



ORIGINAL ARTICLE

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**Brand valuation: an innovative approach based on the risk difference**

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**Keywords:** brand valuation; valuation methods; risk difference; Net Present Value; NPV; IRR

**Abstract**

**Research background:** Among academicians, a growing interest in brand valuation methods can be observed since the 1980s, when it became obvious that firms have off-balance sheet assets which have a significant effect on their value. Moreover, in a number of cases, the need to value the brand arises due to the reporting requirements or transactional and other intrafirm reasons. The existing methods used so far have commonly focused on changes in variables such as sale prices, changes in customer behaviour, or sales volumes and very often lead to different results, even when valuing the same brand. We believe that the risk factor has been neglected in these methods, although having a significant impact on the brand valuation.

**Purpose of the article:** The aim of this paper is to formulate an alternative brand valuation approach based on the risk difference. This is defined as the difference between the risk to which a producer with a certain brand is exposed and the risk of the producer without a brand.

**Methods:** Firstly, a set of assumptions was defined concerning the issue what conditions are required to be applied to use the proposed methodological approach. Next, the concept itself is

formulated and tested while using the case study approach. Hence, in conditions of a model company, the method was verified with specific data. The results were also compared with the reproduction cost approach.

**Findings & value added:** This paper presents a novel brand valuation method based on the risk difference. Building on a thought experiment, we compare an incumbent with a brand rather than with an average producer, which is a commonly used approach, with a new entrant to the market. We argue that in comparison to existing methods, our methodological approach reduces the number of unobservable inputs in the brand valuation process, and thus increases the accuracy and reliability of its results. Our method supports both researchers and practitioners to establish a better understanding between the well-established financial theories and new directions in brand valuation research.

## Introduction

The need for brand valuation and the development of the brand valuation research dates back to the 1980s (Aaker, 2009), when it became increasingly obvious that companies have off-balance sheet assets which have a significant effect on their overall value (Haskel & Westlake, 2018). A large number of academic studies deal with the issue of brand valuation, both from the perspective of transactions (e.g., in the form of mergers and acquisitions) and from the perspective of intra-firm value management, and a vast number of valuation approaches have been formulated to shed light on various aspects of brand valuation in recent three decades. The first methods were defined by Simon and Sullivan (1993), or the Interbrand Company (Haigh, 1997). Gradually, the number of approaches to brand valuation has expanded considerably (for reviews see, e.g., Janoskova & Krizanova, 2017; Fernández, 2002; Abratt & Bick, 2003; Salinas & Ambler, 2009; Lagrost *et al.*, 2010; Reyneke *et al.*, 2014; Keller, 1999).

The discussions on brand valuation methods are more current than ever before due to the growing importance of intangible assets in firms' balance sheets. Moreover, in a number of cases, the need to value the brand arises due to the reporting requirements; in other cases, companies value the brand for transactional (in the case of mergers and acquisitions) or other intra-company reasons. Lev (2019), Calder and Frigo (2019) or Yuan and Shaw (2014) point out the need for further research in this area.

The brand valuation methods used so far have commonly neglected the factor of risk and have frequently focused only on changes in variables such as sale prices (e.g., Crimmins, 1992), changes in customer behaviour or sale volumes (e.g. Hupp & Powaga, 2004). Attention is also paid to the secondary change of other operating variables; examples may include costs (e.g., Sander, 1994) or the payback period of investment into a brand (Herreman *et al.*, 2000). Some other approaches to valuation focus on evaluating the costs of developing a brand (e.g., Abratt & Bick, 2003), or on the

savings which a successful brand owner achieves. Probably the most commonly used approach is based on the royalty relief, which calculates the savings resulting from brand ownership compared to the costs of assets that would otherwise have to be leased (e.g., Paugam *et al.*, 2016). These approaches often lead to significantly different results, even when valuing the same brand (Abratt & Bick, 2003; Reyneke *et al.*, 2014). This fact is a persistent issue not only from the perspective of reporting, but also, for example, current or potential investors (Lev & Gu, 2016; Sinclair & Keller, 2014; Sudolska & Łapińska, 2020). We believe that one of the reasons consists in neglecting the risk factor, which, however, is a substantial feature of established asset valuation methods (see, e.g., Pinto *et al.*, 2015) and has also a significant effect on the brand valuation. The royalty relief method and cost and income valuation methods assign the brand a share of the producer's sales, margin, profits, etc. However, these approaches do usually not reflect the risk. As a result, two brands with different risks may be assessed (valued) in the same way, which does not correspond to the assumptions devoted to the financial valuation of assets in general.

