship or influence of brand value on the financial and market performance of companies. Unlike the aforementioned methods, which are difficult to apply to some markets (as is the case in our research) due to specific financial reporting and the fact that financial and marketing aspects of brand valuation are not included, the Interbrand methodology can be applied. This is important both from a marketing and financial standpoint; especially considering the specificity of the banking market.

Additionally, it is the brand, as an intangible asset, which appears to be key to strategies differentiating and establishing relationships with consumers because, on the one hand, this



References	Sample	Methodology	Object of research
Janoskova and Krizanova (2017)	12 global well-known brands	Forbes, Interbrand, Brand Finance and Millward Brown	Analyzing the brand values and the methods applied for possible deviations
Virvilaitė and Jucaitytė (2008)	Ukio bankas	Systemic and comparative literature analysis; Secondary data analysis Quantitative studies	How to prepare integrated brand valuation model which enables thorough estimation of brand value in viewpoint of customer and company
Ardestani <i>et al.</i> (2012)	The private banks in Tehran	Regression analysis; <i>T</i> -test Analytic Hierarchy Process (AHP)	Relationship between brand value and the performance of private banks in Tehran
Cravens and Guilding (2000)	392 companies	Factor analysis	Investigation of companies with strong brands for providing the first evidence of a relationship between market orientation and brand valuation
Agus Harjoto and Salas (2017)	47 companies	Multivariate regression	Investigation the impact of strategic and institutional (normative) CSR on brand value and brand reputation
Ruževičiūtė and Ruževičius (2010)	200 largest companies in Lithuania	Systemic and comparative literature analysis Semi-structured expert interview, Questionnaire survey and qualitative analysis	Preparing consumer-based brand equity evaluation model
Kirk <i>et al.</i> (2013)	19 companies	Interbrand methodology	Analyzing the impact of brand value on firm valuation
Kumar <i>et al.</i> (2019)	75 brands ranked by Interbrand	Dynamic simultaneous equation model	Examination the role of marketing–finance interface factors for value creation
Fernandez (2001)	2 companies	Damodaran and Interbrand methodology	Showing the limitations of the number of the methods for valuating brands and intellectual capital
Arora and Chaudhary (2016)	10 banks	Multiple regression analysis	Investigating the impact of brand value on various financial indicators on of banks
Hsu <i>et al.</i> (2013)	100 best global brands	<i>T</i> -statistic Cumulative abnormal returns (CARs) Buy-and-hold abnormal returns (BHARs)	Examination the relationship between brand value and stock performance of companies

**Table 2.**  
An overview of research of the brand and assessing the brand value – relation with business performances

is a means of distinguishing the company from competitors and, on the other hand, this is the basis of trust and close relationships with consumers (Ball *et al.*, 2004; Čavalić, 2013).

However, it is very difficult to identify a brand and present it in financial statements (Nimtrakoon, 2015). International Valuation Standards Council, (International Valuation Standards Council IVS, 2010), enforce a precise hierarchy in the valuation criteria: market and income methodology. The most recognized business consulting agencies follow this hierarchy. Thus, the need to determine the value of the brand is an important factor when creating and preserving the overall value of the company, alongside the need to establish a better methodology for evaluating the company as a whole (Rubio *et al.*, 2016). At the end of

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the 1980s, the brand was classified as an intangible asset in financial statements. This problem is recognized in the context of the need to evaluate the brand as a category that plays a major role in creating the overall value of the company (Cottan-Nir, 2019).

Based on previous research, it has been acknowledged that, in marketing theory, the basic methodologies for brand evaluation can be classified into one of two basic groups. These authors point out that the first group consists of methodologies for determining brand value based on research results on consumer behavior and attitudes, and methodologies based on financial results or the financial performance of the brand which, in a classical sense, equates with the brand's financial value. The second group of methodologies relates to the tendency to assess the (financial) value of a brand as an intangible asset (Damodaran, 2012).

There are four approaches to brand valuation: cost, market, production and formulary (Cravens and Guilding, 1999; Seetharaman *et al.*, 2001). All of these approaches contain methods by which brand value can be assessed. However, as these are comprised of multiple evaluation criteria, the formal approach and the Interbrand methodology belonging to this approach are of particular interest. The formal approach is suitable for internal managerial evaluation purposes, but also when reporting to external users (Brlečić, Valčić and Hodžić, 2016). These authors also point out that the methodology of this approach focuses on profitability determination.

The brand evaluation methodology, Interbrand, was the first to meet the international standard for monetary requirements, see ISO 10668 in 2010 (Duguleana and Duguleana, 2014). This methodology is becoming increasingly important as it is based on observing the continuous flow of investment in the brand and its management of intangible assets (Krstić and Popović, 2011).

The Interbrand methodology assumes that the greatest value of a brand is its economic value, representing the net present value of discounted profits, which are obtained exclusively from the brand, and it complicates the process of implementing this methodology. That is, according to the Interbrand methodology, determining the value of the brand involves three phases in which economic profit is determined first, then the profit from the brand and, finally, the value of the brand (Krstić and Popović, 2011).

The methodology applied when ranking of the most valuable brands by the consulting company Interbrand combines marketing, financial and legal aspects in determining the value of the brand (Veljković and Đorđević, 2010). These authors point out that brand value is calculated via the net present value of the future benefits of possessing a brand. It is crucial to determine the earnings of the brand and cash flow by applying the discount factor to reduce the value of the present net. In order to make the final calculation, it is necessary to determine which part of the company's revenue is of merit to a specific brand. Risk is assessed through brand strength assessment. This is a precondition for determining the discount factor, on the basis of which the final calculation is performed.

Although there are a number of methods for assessing the brand value, the success of any method depends on the company's ability to use that measure to improve financial performance (Pakseresht and Mark-Herbert, 2016).

The application of different methods in measuring brand value is a way to differentiate between companies (Duguleana and Duguleana, 2014; He and Calder, 2020). Such is the case in the banking market as well. Strong competition in this market increasingly emphasizes the role and importance of a bank's corporate identity. At first, the brand identity is created in order to enable the recognition of banks and establish how corporate identity is an essential component of market competitiveness. Therefore, modern and current trends in the banking industry are reflected in the corporate identity of the banks (Trent and Mohr, 2017). This is the reason why the assessment of banks' brand value is a topic of contemporary relevance. However, it takes time in order to create a recognizable brand and to follow stages in the brand creation process. This has been confirmed by Milić (2014), who showed that modern



literature and economic practices show that the brand is created through long-term, persistent, patient and dedicated work.

### *2.2 Optimization of the Interbrand methodology for assessing banks' brand value*

As mentioned above, this research is based on the application of the Interbrand methodology when assessing bank's brand value. Therefore, the specifics that characterize the application of this methodology in the banking market will be presented below.

