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## Comparison of selected internationally recognized brand valuation methods

**JEL Classification:** M30; M31; M39; C10

**Keywords:** brand; brand value; brand valuation; brand valuation method

### Abstract

**Research background:** There are many consultative groups and market research companies on the market that have also brand valuation included in their service portfolios. Such companies tend to adopt their own unique approaches to value brands to face increasing competition, which is also reinforced by the fact that brand constitutes the company's most valuable commercial and intangible assets. The paper compares selected internationally recognized brand valuation methods, using the mathematical statistics apparatus (Pearson and Spearman correlation coefficients), on the sample of 12 global well-known brands (Apple, Google, Microsoft, Coca-Cola, Facebook, Toyota, IBM, Disney, McDonald's, General Electric, Samsung and Amazon).

**Purpose of the article:** The aim is to analyze the brand values and the methods applied for possible deviations, and identify whether they are statistically significant and/or find any statistical correlation, or eventually recognize them as totally different and independent approaches.

**Methods:** The analysis is carried out by pairwise comparison of selected brand values provided by selected consultative companies (Forbes, Interbrand, Brand Finance and Millward

Brown). The degree of correlation of brand values provided by respective consultative groups is calculated using the following correlation coefficients: Pearson's correlation coefficient and its modified non-parametric version involving ordinals — Spearman's rank correlation coefficient.

**Findings & Value added:** The analysis proved the highest correlation of the brand values provided by the Forbes and Interbrand; Subsequently, a trend analysis is carried out to determine the development over time, identifying the most striking development in the brand values provided by Millward Brown (BrandZ™) for the period 2013–2016.

## Introduction

The brand is an important intangible asset of enterprises which plays a vital role in the development of enterprises (Cui & Zhang, 2013, pp. 749–753). Brand is a concept, like an equity, which is continuously cultivated and accumulated for a long time (Yi, 2012). Brands are a company's most valuable intangible asset, and, over the past decade, managers at many firms have made brand development a top priority (Keller & Lehmann, 2006 in Hsu *et al.*, 2013, pp. 129–141). Brand reflects the exterior (visible elements), but also the personality, i. e. the character of the company (invisible elements) (Dejanovic *et al.*, 2015, p. 120). The brand name identification with costumers creates benefits that a firm may charge higher price for the same product, leading to higher profit margins, growth and firm value to net sales ratio. A well-know brand may also create an immediate product identification on the consumer mind, increasing the probability of sale if we compare it with a generic product (Cardoso & Laruccia, 2006). Brand valuation has attracted the interest of accounting academicians and practitioners, several valuation methods have come into existence, however, after a careful review they prove a lack of objectivity (Xia, 2015). Brand and its performance is very important, because brand performance is one of the eight dimensions (market, brand, customer, financial, product, price, placement and promotion performance) of marketing performance (Sucala & Sava, 2015, p. 92).

There are many consultative groups and market research companies on the market that have also brand valuation included in their service portfolios. Such companies tend to adopt their own unique approaches to value brands to face increasing competition, which is also reinforced by the fact that brand constitutes the most valuable commercial and company's intangible assets.

Since brand is by nature intangible, the brand valuation processes are rather complex and often ambiguous, resulting in many approaches and methods to be applied; and thus, each consultative company would rather prefer their own unique approaches, but still has to follow the standards as

defined in ISO 10668:2010 on brand valuation. The issue of application of ISO 10668 is discussed in Roberts (2011, pp. 47–49) and Vijayakumar & Filma (s. a.).

The paper compares a variety of selected, internationally recognized, brand valuation methods. The analysis is carried out on the sample of 12 global well-known brands (according to Forbes's The World's Most Valuable Brands), where the brand values, setting the Forbes' ranking the benchmark, are further analyzed as for the corresponding values provided by other internationally accepted consultative groups Interbrand, Brand Finance and Millward Brown.

The aim is to analyze the brand values and the methods applied for possible deviations and identify whether they are statistically significant and/or find any statistical correlation, or eventually recognize them as totally different and independent approaches.

It is not possible to decide what approach is best to adopt, however, and whatever the approach, whose development is observed over time to be crucial to determine the brand value.

If we use uniform methods all the time (or we draw on the brand values provided by the same consultative company), the development over time is crucial i.e. it is the development of the brand value over time which is determining rather than the absolute value of the brand i.e. it is on upward or downward trend, hence the brand is defined in terms of high quality when showing the upward trends.