Against this backdrop in the methodology, the purpose of this paper is to formulate an alternative brand valuation approach based on the risk difference. This is defined as the difference between the risk to which a producer with a certain brand is exposed and the risk of the producer without a brand. In contrast to, for example, income valuation methods, this approach does not consider a non-branded producer as a benchmark. This producer has also a certain brand and cannot be considered a standard for the situation of not having a brand. A much more suitable benchmark seems to be a producer who does not yet exist, i.e., a producer without any brand. Under certain conditions, it is possible to assign the required rate of return and the associated risks to the incumbent and the new entrant. These differences represent the basis for estimating the financial value of the brand.

An inductive approach was used here, assuming that a producer without a brand is equal to a non-existing producer (the new entrant). This reasoning aims at developing an original brand valuation approach by deducing it systematically from existing approaches of brand valuation methods and theoretical considerations based on prior academic literature. The introduced concept is tested while using data of a hypothetical company.

The remainder of this paper is structured as follows. In the first part, a theoretical framework on brand valuation methods is developed. Next, the research design is introduced followed by the proposal of the brand valuation method. Finally, we provide a discussion of the approach and propose a new agenda for the upcoming research.

## Literature review

The term brand is not a uniform term, which does not contribute to the clarity of the situation (for an overview of the definitions of brand equity used, see, e.g. Sander (1994). According to American Marketing Association/AMA (2019), the brand is the “name, term, design, symbol, or any other feature that identifies one seller's goods or service as distinct from those of other sellers.” However, the brand value is commonly perceived in something other than a mere mark identifying the producer.

Three basic theoretical approaches have developed in the understanding of brands (Avery & Keinan, 2015), being different in many respects. The representatives of those who understand the brand as an accumulation of (more or less successful) marketing messages which are (more or less) passively received by customers are, for example, Aaker and Keller (1990). According to this approach, the brand is simply a function of the resources spent on the “brand image”. Mick and Buhl (1992) and Fournier (1998) interpret the brand as the result of the interaction of these expenditures in relation to the consumer. The consumer is understood as a person who interprets the meaning of the brand, changes it, and creates a relationship with the brand (Meilhan, 2019; Servera-Francés & Piqueras-Tomás, 2019). The concept of “brand personality” thus comes to the fore. The third direction of brand understanding (Holt, 2002, 2004) considers the brand to be a socio-cultural phenomenon shaped by culturally influential people (Holt & Cameron, 2012) and uniformly understood across the cultural environment, regardless of the perspective of the individual consumer. The brand is thus an indicator of lifestyle, ideology, etc. (Ferencakova *et al.*, 2020). The brand no longer accompanies goods and services, but on the contrary, these accompany the brand (Worimengbe *et al.*, 2020). Thus, there are different concepts of what a brand is and how to capture it, whether in the financial field, in marketing (e.g. Mura, 2020), in customer behaviour, etc. (Davicik *et al.*, 2015; Mičák & Mičudová, 2018; Bratu, 2019; Hollowell *et al.*, 2019; Bilan *et al.*, 2019; Uskokovic, 2020; Hussain & Ahmed, 2020; Yasin *et al.*, 2020; Gajanova *et al.*, 2020). The basic differences in the understanding of individual approaches are shown in Table 1.

The level of brand awareness and customers' attitudes towards the brand are measured on the basis of different methodological approaches. An example includes the approach called Customer-Based Brand Equity (CBBE) (e.g., Keller *et al.*, 2008). There are also similar procedures for evaluating the perception of difference, seriousness, satisfaction, or knowledge (e.g., Aaker, 1995), or possibly other brand attributes Sicard (2013). Some meth-

ods of brand valuation then seek to convert these metrics into financial indicators (e.g., Hupp & Powaga, 2004).