The sample of this survey consisted of all of the banks operating in Montenegro, with the number of banks varying depending on the year in which the survey was conducted. The Interbrand methodology was applied for a period of three business years, i.e. 2014, 2015 and 2016. In the first observed year (2014), 12 banks operated in Montenegro, whereas in the second observed year (2015), 14 banks operated, and in the third (2016), 15 banks operated. The reason why this period was taken for analysis is that, at the time of conducting research with the Central Bank of Montenegro, there were no complete financial statements with the reports of the official auditor from which the data necessary for the research could be collected and which was in reference to 2017. Therefore, the Central Bank of Montenegro is regarded as the most reliable source of information with regards to the balance sheets and audit reports necessary for the implementation of the Interbrand methodology.

According to the [Interbrand methodology \(2019\)](#), brand value assessment involves determining economic profit first, then profit from the brand and finally the value of the brand, which is described below.

*2.2.1 Calculation of economic profit by adjusting the Interbrand methodology to the banking sector.* Economic profit is calculated as the difference between the net operating profit after tax (NOPAT) and the cost of capital. The NOPAT is obtained as the difference between the net operating profit and taxes, and the cost of capital as a product of total capital and the weighted average cost of capital, where the average weighted price of capital (*eng.* WACC) is calculated in the following way ([Frank and Shen, 2016](#)):

$$WACC = wd*kd*(1 - T) + wp*kp + we*ke,$$

wd—the share of debt in the desired capital structure;

kd—debt price;

wp—share of preferred shares in the desired capital structure;

kp—price of the capital from the issue of preferred shares;

we—the share of equity in the desired capital structure;

ke—cost of equity;

T- income tax rate.

However, due to the specifics of the banking market in Montenegro and the lack of availability of information on market indicators, as well as the fact that most banks do not pay dividends, which was confirmed based on the reports of the [Montenegro Stock Exchange \(2019\)](#), in order to implement the Interbrand methodology, the weighted average cost of capital should be adjusted to the available data of the analyzed market.

Therefore, the weighted average cost of capital is calculated as follows in this paper:

$$WACC = ke*we + kd*(1 - p)*wd,$$

ke—cost of equity;

we—the share of equity in liabilities;  
kd—price of borrowed capital;  
wd—share of borrowed capital in liabilities;  
 $p$ - income tax rate.

In accordance with the example of the WACC budget in practice (Telekom Srbija, 2016) the authors decided to adapt the Interbrand methodology. This method of calculating the weighted average cost of capital involves the analysis of the liabilities of the balance sheets of banks from the perspective of financial structure, all with the aim of calculating the share of equity and borrowed capital. The cost of equity is calculated as a ROE, which is calculated according to the following formula:

$$\text{Return on equity} = \frac{\text{Net profit}}{\text{Share capital}} \times 100$$

For each bank, the value of the net profit is divided by the value of the share capital and this is taken individually from the balance sheet and income statement. The ROE rate should be multiplied by the share of equity in the liabilities of the balance sheet. This share is obtained when the value of equity is divided by the total value of liabilities.

The price of the borrowed capital is then determined. The interest rate on time deposits deposited for more than one year was taken as the price of borrowed capital (Bikker and Gerritsen, 2018). This interest rate is taken from the audit reports for each year and for each bank individually. The price of borrowed capital is multiplied by the share of borrowed capital in the bank's liabilities and by  $(1-p)$ , where  $p$  is profit tax rate, which amounts to 9% in Montenegro (Chamber of Economy, 2020). Finally, the product of the cost of equity and the share of equity in the bank's liabilities is increased by the product of the price of borrowed capital, the share of borrowed capital in the liabilities of the bank and  $(1-p)$ . In this way, an average weighted cost of capital was obtained for each bank for the observed time period. The calculated weighted average cost of capital is multiplied by the total capital and thus the cost of capital is obtained. The obtained cost of capital is deducted from the operating profit and so the first step in estimating the value of the brand is completed, i.e. the value of the economic profit of each bank is obtained.

*2.2.2 Calculating the budget profit from the brand by adapting the Interbrand methodology to the banking sector.* Profit from the brand is considered to be a product of economic profit and brand role index. Economic profit, which strives to measure the true profitability of the business (Osinski *et al.*, 2017), is explained in the previous section, whereas the brand role index is calculated with the help of parameters. It is worth noting that each parameter carries a corresponding weight. Every parameter should establish scales in order to distribute the points corresponding to the weight—as objectively as possible—that these parameters have as a whole.

According to Jia and Zhang and Interbrand methodology, (Jia and Zhang, 2013), the following is necessary for this research: market (10%), stability (15%), leadership (25%), trend (10%), support (10%), internationalization (25%) and protection (5%). These parameters for the calculation of the brand role index are also indicated by Vasileva (2016). However, due to the specifics of the banking market, the parameters were adjusted to fit with financial services, i.e. banks as financial institutions, so that the Interbrand methodology could be applied.

The market parameters should show whether or not the market is stable, growing and whether there are strong barriers to entering the banking market. In this study, parameters with a weight of 10% were identified through the annual reports of the Central Bank of

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Montenegro. In the observed business years, according to the reports of the [Central Bank of Montenegro \(2019\)](#), the banking market was stable, with a tendency to expand. This was supported by the fact that the banking market in Montenegro in the first observed business year expanded by one bank, in the second by two banks and in the third by one new bank. With regards to barriers to entry, all newly opened banks met the conditions prescribed by the rules and laws. Taking into account all of the above, according to this parameter, each bank could obtain a maximum of 10 points.

Parameter stability with weight (15%) suggests that new brands may not have the same significance to customers as brands with a long history, especially with regards to financial services, where two of the advantages that banks capitalize on are security and trust. According to [van Esterik-Plasmeijer and van Raaij \(2017\)](#), trust is a very important determinant for the banking sector, which confirms the aforementioned claims. Thus, banks with a long history are better positioned in this aspect in the mind of the client and are trusted more than newly opened banks. This parameter is determined based on the years of operation of each bank. The years of establishment of each bank at the Montenegrin market are taken from the official website of each bank and the number of points is awarded accordingly. Depending on the number of years of operation of each bank, according to this criterion, banks could get three, six, nine, twelve, or fifteen points. Therefore, banks with the longest tradition received fifteen points and banks with the shortest period of operation received three points. The values in between were assigned in accordance with the years of operation of the bank according to the formed scale. If the bank did not operate at the market in a certain year, it was awarded zero points.