The issue of brand valuation is frequently discussed in specialized literature; in particular, broad classifications of brand valuation methods (Srinivasan *et al.*, 2011; Abratt & Bick, s. a.; Budac & Baltador, 2013) or more detailed classifications focused on income brand valuation methodologies (Majerova & Kliestik, 2015, pp. 546–552) or either specific comparison of methods involved, e.g. the model used by Interbrand vs. the one according to Damodaran revised by Fernandez (2002; 2015) or the Interbrand's model based on the real option theory further addressed by Cui and Zhang (2013, pp. 749–753), and also by Jia and Zhang (2013, pp. 325–330), who deal with the model from the perspective of consumer. The issue of economic and behaviourally oriented brand valuation models presented Virvilaite and Jucaityte (2008, pp. 111–119).

## Research methodology

Brand valuation began in the 1980s as a financial tool used to separate out the value of brands from goodwill for accounting purposes (Seddon, 2010, pp. 9–57; Seddon, 2015, pp. 146–161).

The concept of value is one of the most difficult concepts to grasp. Value has different meanings to different people and thus is not an objective concept. The valuation approach used is effectively the objective of the valuation. The objective of the valuation is determined by its use. Some of the more common valuation approaches can be classified into five categories:

- Cost-based approaches
- Market-based approaches
- Economic use or income-based approaches
- Formulary approaches
- Special situation approaches (Abratt & Bick, s. a.).

The “ideas” underlying the brand are subject to valuation by the proprietary methods employed by the larger advertising agencies. These methods have five basic parameters in common, all relating to the potential consumer: “Awareness” or knowledge of the brand, “Consideration” of the offer underlying the brand idea, “Preference” for this offer rather than the alternatives, “Satisfaction” or positive experience, and “Loyalty” in recommending the offer to others. However, these proprietary methods lead to results that differ from each other and are sometimes even markedly dissimilar (Argenyiano, 2016).

Brand valuation helps the management to review brand decision by linking investment made on a brand to the increase in brand value over a reasonable period of time. It reveals to the management the disparities between its assumptions and the market realities pertaining to the brand. ISO 10668, the standard on brand valuation laid down in 2010, acts as a comprehensive set of guidelines to be followed in a brand valuation exercise (Vijayakumar & Filma, s. a.). ISO 10668 is the international norm that sets minimum standard requirements for the procedures and methods used to determine the monetary value of brands. It defines a coherent and reliable approach for brand valuation that takes into consideration financial, legal and behavioral science aspects (*New International Standard...*, 2010).

The paper draws on particular brand valuation methods used by 4 consultative companies, which are as follows.

**Forbes** — the first step in valuing the brand is to determine revenue and earnings before interest and taxes for each brand. The Forbes apply the maximum corporate tax rate in the parent company’s home country to that

net earnings figure. As the next step, they allocate a percentage of those earnings to the brand based on the role brands play in each industry. To this net brand earnings number, they apply the average price-to-earnings multiple over the past three years to arrive at the final brand value ([www.forbes.com](http://www.forbes.com)).

**Interbrand** — Interbrand was the first company to have its methodology certified as compliant with the requirements of ISO 10668 (requirements for monetary brand valuation) and has played a key role in the development of the standard itself. The Interbrand brand valuation methods consists of these components:

- financial analysis — this measures the overall financial return to an organization’s investors, or its economic profit,
- role of brand — this measures the portion of the purchase decision attributable to the brand as opposed to other factors (purchase drivers such as price, convenience, or product features),
- brand strength — this measures the ability of the brand to create loyalty and, therefore, sustainable demand and profit into the future. Brand Strength analysis is based on an evaluation across 10 factors that Interbrand believes constitute a growing brand ([www.interbrand.com](http://www.interbrand.com)).

**Brand Finance** — “Royalty Relief” method is based on the notion that a brand-holding company owns the brand and licenses it to an operating company. The notional price paid by the operating company to the brand company is expressed as a royalty rate. The NPV (net present value) of all forecast royalties represents the value of the brand to the business. This method is based on commercial practice in the real world. It involves estimating likely future sales, applying an appropriate royalty rate to them and then discounting estimated future, post-tax royalties, to arrive at a NPV. The steps in the Royalty Relief brand valuation process are as follows:

- obtain brand specific financial and revenue data,
- model the market to identify market demand and the position of individual brands in the context of market competitors,
- establish the notional royalty rate for each brand ([www.brandfinance.com](http://www.brandfinance.com)).