In the non-exhaustive list of non-tangible assets, the International Valuation Standards (IVS, 2020) specify, among other things, marketing non-tangible assets (i.e., trademarks, trade names, designs, domains, etc.) and customer intangible assets (i.e. customer lists, customer contracts, non-contractual relationships, etc.). These standards specify the following methodological approaches: revenue, cost, and market. In their extensive summary of brand valuation methods, Salinas and Amber (2009) do not include any proprietary models for the cost approach. The relationship between past marketing expenses and brand value is addressed, for example, by Herremans *et al.* (2000), a brand valuation model based on the accumulation and depreciation of past investments is proposed by Damodaran (2006). However, this is a marginal approach, as it encounters several basic issues. In particular, it does not address the following questions: What expenses should be reflected in the valuation? What is the effectiveness of the expenditure involved? What is the variability of efficiency over time? Are there any time delays? Greater attention is paid in the literature to the market approach, which is based on finding comparable brands and their well-known valuation. The mere fact that brands usually strive to differentiate themselves from others and their own uniqueness does not entirely support this approach. This valuation category may include multiplier models (see, e.g., Krabec, 2009; Damodaran, 2006). The largest group of methods is thus represented by methods based on the allocation of the revenue or income generated by a brand generated for the benefit of its owners / users. The basic issue of these methods consists in the fact that it is necessary to determine the extent to which the brand contributes to the overall result. The solution is to find a non-branded producer (comparison base) and based on the comparison with this producer, the values assignable to the brand are derived. Approaches vary according to the level at which the effects of the brand are captured (especially in the form of future sales, revenues, profit margins, etc.) and the comprehensiveness of capturing the different situation of a branded producer from a non-branded one (e.g. brand maintenance costs, brand investments, the costs of a higher product quality, change in quantity, etc.). For more details on this approach, see, e.g., Smith and Richey (2013). Brand valuation has also been developed on the basis of determining the score, when the brand is assigned a certain participation in the creation of the value of the enterprise (Janoskova, & Kliestikova, 2018). The royalty relief method occupies a special position among the brand valuation methods. It is an approach which is based on a comparison of the current situation with a hypothetical situation in which

the producer would not own the brand, but would acquire it in the form of a license agreement and pay the license fees.

The above literature review has argued that a common shortcoming of income valuation methods consists in the fact that these are based on the existence of a non-branded producer, i.e., a producer with an average product, average results, average market share, etc. Any such approach is, however, not justified in many situations, since, for example, producing a lower quality and cheap product or reducing presentation costs may be part of developing a brand of its kind. Building on the assumption that it is not appropriate to value a brand based on a non-branded or average producer as this might deliver biased results, the following research questions were developed: Is it possible to design an income valuation method assuming a non-existing producer, i.e., a new producer entering the market, as the benchmark? If so, under what conditions is it possible to conduct the valuation in this way? How might the results delivered by the conventional methods differ from our innovative approach? What impact will the change of input parameters have on the resulting calculations? How might the estimated value of a brand be interpreted in relation to its sources (i.e., value drivers)? Finally, is the proposed method suitable to address the paradox consisting in the assumption that adding a high risk asset will induce a lower risk associated with a branded producer?

## **Research methodology**

Assumptions for our methodological approach are based on an extensive review of academic literature focused on brand valuation methods. Kitchenham (2004) reports that a systematic review “is a means of identifying, evaluating and interpreting all available research relevant to a particular research question, or topic area, or phenomenon of interest”. The examined phenomenon of brand valuation is influenced by a number of concepts which use different terminology, making it difficult to categorise them. In examining the individual concepts, this paper mainly relies on the categorisation of brand valuation methods introduced by Salinas (2009). It is assessed how the basis for deriving the brand value is constructed, searching for weaknesses in the application of individual valuation methods.

Based on a thought experiment of a “producer without a brand” = “non-existent producer”, assumptions are formulated to compare an established producer and his brand with a non-existent producer without a brand (i.e. a new entrant in the sector). These assumptions represent the basis of our original brand valuation approach.

When formulating the valuation model, we proceeded analogously to the already established valuation methods, deriving the value of the brand from the comparison of a certain parameter of the producer with the brand and without the brand (e.g. profit, sales, etc.), for details see e.g. He and Calder (2020). We, therefore, compare the intentions of the incumbent producer and the new entrant and the resulting risk. Next, based on analogy, the change in risk and the resulting change in the required rate of return are assigned to the brand. By applying the changed amount of required rate of return to the estimated cash flows of the incumbent producer, an estimation of the brand value might be obtained.

The proposed method of risk difference is tested while using the case study approach. In the conditions of a model company, the method was verified with specific data. Although the case study method is severely limited in terms of transferability of knowledge to other cases, this approach is commonly used in research on brand valuation methods (see, e.g., Smith & Richey, 2013; Reyneke *et al.*, 2014; Hupp & Powaga, 2004; Fernández, 2002; using experimental data He & Calder, 2020). The results were also compared with the results of the reproduction cost approach and the income approach (e.g., Abratt & Bick, 2003).