The leadership parameter (25%) is observed through the sum of assets. A larger amount of assets suggests an increased competitiveness of the bank, which is reflected in the larger number of loans that make up the most important item in the bank's portfolio, which attracts more clients. The bank with the largest amount of assets had a maximum of twenty-five points, whereas the bank with the smallest amount of assets was awarded five points. Points between five and twenty-five were awarded according to the scale formed.

The trend parameter (10%) is viewed from two perspectives, namely from the perspective of the bank's orientation toward new markets (5%) and new clients (5%). Data on whether a bank was oriented toward new clients were obtained on the basis of the mission and vision of each bank individually, as confirmed by an interview with each bank's management team. Therefore, if the bank was oriented toward new clients, it was awarded 5 points. If only existing clients were in focus, 0 points were awarded. The orientation of banks to new markets was observed based on the number of open branch offices in the territory of Montenegro. In other words, the number of branches and subsidiaries of each bank was compared first in relation to the previous business year, in the second year in relation to the first and in the third in relation to the second business year. If there was an increase in the number of branches and subsidiaries, the bank was awarded 5 points, if the number remained the same compared to the previous year it was given 2.5 points, and if there was a decrease in the number of branches compared to the previous year then 0 points were awarded, which told us that the bank was not oriented toward new markets. By adding the awarded points, the value of the trend parameter was obtained for each bank individually for all three years covered by this research.

The support parameter should show how much support the brand had in terms of investing in marketing or activities, such as sponsorship and social responsibility, which greatly contributes to brand recognition in the market and indirectly triggers positive associations in the client's mind. Based on the audit reports, which present a detailed analysis of the bank's operations, the item marketing costs were shown and points were awarded for each bank. The bank with the highest marketing cost was awarded ten points for the weight for this parameter, while the bank with the lowest marketing cost was awarded two points,

according to the pre-formed scale. The number of points—between two and ten points—were awarded in accordance with the formed intervals and scales.

Internationalization with a weight of 25% indicates the spread of the brand beyond the borders of the country of origin. This parameter is determined by the number of countries in whose markets these banks do business. Data for this parameter were obtained from the official websites of the banks covered by the survey. Each bank had information on their websites on the number of countries in which they do business, and this was confirmed in an interview with the banks' employees. The more countries in which the banks operate, the higher the number of points awarded to them, in accordance with pre-formed scale and intervals. The bank that operated in most countries was awarded 25 points, whereas if a bank operated in only one country, it was awarded 5 points.

The last parameter, protection, with a weight of 5%, shows the company's ability to protect its brand. Whether a bank has protected its brand or, in this case, its logo, was determined with the help of the [Intellectual Property Office of Montenegro \(2019\)](#) and [WIPO Madrid Monitor \(2019\)](#). Based on the website of the Intellectual Property Office of Montenegro and the "trademark search" option, we established which banks in the Montenegrin market had a protected logo. Based on interviews with the authorities in this area at the Intellectual Property Office of Montenegro, it was confirmed that only a trademark can be protected in Montenegro which, in this case, is the bank's logo. As there are banks in the market that operate under the auspices of a certain group, we determined the degree of protection of their logos on the basis of the WIPO Madrid Monitor website. Banks with a protected logo were given a maximum of 5 points, and banks that did not have a protected logo were given 0 points.

After determining the parameters for each bank individually, the values assigned to each parameter were summarized and this is how the brand role index was obtained. The higher the brand role index, the better the bank, because the profit from the brand would be higher, which will be reflected upon later in the estimated value of the brand.

*2.2.3 Calculation of the brand value of the bank by the Interbrand methodology.* As the third step, on the end, the brand's value is considered to be a product of the brand's profit and the discount rate of the brand's strength. The discount rate of a brand's strength is calculated by the brand with the highest strength being discounted at a rate without a risk – a risk free rate—because risk is assessed through brand strength assessment ([Veljkovic and Djordjevic, 2010](#)), while the average power brand is discounted with the weighted average cost of capital for a given branch.

Due to the specifics of the market, the obtained value of brand profit is discounted with the average weighted cost of capital at a branch level, which was obtained for each year individually, from the previously calculated weighted prices of capital for each bank and an average was found. The discount rate obtained is multiplied by the profit from the brand and the brand value of the banks is found. However, this paper also postulates what would happen if brand profits were discounted at a risk free rate. The risk free rate can be determined on the basis of the capital asset pricing (CAPM) model; however, due to the lack of data for the calculation of the  $\beta$  coefficient in the Montenegrin banking market, this is calculated with the help of auctions of treasury bills. Also, this method calculated a risk free rate through the [Damodaran \(2019\)](#), which does not have this data, and so we could not deduce a rate for Montenegro. As the Central Bank of Montenegro does not have an issuance function, the risk free rate is calculated based on auctions of treasury bills ([Treasury bills auctions, 2019](#)), which is acceptable. In other words, only auctions related to one hundred and eighty two day bills were observed, then the average price at each auction at which treasury bills were sold during the observed year was observed, and after that an average was found. The value obtained is multiplied by the brand profit and thus the brand value of the banks is calculated.

This shows the specifics of the application of the Interbrand methodology in the banking market, especially in Montenegro. However, despite these specifics, it is possible to apply this methodology, which adds value to this work, while meeting one of the research objectives related to the fact that the Interbrand methodology, in addition to its standard use in technology and telecommunications, manufacturing, trade and classic service, can also be applied to the banking sector.

*2.3 Conceptual model and research issues*

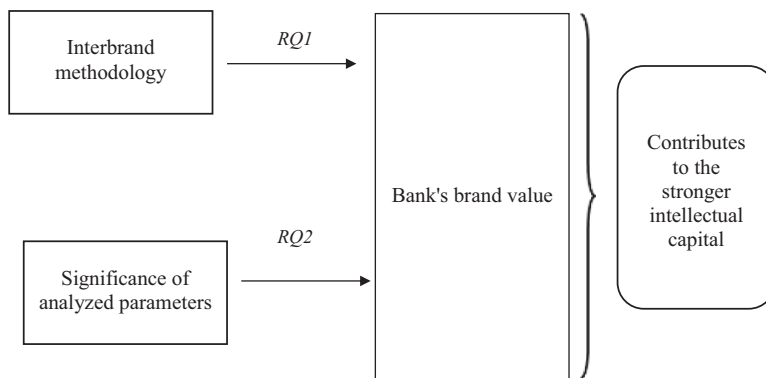
The research questions on which this paper is based are as follows:

- (1) Can the Interbrand methodology find an empirical basis for assessing the brand value of banks?
- (2) Which of the parameters of the Interbrand methodology have the greatest significance when it comes to the value of the bank's brand?

Conceptual model of the research is shown in [Figure 2](#).