**Millward Brown** — BrandZ™ valuation methodology that combines extensive and ongoing consumer research with rigorous financial analysis. Their research covers three million consumers and more than 100,000 different brands in over 50 markets ([www.millwardbrown.com](http://www.millwardbrown.com)).

$$\text{Brand value} = \text{Intangible Earnings} \times \text{Brand Contribution} \times \text{Brand Multiple} \quad (1)$$

The degree of correlation of brand values provided by respective consultative groups is calculated using the following correlation coefficients: Pearson's correlation coefficient and its modified non-parametric version involving ordinals — Spearman's rank correlation coefficient.

The Pearson's correlation coefficient is applied to find out whether there is a linear relationship between the absolute brand values for the reporting period 2013–2016:

$$r_{XY} = \frac{n \cdot \sum_{i=1}^n x_i \cdot y_i - \sum_{i=1}^n x_i - \sum_{i=1}^n y_i}{\sqrt{n \cdot \sum_{i=1}^n x_i^2 - \left(\sum_{i=1}^n x_i\right)^2} \cdot \sqrt{n \cdot \sum_{i=1}^n y_i^2 - \left(\sum_{i=1}^n y_i\right)^2}} \quad (2)$$

where:

$r_{XY}$  – Pearson's correlation coefficient

$x_i$  – variable  $X$

$y_i$  – variable  $Y$

$n$  – number of measurements

And the Spearman's rank correlation coefficient is applied to determine a monotonic relationship between the ranked brand values (the ranks of 1–12).

$$r_s = 1 - \frac{6 \sum_{i=1}^n (R_i - Q_i)^2}{n(n_2 - 1)} \quad (3)$$

where

$r_s$  – Spearman's rank correlation coefficient

$R_i$  – rank-ordered value  $x_i$

$Q_i$  – rank-ordered value  $y_i$

$n$  – number of measurements

When interpreting the calculations of correlation coefficients, we draw on the guidelines (Table 1).

## Results and discussion

In this paper, individual brand valuation methods used by selected internationally accepted consultative companies are analysed and compared to identify the pros and cons of the methods applied.

The aim is to identify whether they are statistically significant, not only by comparing the method and the individual steps to take when applied, but also by evaluating the brand values themselves.

The analysis is carried out on the sample of 12 global well-known brands based on the Forbes' ranking of the world's most valuable brands in 2016, which are the following: Apple, Google, Microsoft, Coca-Cola, Facebook, Toyota, IBM, Disney, McDonald's, General Electric, Samsung and Amazon; the brand values, setting the Forbes' ranking the benchmark, are further analyzed as for the corresponding values provided by Interbrand, Brand Finance and Millward Brown during the period of 2013–2016.

Our objective is to determine, involving appropriate mathematical statistics apparatus, the degree of correlation of applied brand valuation methods and also to identify them in terms of differences in the approaches applied.

In this case, the Pearson's correlation coefficient (2) shows the correlation of the absolute brand values calculated by respective consultative companies (Table 2).

The following is determined when applying the Pearson's correlation coefficient:

- The most similar brand values are provided by Forbes and Interbrand in 2016. The correlation coefficient is 0.936, indicating high correlation of values, which is also demonstrated by the fact that both the companies have the same up to 70 brands that appear in the top 100.
- And, on the other hand, the most significant deviations show Brand Finance and Millward Brown in 2014. The correlation coefficient is 0.542, indicating medium correlation of values.
- We observe, following the monitored period 2013–2016, that the most comparable brand value rankings are those of Forbes and Interbrand, showing a significant correlation of analyzed brand values i.e. the correlation coefficient, calculated by the Pearson's correlation coefficient, is 0.8 during the whole period monitored (2<sup>nd</sup> Interbrand and Millward Brown, 3<sup>rd</sup> Forbes and Millward Brown).
- Moreover, taking into account all the companies involved, the most comparable results are observed in 2015 (2<sup>nd</sup> 2016, 3<sup>rd</sup> 2013).

Given that the absolute brand value is not always that crucial but ranking, the Spearman's rank correlation coefficient (3) is also applied to measure the ranked (ordered) values rather than the absolute ones (Table 3).

The following is determined when applying the Spearman's Rank Correlation Coefficient:

- The most similar brand values are provided by Forbes and Interbrand in 2013. The correlation coefficient is 0.936, indicating high correlation of values.