## **Results**

For our purposes, we define a brand as follows: the brand identifies the producer, product and method of consumption at the same time (for other types of brands, the methodological procedure is not suitable). In our perspective, the effect of the brand does not only apply to customers, but also to employees, suppliers, regulators, the public, or other entities whose activities and attitudes may affect the success of the producer. The value of these relationships does not merely equal the costs incurred to establish them (e.g., advertising campaigns or negotiations with suppliers) and maintain them, but also the knowledge that the choice of the product, its quality and other characteristics, as well as the circumstances and conditions of sale were adequate to what at least to a certain proportion consumers expect, willing to purchase the products on a regular basis. The value of the brand, therefore, corresponds to verifying the assumption that the proposed business concept is truly viable. The value of the brand, therefore, consists of established relationships with employees, suppliers, and other entities (stakeholders) with an impact on the activities and success of the producer.

Unlike an already incumbent producer, whose business model appears to be viable, based on past results (a specific product, specific location at

a specific time, under specific conditions, sufficient number of customers, employees, suppliers, etc.), the new entrant is forced to verify the success of the business model (although the producer offers a complete set of product conditions, there is a great uncertainty in relation to the issue whether the products will be accepted by the market). Therefore, the benchmark / control for brand valuation cannot be the “average producer”, or “non-branded producer”, but a producer who intends to enter the market. The offer of restaurants in a large city may serve as an example in this respect.

A comparison of the risks incurred by the incumbent producer and the new entrant is shown in Table 3. For the set of assumptions providing the basis to develop the methodological approach, see Table 4. Once the assumptions have been met, it is possible to proceed to formulate the methodological approach itself, leading to the brand valuation based on the risk difference, see Table 5. The proposed brand valuation approach can also be formalised through a diagram, see Figure 1.

As shown in Figure 1 and Table 5, the first step consists in determining the value of the firm with a brand on the basis of already established methods for company valuation (income-based valuation models are preferred). The second step (which may already be a part of the first) is to derive the expected financial plan and the resulting cash flow of the incumbent company. The source of deriving the corresponding cost of capital can be, for example, the CAPM model. As this is a valuation of the brand from the perspective of a potential investor, where the alternative to buying an incumbent branded company is to establish a new non-branded company, the corresponding valuation is at the level of net value, which corresponds to a certain level of equity costs. However, it may be expected that the capital structure of the incumbent company will be different from the capital structure of the investment in a start-up. The investment in establishing a new company may be so risky that using debt financing is impossible, or the use of loans will be allowed only to a lesser extent compared to the situation of an incumbent company. The solution to this issue may be to assume, for the incumbent company, a capital structure corresponding to either 1) the reality or 2) standard industry conditions. In the financial plan (and the cash flow plan derived from it) of the new entrant, the gradual involvement of the use of foreign capital up to the level of the incumbent company, including the costs of capital, may be simulated. The third step consists in proposing a financial plan (and the cash flow derived from it) to invest in the establishment of a new business. This financial plan is completed when the new entrant reaches the level of the incumbent company. The financial plans (and cash flows) related to the new entrant and the incumbent company are identical at that moment, as well as the risk of both companies.

From this point, there is no longer the need for a deeper elaboration of the plan, as it can be replaced by the values from the financial plan of an incumbent company at the specific moment. The approach is demonstrated while using the data of a model company, for details see Figure 2.

Once an investment in a new entrant has become comparable to an incumbent business in terms of cash flows and risk, it is necessary to consider this investment fully comparable to an investment in an incumbent firm. This implies that the required rate of return corresponding to the incumbent company should be applied. The future cash flow of an investment in a new entrant may be replaced at that point by the value of the incumbent firm. For the option of investing in a new entrant, only a time-limited financial plan (and the resulting cash flow) is required. The IRR of the investment may be estimated from the expected cash flows and the value of the incumbent company in the future (at the end of the time horizon). The amount of the project's IRR reflects the risk of starting a new firm. The net present value (NPV) of an investment in a new business must, like the NPV of an investment in an incumbent business, be zero under market conditions (when the corresponding required rate of return is applied). If the IRR of incorporating a new entrant were lower than the required rate of return (i.e.,  $IRR < r_e \rightarrow NPV > 0$ ), potential investors would have a good alternative to investing in an incumbent firm, represented by setting up their own new entrant (the initially estimated value of the incumbent business would therefore not represent the market value). If the actual IRR were higher (and thus the chances of successfully establishing a new entrant were lower), it would prevent potential entrants from penetrating the sector, which would strengthen the position of the existing producers and thus increase the value of the incumbent business (the originally estimated value of the incumbent would therefore not be market-based). The difference in the required rate of return may be understood as an expression of different risk levels - the investment in an incumbent company on the one hand, and the investment in establishing a new company on the other hand. The difference between these companies consists in well-established activities of the incumbent company's relationships with its environment (not only with customers, but also with other groups, i.e. stakeholders). If these relationships are perceived as the brand, the value of the incumbent company's brand may be expressed as the difference between its current valuation (expected cash flow of the incumbent company discounted by the required rate of return) and the value of the incumbent reflecting the risk of the new entrant (expected cash flows of the incumbent company discounted by the required rate of return of the new entrant).