**3. Methodology**

Although other methods, such as Forbes, Brand Finance, Millward Brown and the Damodaran methodology (Janoskova and Krizanova, 2017; Fernandez, 2001), can be used to assess brand value, in order to determine the banks' brand value, the Interbrand methodology was applied. This was adjusted in accordance with the specifics of banks as financial institutions. Brand evaluation methodology was conducted in three steps: the first step determined the economic profit as the difference between operating profit and the cost of capital. The cost of capital was obtained by multiplying the total capital with the weighted average cost of capital. Due to the specific application of this methodology in the banking sector, the items for calculating the weighted average cost of capital were adjusted to the banking market, in accordance with practice, in an attempt to apply the Interbrand methodology. The authors identify that the second step involves the calculation of brand profit as a product of economic profit and the brand role index. The brand role index was based on the determination of the values of parameters adjusted to the banking market, as previously explained. The third step was related to the calculation of the brand value, which was obtained by discounting the profit from the brand with the weighted average cost of capital at a branch level and with the risk free rate. The weighted average cost of capital at a



**Figure 2.**  
Conceptual model of research

branch level was obtained when an average of the previously calculated weighted cost of capital for each bank was found. The risk free rate was calculated based on government bond auctions, as described above. For each bank individually in the observed business year, an assessment of brand value was performed. Although the aforementioned methodology could be implemented in one year, the authors believed that a period of three years offered more reliable, timely data necessary for the most objective research, creating a clearer depiction of the process. In this way, we were able to see how the bank's ranking changed according to its estimated brand value in the observed time period and whether there was a trend of growth or decline in the banks' brand value.

If we consider that the brand belongs to IC, and that the quality of services provided to customers is determined by IC (Goh, 2005), it is not surprising that brand evaluation is a particularly important topic in contemporary business. Therefore, in order to determine the banks' brand value, this methodology was applied in the banking sector, bridging the gap between theory and practice. In other words, according to the authors, this is the first application of the Interbrand methodology in the banking sector, which is an additional contribution of this paper.

The research was conducted as follows:

- (1) First, secondary data were collected from the official reports of banks (balance sheet and income statement) on the website of the [Central Bank of Montenegro \(Central bank, 2017\)](#) as well as on the banks' websites. Data from official sites refer to the parameters necessary to calculate the brand role index. In particular, for the stability parameter, which indicates that brands with a long history are not given the same treatment as new brands, it is necessary to know the years of operation of banks in the market and when they were established. As far as the parameter of internationalization is concerned, it is important to know whether the bank operates outside the borders of its country of business, which is shown on the official websites of each bank. The parameter of internationalization is especially important because the process of brand assessment itself becomes more complex when the international dimension is added. The support parameter requires audit reports for each bank individually for each year, because these reports contain clearly separated data on the funds that banks invest in marketing and other related activities. The protection parameter requires data from the website of the Intellectual Property Office of Montenegro and WIPO Madrid Monitor. For other parameters, data were gathered either from income statements or through communication with each bank's management.
- (2) The collected data are processed and prepared for end use.
- (3) Application of the Interbrand methodology.
- (4) By applying the Interbrand methodology across all three years, we are able to establish whether there has been a significant switch in the value of the banks' brand during the observed period. Below is a graphical representation of the results obtained.
- (5) Finally, there is a discussion of the obtained results, with conclusions made based on the research results.

#### 4. Research results

This section presents the results of the research, obtained by applying the Interbrand methodology to the banking market. All of the data on which this research is based is



available on request. Also, it should be noted that, due to the specifics of the area within which this methodology is applied, the Interbrand methodology had to be adjusted to the Montenegrin market conditions in some segments in order to implement it. In this way, an optimized Interbrand methodology was obtained. This was in accordance with practice and was confirmed by [Jia and Zhang \(2013\)](#), indicating that, in this way, a more comprehensive analysis was achieved by applying an optimized model.

The banks' brand values used by the Interbrand methodology are shown in the following tables.

The brand values in [Table 3](#) are shown in the graph below ([Figure 3](#)).

Based on the given table and graph, we can see that the highest brand value is held by Bank 3, Bank 8, Bank 1 and Bank 2, which is expected if we take into account the performances of these banks, as well as the brand role index, which is highest in these banks respectively. The idea that brand value is related to the business performance of banks was confirmed through a study by [Mavridis \(2004\)](#), which indicated that banks perform best in IC and, thus, in branding as brand is a relational element of IC. As can be seen, the discount rate of brand strength, i.e. the weighted average cost of capital at a branch level in the first observed business year, was 0.049, while the risk free rate, obtained on the basis of the auctions of treasury bills, was 0.013.

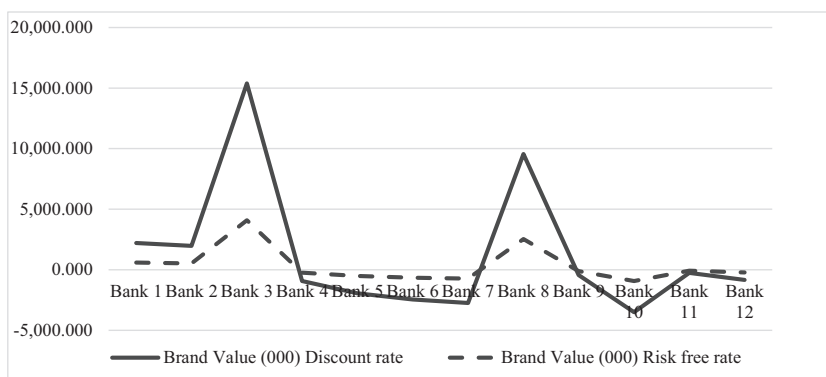
Some banks have a negative brand value as a result of lower operating profits compared to the cost of capital, or sometimes the cost of capital is initially higher than operating profit, which results in a negative value through all phases. The negative value of the brand means that some banks do not invest enough, primarily in marketing activities, which is further reflected on the value of their brand. The reason for the negative value of the brand could be the poorer banks performance, which occurs as a result of competition at the market. The profit from the brand is discounted with the average weighted price of capital at a branch level and with the risk free rate, while ranked banks are obtained in the same way, and the difference is only in value, which is to be expected. Bank 3 is first in both ways, followed by Bank 8, Bank 1 and Bank 2, confirming the objectivity of this research. In this way, the answer to the first research question can be given. The Interbrand methodology finds its empirical basis in the Montenegrin banking market, considering the specifics of the banking market, i.e. banks as financial institutions, for the application of this methodology.