- And, on the other hand, the most significant deviations show Forbes and Brand Finance in 2016. The correlation coefficient is 0.224, indicating low correlation of values.
- We observe, following the monitored period 2013–2016, that the most comparable brand value rankings are those of Forbes and Interbrand (2<sup>nd</sup> Forbes and Millward Brown, 3<sup>rd</sup> Interbrand and Brand Finance).
- Moreover, taking into account all the companies involved, the most comparable results are observed in 2013 (2<sup>nd</sup> 2014, 3<sup>rd</sup> 2015).

To sum up, closely comparable results can be found, following both the methods used, in case of the brand values provided by Forbes and Interbrand, which are as close as possible in terms of the methods applied by both the companies.

As already mentioned, and given the differences in values obtained when different methods are applied, we find the development over time to be the key factor in determining the brand value. An analysis is carried out to monitor the development of the brand values over time, involving selected brand valuation methods used by different consultative companies (Forbes, Interbrand, Brand Finance and Millward Brown, respectively); and it shows the most significant deviations in case of the brand values provided by the Millward Brown's BrandZ™ study compared to the brand values provided by the other companies that show also different values though showing mostly constant trends e.g. the trend analysis of the brand value of Apple during 2013–2016 (Figure 1).

Several methods are commonly used to establish the financial value of brands. All of them should establish the future economic benefit of brand ownership, discounted for market and brand-specific risks (Tiwari, 2010, pp. 421–434). During the past few decades, brand consulting firms have emerged to quantitatively assess the value of prominent brands collected into annual rankings. Founded in 1974, Interbrand is one of the most renowned brand consultancies. The firm began ranking American brands in 1984 and global brands in 1999, and is considered to be the market leader of brand valuation due to its long experience (Hsu *et al.*, 2013, pp. 129–141).

## **Conclusions**

There are many consultative groups and market research companies on the market having brand valuation included in their service portfolios. Such companies tend to adopt their own unique approaches to value brands, mostly building on thorough financial analyses and comprehensive surveys.



However, it means the more approaches — the more results; and it is the deviation in the brand value when calculated by involving different methods which gave rise to analyzing the methods applied. Therefore, an analysis was carried out, on the sample of selected brand values provided by different consultative companies, to prove the methods applied to be statistically significant or not, and to what extent i.e. by applying Pearson's and Spearman's correlation coefficients, we tried to identify whether there is any correlation between the brand valuation methods involved. The analysis proved the highest correlation of the brand values provided by the Forbes and Interbrand; another analysis was carried out to monitor the development of the brand values over time, and it showed that even though the absolute brand value may vary, the development over time is showing the constant trends (in case of three models used by the Forbes, Interbrand and Brand Finance, respectively); and, on the other hand, the most significant deviations as for the development can be seen in case of the brand values provided by the Millward Brown's BrandZ™ study.

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## Annex

**Table 1.** Degree of Correlation

Correlation Coefficient	Degree of Correlation
0 – 0.3	low
0.3 – 0.8	medium
0.8 – 1.0	high

**Table 2.** Correlation of Brand Values of Selected Consultative Companies Calculated Using Pearson's Correlation Coefficient

Consultative Companies	Pearson's Correlation Coefficient			
	2013	2014	2015	2016
Forbes vs Interbrand	0.857	0.857	0.928	0.936
Forbes vs Brand Finance	0.774	0.745	0.78	0.819
Forbes vs Millward Brown	0.901	0.744	0.91	0.83
Interbrand vs Brand Finance	0.622	0.707	0.8	0.87
Interbrand vs Millward Brown	0.863	0.878	0.92	0.86
Brand Finance vs Millward Brown	0.64	0.542	0.701	0.712

**Table 3.** Correlation of Brand Values of Selected Consultative Companies Calculated Using Spearman's Rank Correlation Coefficient

Consultative Companies	Spearman's Rank Correlation Coefficient			
	2013	2014	2015	2016
Forbes vs Interbrand	0.93	0.909	0.832	0.671
Forbes vs Brand Finance	0.636	0.552	0.566	0.224
Forbes vs Millward Brown	0.787	0.762	0.636	0.622
Interbrand vs Brand Finance	0.685	0.65	0.65	0.643
Interbrand vs Millward Brown	0.85	0.678	0.664	0.406
Brand Finance vs Millward Brown	0.486	0.357	0.315	0.399

**Figure 1.** The Brand Value of Apple – Trend Analysis (billion \$)