Summing up, we formulate the following formula (1):

$$HZ = \sum_{i=1}^n CFZ_i [(1 + r_z)^{-i} - (1 + r_N)^{-i}] \quad (1)$$

where  $HZ$  is the brand value,  $CFZ_i$  is the expected cash flow of the incumbent company in years  $i=1, \dots, n$ ,  $i$  stands for individual periods,  $n$  is the total number of expected periods,  $r_z$  is the cost of equity when investing in the incumbent company, and  $r_n$  is the cost of equity when investing in establishing a new entrant. It is obvious that the value of a brand is equal to an increase in the value of the company due to the reduction of the risk of establishing successful relationships with its environment. For details about the approach application, see Figure 3.

### *Case Study*

The case study is aimed at applying the approach of brand valuation described in the section above. The company, which represents the entity being valued, operates in the service sector (a restaurant in a large city). It may be assumed that the incumbent company whose brand we intend to value can be characterised by the set of variables specified in Table 6 and the financial plan specified in Table 7.

When following the procedure, according to the diagram in Figure 3, it may be stated that the company brand complies with the requirements for valuation using the risk difference method and that all input variables of the model are available, i.e. the market value of the incumbent producer, the expected cash flow of the incumbent producer and the expected cash flow of the new entrant.

Table 7 consists of three parts. The first five columns represent a summary of the common starting conditions both from the point of view of the existing (incumbent) producer and from the point of view of the new entrant. These include fixed operating expenses, sales costs (per customer), and revenues per customer. The second part of the table (columns 6 and 7) illustrates the situation of the incumbent producer. The last part of the table (columns 8 to 12) then shows the results of the new entrant. The new entrant, using the same production technology, is likely to face similar operating conditions as an incumbent producer, yet has to deal with the need to acquire operationally necessary assets and the need for additional start-up costs, including promotion expenditure (of course, it is possible to use another manner of modelling the expenses of the new entrant in view of the realities they face). If the plans are fulfilled and the new entrant manages to establish itself on the market, then at the end of the fourth period, the new

entrant will already be equal to the incumbent company in terms of the number of customers, sales, costs (expenses), and other operating data. Therefore, there are no differences (loss of income) due to the creation of their own brand and the companies are thus fully interchangeable.

However, for several consecutive periods, the new entrant, in spite of maintaining the same capacity as the incumbent producer, will achieve lower turnover, as it does not have enough customers (it takes some time for potential customers to take note of the new producer, gain experience and then return to it). In the case of a new entrant, therefore, the customer base has not been fully developed. The effects on operating cash flow (with capacity readiness) may then be attributed to the brand. Therefore, the costs of creating a brand are not only in the form of the costs for reaching customers (columns 3 and 8 in Table 7), but may be understood as a difference in operating results of companies, e.g. due to the insufficient number of customers (difference of columns 6 and 11 in Table 7). The amount of these costs is shown in the last column for individual periods.

According to the valuation procedure (see Figure 3), the ability to estimate the expected cash flow and the market valuation based on the DFC model by iterations, it may be deduced that the required rate of return on investment in the incumbent company is 9%. If we approached the investment in the brand only on the basis of accrued loss of income, its estimated value would be 296.4 monetary units (see Table 8).

Since the expected cash flows of the incumbent producer and the cash flows of the new entrant are incomparable in terms of risk; a direct comparison of nominal values is not possible. The cash flow of the incumbent producer and the new entrant corresponds to the different required rates of return. The required rate of return for a new entrant is derived according to the diagram in Figure 3. The following relationship can be used:

$$NPV = 0 = \sum_{i=1}^n CF_i * (1 + r_N)^{-i} + HZP * (1 + r_N)^{-n-1} \quad (2)$$

where NPV is the net present value of the investment in the new entrant,  $CF_i$  are the cash flows of the new entrant for the period during which it lags behind the incumbent business,  $n$  is the last period of lagging behind, and HZP is the value of the incumbent enterprise. When incorporated into the relationship (2), the resulting return is  $r_N=26.42\%$ .