It is emphasized that the research in the first observed business year concluded that the Interbrand methodology found its empirical basis in the banking market, with a particularly

Banks	Profit from brand	Discount rate of brand strength	Brand value (000)	Risk free rate	Brand value (000)
Bank 1	45214.895	0.049	2.218257	0.013	589,301
Bank 2	40327.145	0.049	1.978463	0.013	525,597
Bank 3	313581.721	0.049	15.384421	0.013	4.087015
Bank 4	-18990.968	0.049	-931,703	0.013	-247,516
Bank 5	-39783.315	0.049	-1.951782	0.013	-518,509
Bank 6	-49993.845	0.049	-2.452714	0.013	-651,586
Bank 7	-55852.819	0.049	-2.740157	0.013	-727,948
Bank 8	194686.782	0.049	9.551397	0.013	2.537418
Bank 9	-8977.260	0.049	-440,427	0.013	-117,004
Bank 10	-71368.989	0.049	-3.501386	0.013	-930,176
Bank 11	-5271.419	0.049	-258,618	0.013	-68,704
Bank 12	-16932.328	0.049	-830,706	0.013	-220,685

**Table 3.**  
Banks' brand value for the first business year

**Source(s):** Authors' calculation



**Figure 3.** Banks' brand value for the first business year

Source(s): Authors

significant variable for brand value as the profit from the brand, which is expected if we take into account that banks with the largest brand value are also those with the highest profits from their brand. This is in compliance with the conclusions of [Muhammad and Ismail \(2009\)](#).

[Table 4](#) shows the value of the banks' brand in their second business year.

The brand values in [Table 4](#) are shown in the graph below ([Figure 4](#)).

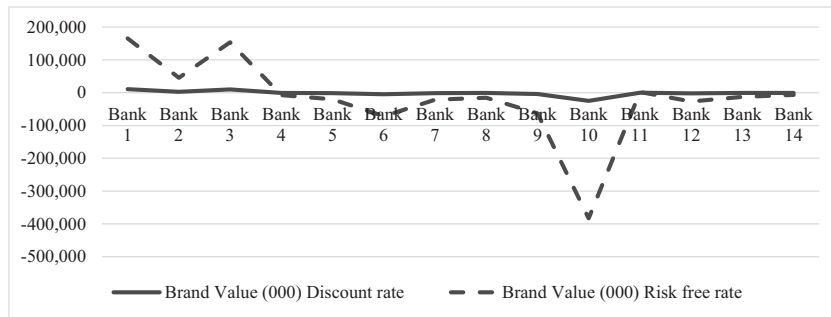
Based on the given table and graph, it is concluded that the highest estimated value of the brand, if the weighted average cost of capital at a branch level is taken as the discount rate, has been found at Bank 1, followed by Bank 3, Bank 2 and Bank 11, which is expected based on the performance of the banks so far, which, in this business year, confirmed a significant relation between bank performance and investment in the brand, as a relational component of IC, which is in line with the findings of the study [Salehi et al. \(2014\)](#). If we observe the risk free rate as the discount rate, the bank with the highest brand value is Bank 1, followed by Bank 3, Bank 2 and Bank 11, which contributes to the objectivity of the research. The authors conclude that the banks' brand values are not the same because the value of the discount rate is not the same, but the rank of banks has remained the same. It is worth noting that the

Banks	Profit from brand	Discount rate of brand strength	Brand value (000)	Risk free rate	Brand value (000)
Bank 1	352099.8586	0.031	10775.046	0.47	165486.934
Bank 2	97118.58721	0.031	2972.047	0.47	45645.736
Bank 3	326764.7675	0.031	9999.736	0.47	153579.441
Bank 4	-16007.36226	0.031	-489.861	0.47	-7523.460
Bank 5	-42761.43897	0.031	-1308.596	0.47	-20097.876
Bank 6	-151512.8316	0.031	-4636.633	0.47	-71211.031
Bank 7	-46020.41943	0.031	-1408.328	0.47	-21629.597
Bank 8	-32893.10221	0.031	-1006.603	0.47	-15459.758
Bank 9	-133959.3126	0.031	-4099.456	0.47	-62960.877
Bank 10	-814850.5884	0.031	-24936.258	0.47	-382979.777
Bank 11	3725.324685	0.031	114.003	0.47	1750.903
Bank 12	-56356.44171	0.031	-1724.634	0.47	-26487.528
Bank 13	-26432.05647	0.031	-808.880	0.47	-12423.067
Bank 14	-14388.27417	0.031	-440.314	0.47	-6762.489

Source(s): Authors' calculation

**Table 4.** Banks' brand value in their second business year

**Figure 4.**  
Banks' brand value in  
their second  
business year



Source(s): Authors

weighted average cost of capital at a branch level in the banks' second business year was 0.031, while the risk free rate obtained on the basis of treasury bills auctions was 0.47.

These results are in correlation with the first research question, i.e. from the attached results it can be seen that in the second business year the Interbrand methodology has an empirical basis in the Montenegrin banking market, despite the specifics that characterize the banking market. Some banks also have a negative brand value this year, which indicates their insufficient activity in terms of investing in marketing activities, as reflected in the construction of a good brand identity. The marketing sector of banks must pay special attention to this problem in order to create a competitive position in the market and maintain the loyalty of customers.

It is concluded that the Interbrand methodology finds an empirical basis in the banking market in the second business year observed.

Table 5 shows the banks' brand value in the last observed business year.

The brand values in Table 5 are shown in the graph below (Figure 5).

The bank that had the highest brand value in the last observed business year was Bank 3, which was expected when the performance of this bank was taken into account. It was followed by Bank 8, Bank 1, Bank 2 and Bank 11. This ranking of banks was obtained by discounting, with the help of the weighted average cost of capital at a branch level. By discounting with the help of a risk free rate, we established the same rank of banks, although the value was different, i.e. Bank 3 was in first place, followed by Bank 8, Bank 1, Bank 2 and Bank 11. This confirms the aforementioned claims: the same rank of banks was obtained, only the value of the brand was different. Based on the results for this year, we conclude that the answer to the first research question has been given, i.e. the Interbrand methodology can find an empirical basis in the Montenegrin banking market. Also, it is noted that the weighted average cost of capital this year is 0.028 and the risk free rate is 0.017.

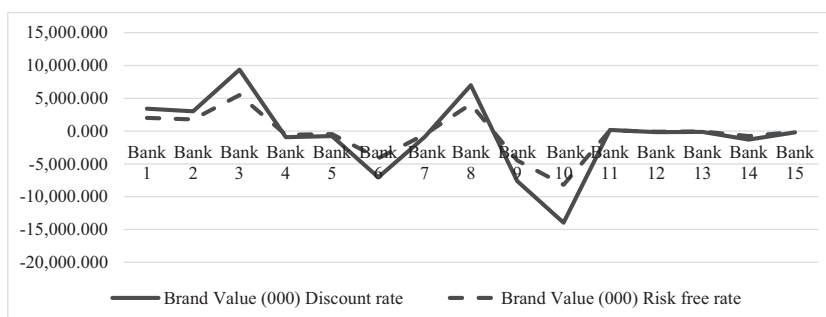
The graph below (Figure 6) gives a summary of the value of the banks' brand for all three observed years.

A general conclusion can be made based on the previous tables and graphs. This was confirmed over three business years and relates to the fact that, despite the limitations that are characteristic of the Montenegrin banking market. All three years gave a positive answer to the research question. Also, it was noticed that, if the values of discount rates are observed, in the last business year, the weighted average cost of capital, as well as the risk free rate, are the lowest, which indicates a lower risk in the banking market. It was noticed that this year, compared to previous years, the number of banks that had a positive brand value increased, demonstrating that bank management teams have increasingly realized from year to year

Banks	Profit from brand	Discount rate of brand strength	Brand value (000) (Discount rate)	Risk free rate	Brand value (000) (Risk free rate)
Bank 1	120666.6998	0.028	3414.163	0.017	2.001861
Bank 2	106260.13	0.028	3006.541	0.017	1.762856
Bank 3	330825.3246	0.028	9360.426	0.017	5.488392
Bank 4	-33110.2489	0.028	-936.827	0.017	-549,299
Bank 5	-26742.42233	0.028	-756.654	0.017	-443,657
Bank 6	-248386.2799	0.028	-7027.882	0.017	-4,120728
Bank 7	-31352.9973	0.028	-887.107	0.017	-520,146
Bank 8	247687.512	0.028	7008.111	0.017	4,109136
Bank 9	-268713.8074	0.028	-7603.032	0.017	-4,457962
Bank 10	-493409.3487	0.028	-13960.604	0.017	-8,185661
Bank 11	5826.003779	0.028	164.842	0.017	96,653
Bank 12	-5978.395996	0.028	-169.154	0.017	-99,182
Bank 13	-4057.534152	0.028	-114.805	0.017	-67,314
Bank 14	-46136.01532	0.028	-1305.380	0.017	-765,396
Bank 15	-6965.452519	0.028	-197.082	0.017	-115,557

Source(s): Authors' calculation

**Table 5.** Banks' brand value in the third business year



Source(s): Authors

**Figure 5.** Banks' brand value in the third business year

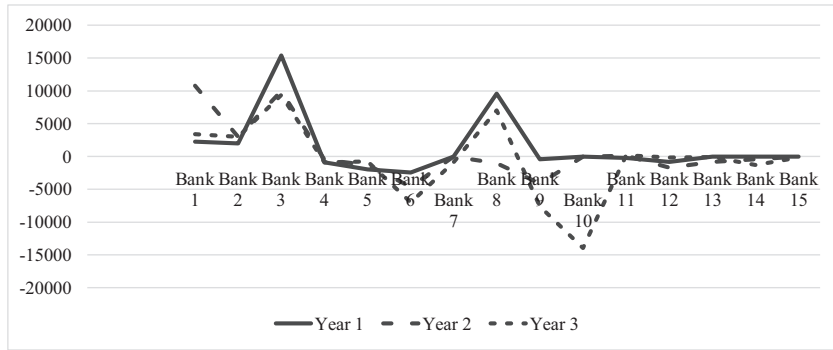
how investing in their brand, as an intangible asset, can contribute to their recognition and reputation in the market. This is in line with the findings of Salehi *et al.* (2014) and Muhammad and Ismail (2009).

The obtained results, from three years analyzed period show that a general conclusion is that the Interbrand methodology finds an empirical basis in the banking market. Also, during these three business years, the number of banks in the market increased, which affected the development of the competition between them and also the achieved economic profit, i.e. the profit from the brand. The number of banks with a positive brand value has increased from year to year.

In order to answer the second research question, regression analysis of the panel data was performed with the aim of achieving a greater efficiency in econometric parameters. The results of this analysis are shown in Table 6.

Based on 36 observations included in the scope of the model and the regression analysis conducted, we can conclude that brand profit is a parameter that has had an important impact on the brand value, with a risk of error of 5%. This decision has been made based on probability  $-p$ . When assessing the statistical significance of the parameter, we began with

**Figure 6.** Banks' brand value in the first, second and third business year – summary view



Source(s): Authors

Variables	(1) Model 1
econ_profit	-0.290 (0.253)
brand_profit	0.0373 *** (0.00622)
Constant	16.34 (138.5)
Observations	36
R-squared	0.972

Note(s): Robust standard errors in parentheses

Source(s): Authors' processing

\*\*\* $p < 0.01$ , \*\* $p 0.05$ , \* $p 0.1$

**Table 6.** Regression analysis

hypothesis  $H_0$ , which indicates that the parameter is not statistically significant, i.e.  $H_1$ , which posits that the parameter is statistically significant. The decision as to whether or not the null hypothesis should be accepted was made on the basis of probability  $p$ , as previously stated. If the probability of the parameter was less than 0.05, then an alternative hypothesis was accepted, which was the case in our model. Therefore, based on the presented results, we can see that the profit from the brand is a statistically significant variable. The R-squared model is 0.972, or 97.2% of the variations of the dependent variable, and is explained through variations of the independent variables. In this way, the answer to the second research question is given, i.e. through the observed parameters, the greatest influence on the value of a brand is the profit of the brand.

This leads to the conclusion that it is of great importance for management to understand how useful the assessment of brand value can be for the future business of a company. The authors identify that the brand is an item of IC. In other words, IC includes the brand and so the assessment of the brand itself gives even more importance to IC as a whole and therefore demonstrates the importance of IC to the financial performance of the company. This is confirmed by researchers who frequently measure the impact of IC as a whole on the financial performance of companies. [Wei Kiong Ting and Hooi Lean \(2009\)](#) identify a positive relationship between the value-added intellectual coefficient (VAIC<sup>TM</sup>) and the financial performance of banks in Malaysia, emphasizing that their research can serve to help bank

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managers to understand the importance of IC and monitor and evaluate its further development. A similar conclusion was also made by [Mondal and Ghosh \(2012\)](#), who showed that the IC of banks is particularly important to their competitive advantage. Furthermore, the authors of this paper confirm the statements of [Melovic \(2012\)](#), asserting that the brand is the most important asset of the company and its greatest value. If this attitude is taken into account, [Shih et al. \(2010\)](#) state that the advancement of knowledge, as an item of IC in the banking sector, is a way to maintain competitiveness in a dynamic business environment. It is thus not surprising that the value of a modern company does not lie in tangible, material assets, but rather in intangibles ones.

#### 4.1 Discussion

As previously discussed, the aim of this paper is to show how to quantitatively assess the value of intangible assets, i.e. the banks' brand, by using the Interbrand methodology, taking into account the specifics of the banking market in Montenegro. Based on the results presented, we are able to conclude that the Interbrand methodology can find its empirical basis in the Montenegrin banking market, despite the numerous specifics that characterize this sector. This provided an answer to the first research question.

The profit from the brand also has a significant impact on the banks' brand value, based on the analysis conducted. Unlike other studies, in which, according to the authors, brand profit was not included as a variable of statistical significance for estimating brand value, this study has shown that brand profit is a statistically significant variable across all observed years, and it can be significant from both theoretical and practical standpoints. Unlike [Vasileva \(2016\)](#), who primarily considered economic profit as an important variable, the authors have concluded that brand profit is no less important because regression analysis for the observed years demonstrated the statistical significance of this parameter with a 5% chance of error. There is a significant relationship between the brand value and the financial performance of the bank according to [Arora and Chaudhary \(2016\)](#). This can be related to IC, bearing in mind that the brand belongs to the relational component of IC, whereas [Salehi et al. \(2014\)](#) identify a significant link between IC and the financial performance of companies. Therefore, the assessment of the value of the banks' brand confirmed the statement of [Chu and Keh \(2006\)](#), showing that the Interbrand methodology can be applied to assess the value of each brand with discounting future cash flows. [Terzic and Dalic \(2019\)](#) indicate that the Interbrand methodology can be applied within different markets and research areas. In particular, the assessment of the banks' brand value can be performed. This is also confirmed by [Dharmawan \(2014\)](#), who conducted a brand evaluation of banks in Indonesia. Unlike [Dharmawan \(2014\)](#), the authors of this paper analyzed the ways in which the Interbrand methodology can be applied to the Montenegrin banking market. The authors identify a significant relationship between financial performance and the bank's brand. Unlike [Arora and Chaudhary \(2016\)](#), who observed the impact of brand value on financial performance, the authors observed the impact of financial performance on the banks' brand value—contrary to the work of previous researchers—and regression analysis confirmed that brand profit affects banks' brand value, with a 5% chance of error. The authors have shown that the brand is a part of the IC of the company and that investing in the brand indirectly strengthens IC—an important element for competitive business, which was also confirmed by [Seetharaman et al. \(2004\)](#). Thus, [Meditinos et al. \(2011\)](#) show that there is a statistically significant relationship between human capital and the financial performance of a company. Similar conclusions were made by [El-Bannany \(2008\)](#), who emphasized that people, as a component of IC, are of great importance when it comes to achieving goals. Hence, it is not surprising that brand and human capital significantly affect the strengthening of IC as a whole ([Seetharaman et al., 2004](#)), allowing companies to achieve a higher level of competitiveness.



Contrary to the methodology of the consulting company Interbrand (a marketing agency) Young and Rubicam suggest that brand performance could be affected by other performances such as: differentiation, respect, relevance and knowledge; whereas Verbeeten and Vijn (2010) point out that these variables could also affect financial performance in the future. If we take into account that the Interbrand methodology is also based on qualitative indicators in the form of a brand role index, then it is clear why these authors argue for the importance of qualitative indicators. The reason for this is that, if the value of the brand role index is higher, the profit from the brand will be higher, which the authors concluded following this research.

The results of the research also lead the authors to conclude that brand value and its assessment is a multidimensional concept, which is consistent with the research of Verbeeten and Vijn (2010). According to the Interbrand methodology, only strong brands are discounted at a risk free rate, as confirmed by Madden *et al.* (2006), and strong brands bring about the highest returns and lowest risks to the stakeholder. However, considering banking market brands belong to medium-strong brands, brand profit is discounted with the weighted average cost of capital that applies to medium-strength brands. In order to fully apply the Interbrand methodology, the profit from the brand was discounted at both rates, which the authors presented as well and thus confirmed the findings outlined above.

We can conclude that most banks have a problem when it comes to their high share of obligations with regards to total liabilities, as reflected in the calculation of the economic profit of the brand. That is, all banks that had a higher operating profit than their cost of capital had a positive brand value as well. Most banks do not have a high index of the role of the brand, which means that managers of the marketing sector in banks must be aware of the role and the importance that the brand holds for the modern client and thus for the modern way of doing business. The analysis concluded that, in both ways the same bank rank was obtained (with regards to discount rates used to calculate the brand value), and only a difference is in the brand value. Thus, in the first business year, the bank with the highest brand value was Bank 3, in the second business year the leading position belonged to Bank 1, while in the last observed business year Bank 3 was in first place. We noticed that, for these three years, the value of the banks' brands changed, as did their positioning, but that the banks in question have always been competitive. Bank 3 was in the leading position in the first and last business years, but its place was taken by Bank 1 in the second business year. The results obtained are, in this way, in line with expectations if the performance of the banks is taken into account.

## 5. Conclusion and implications

The analysis has shown that knowledge of the role of brands and awareness of the importance that the brand has for modern ways of doing business is crucial for companies to survive in the marketplace. The objective of each company is to develop a brand that will evoke a positive association in customers, serving as their main drive for each subsequent purchase. A brand is not just a set of visible identity features (name, logo, slogan, color, packaging and labeling). The brand also comprises of something invisible and intangible, which offers added value for both customers and the company. Brand development, as a form of differentiation, and thus the assessment of its value, is becoming increasingly important. However, researching the brand as an intangible asset is challenging but, at the same time, is encouraging given that the value of the most world-renowned companies does not lie in their tangible assets, but in their intangible ones. Therefore, special attention should be paid to methods through which we can assess brand value. All methods are classified into four approaches to brand evaluation: the cost approach, the market approach, the revenue approach and the formal approach (Seetharaman *et al.*, 2001).

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By applying this method, the brand value is considered in relation to the overall value of the company. We identify the relative presence of subjectivity in research as a lack of Interbrand methodology.

This research provides answers to the previously established research questions on which this paper is based, which imply that the Interbrand methodology has an empirical basis in the Montenegrin banking market, but also that the profit from the brand has a significant impact on the banks' brand value.

The application of the Interbrand methodology shows how the value of the banks' brands has changed over the observed years and what caused this. It is certain that Bank 3 and Bank 1 are especially important to clients within the Montenegrin market, as evidenced by their performance, and this is reflected not only in financial statements, but also in the way they view clients, how they innovate their systems and operations and whether they offer something new and different. Therefore, measuring brand value is an important evaluation of the performance of companies (Chu and Keh, 2006). Bank 3 was the best ranked bank in the first and last observed business years, while its place was taken by Bank 1 in the second business year. It is interesting to observe that the banks with the best financial performance are also those that have the greatest brand value, demonstrating a strong relationship between the good and responsible business of banks and the positive associations that customers associate with that bank. Economic implications anticipate that assessing the value of a brand strengthens the market value of banks. A bank that has a higher estimated brand value will have a better market position and thus a better reputation in the minds of clients. This is important if we keep in mind that these are financial services, i.e. banks are financial institutions. As such, a better reputation in the market could positively affect levels of investment in the bank as a brand, strengthening the bank's competitiveness. The institutional contribution of this paper is reflected in the emphasis on the importance of the brand as an intangible asset, and thus its assessment, which is especially important if we consider the ways in which intangible assets are balanced in financial statements. In addition to this, this research can serve as a basis for comparison when it comes to assessing the brand value of banks in transition countries with the same or similar levels of economic development and in developed countries with strong competitiveness in their banking market. This relies on the fact that Montenegro, although a small transitional country, has a competitive banking market with a large number of commercial banks. More than 90% of the financial system in Montenegro is comprised of banks (Central bank, 2020). In addition to economic and institutional implications, this paper has a social contribution as well. This is reflected in the fact that banks that have a higher brand value are also banks to which customers are loyal, affecting reputations. Therefore, in order to maintain and uphold a reputation in the market, banks are increasingly encouraging socially responsible business, thus enabling not only successful business, but also that which is responsible and sustainable, making a profit and affecting the working conditions of employees, the environment and the local community. This contributes not only to positive perceptions of banks, but also to greater satisfaction in clients.

## 6. Limitations and future research

This analysis has shown that the research itself has a number of limitations, which primarily relate to the calculation of the weighted average cost of capital and the risk free rate. Therefore, the price of equity could not be calculated through the paid dividend of banks, because most banks do not pay dividends in the Montenegrin market, as confirmed by the Montenegro Stock Exchange. As such, the price of the equity is taken as the net ROE, whereas the price of the borrowed capital is taken as the interest rate on time deposits of more than one year, which is in line with the practice. Furthermore, banks in Montenegro do

not have a clearly defined scale which is the same for all banks in terms of the amount that clients can deposit for the same period, which depends on the interest rate on time deposits. For the sake of the objectivity of the survey, this was taken from the audit reports of each bank individually. In other words, the maximum interest rate at which time deposits in that bank could be terminated for the observed year was taken over. Also, it should be emphasized that, when calculating the weighted average cost of capital, banks' liabilities were observed in terms of their financial structure. The parameters for calculating the brand role index are adjusted according to the market and banks as financial institutions. In particular, it was necessary to determine this based on which bank should be viewed as a market leader, and the same criteria should then characterize all banks. If the trade or production company was analyzed, we could take some of the elements of the marketing mix (price, product, promotion and place) and, based on that, determine the parameter of leadership or, more simply, uncover their market share. When it comes to determining the market share of the banks, this cannot fully be determined without covering all banks, for the simple reason that banks do not have the same range of services or products that they offer in their range. Therefore, the total number of assets was taken as the criterion of leadership. According to the official balance sheets, the bank that had the largest total number of assets was more competitive in the market, obtaining a larger portfolio and thus a larger customer base.

With regards to the protection parameter, according to the data obtained from employees of the Intellectual Property Office in Montenegro, it is not possible to protect all elements of brand identity. In other words, only a trademark can be protected. The protection of bank trademarks was monitored with the help of the website of the Intellectual Property Office in Montenegro, whereby checking on the "database search" option meant that one could see which banks had a trademark and which were in the process of securing one.

There are fifteen commercial banks registered in Montenegro. Some banks are operating under the auspices of a group (and this should be taken into account as well) and so, with the help of an international trademark verification database, we checked whether the groups had trademarks in the Montenegrin market in order to conduct our research as objectively as possible.

The discount rate of brand strength is calculated in two ways: as an average weighted cost of capital at a branch level and as a risk free rate. The weighted average cost of capital at a branch level was calculated through the sum of the weighted average cost of capital for each bank divided by the number of banks operating in our market during that period. It was calculated in this way due to the lack of official data on the average weighted price of capital at the level of the banking market.

The risk free rate was calculated on the basis of auctions relating to one hundred and eighty two-day bills, examining the average price at each auction at which treasury bills were sold during the observed year, and their average was calculated.

The importance of the issue of the development of the financial system is also indicated by [Cabrita et al. \(2017\)](#), emphasizing that a competitive and efficient financial sector is a prerequisite for the growth and development of a country. In other words, in order for banks to be competitive in the Montenegrin market, it is not enough to have only good financial performance. They are a necessary but not sufficient condition. Banks need to create a strong brand and establish their recognition in the market. That is, they need to build a strong brand identity. This is particularly relevant due to the fact that the most critical challenge for the financial sector is regaining the trust of clients, which is especially critical for a company's survival and competitiveness ([Cabrita et al., 2017](#)).

Based on the previous analysis, the authors concluded that the results obtained in this research serve bank management teams by creating a more efficient business policy in the market in order to retain existing and acquire new customers.

This paper could be the basis for further research on assessing brand value and intangible assets because the analysis of banking institutions of this type, which includes marketing and financial aspects, i.e. the applied methodology of the consulting company Interbrand, was not conducted in Montenegro. Therefore, it influences business decisions and encourages the creation of adequate policies with which to improve the position of IC and thus the brand in financial statements. This represents both a theoretical and practical contribution of the work.

Most countries of the Western Balkans have a similar level of development, adapted form of methodology can be applied to assess banks' brand value in neighboring countries. This could influence the expansion of the theoretical basis for assessing brand value, i.e. intangible assets, as an important component of the financial statements of modern business. Additionally, our results can help to create better strategies with which to improve IC by strengthening the brand and elements of brand identity as constitutional elements of IC, which further emphasizes the practical contributions of this research.

Finally, this work, i.e. the application of the Interbrand methodology, has positive implications not only for company management, but also for a society as a whole. Based on the estimated value of the banks' brands, the management teams within the banks can deduce how much their bank as a brand contributes to a positive business result. In this way, the banks' position in the market could be improved through additional marketing investments. Additional marketing investments encourage the strengthening of IC as a whole, serving as an important factor in the company's financial statements.

With relation to customers, it is important to know how they perceive the bank as a brand. The results obtained on customer perception should be compared with the results of the estimated brand value based on financial statements since it is to be expected that the bank with the greatest brand value will be the bank that customers trust most. This triggers positive perceptions, which will reduce the suspicion of the bank as a financial institution.

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