The last step of the calculation, according to the diagram in Figure 3, consists in incorporating all detected values into formula (1). The resulting value is 366 monetary units.

*The relationship between the required rate of return of the incumbent firm and the required rate of return of the new entrant*

The tenet of the proposed methodological approach consists in the relationship between the required rate of return of the incumbent company and the required rate of return of investment in the new entrant. The consequences of changing the required rate of return of investment in an incumbent company (i.e., when the assumption of constant cash flow has been met) from the level of 9% to 8% or 10% are shown in Figure 2. The market valuation of the incumbent producer changes to the NPV level of the relevant cash flow level. With the knowledge of the expected cash flows of the new entrant and the requirement for the NPV value ( $NPV = 0$ ), it is then possible to derive the required rate of return on investment in establishing a new entrant. In our model, these cash flows also include the market valuation of the incumbent producer. This is subject to the moderate required rate of return on investment in the incumbent producer's firm. The required rate of return on an investment in an incumbent business, with the current knowledge of the cash flow of the new entrant until it becomes fully comparable to the incumbent company, thus implies the required rate of return on the investment in the new entrant.

With respect to the cash flows of both the incumbent and the new entrant, the required rate of return on investment in the incumbent company (8%; 9%; 10%) corresponds to the market value of the incumbent business at 625, 556 and 500 cash units and the required rate of return on the investment in a new entrant at the level of 32.1%, 26.42%, and 21.52% (see Figure 4).

Using the above procedure, the required rate of return corresponding to the risk taken by the investor in the new entrant might be obtained. This difference in risk (and indeed in cash flow) is what distinguishes an incumbent company with an established brand from a new entrant without relationships with its environment. The investor in an incumbent company obtains cash flows at different levels of risk. The value of the brand is then provided by the difference between the required rates of return (of the incumbent company and the new entrant), which are applied to the cash flow of the incumbent producer, see formula (1).

The lower the required rate of return on investment in the incumbent, the more valuable (*ceteris paribus*) the incumbent is. The low required rate of return is related to the low level of risk of any such company. The low risk of a company is related, among other things, to the fact that it is not easy to replicate this company (to establish an identical company). Any attempt to replicate the business must necessarily lead to a higher failure

rate. The required rate of return will, therefore, inevitably increase, and investors must accept an increased failure rate of their projects. The declining requirement for the rate of return on investment in an incumbent company corresponds to the growing requirement for the rate of return for establishing a new entrant to replicate the incumbent.

An increase in the required rate of return of an investment in an incumbent firm indicates that the market position of this enterprise is not well established. If the value of this indicator rises above the level of the required rate of return of investment in establishing a new entrant, it can be assumed that the existence of this firm is associated with a certain burden. This represents a negative brand value. The impact of the change in the required rate of return of investment in an incumbent company on the required rate of return on investment in a new entrant, and thus on the brand value, are shown in Table 9 (baseline data; see the case study). It serves as a deeper analysis of the results demonstrated in Figure 4.

From the perspective of the producer (and potential investor), the brand is understood as its provenance, i.e. the viability of the business concept, and the difficulty of its replication. The brand value is therefore determined by the change in risk. While a new entrant has not yet been initiated (it is only under consideration and unverified), the incumbent company has already demonstrated its viability. Because both the incumbent company and the new entrant face the same industry risks, yet the new entrant also has to manage the process of acquiring clients and building relationships with its environment, it may be concluded that the required rate of return of investing in a new entrant must be at least equal to the rate of return on investment in the incumbent company (see Table 3).

The required rate of return for new entrants cannot therefore be lower than the subsequent rate of return of the incumbent company. Therefore, in Table 9, the implied required rate of return on an investment in a new entrant is replaced by a minimum rate of return to comply with the following condition (3): The required rate of return on setting up a new entrant  $\geq$  the required rate of return on an existing business. The required higher rate of profitability of the incumbent company may be understood, among other things, such as the costs of a bad reputation, bad relationships, the risk of their interruption, etc.

### *A comparison — valuation using the risk difference method and the cost approach*

Figure 5 shows a comparison of the estimate of the brand value based on the risk difference method and the method based on discounting the

expenses (and loss of income) related to the actual brand building based on the relationship (3).

$$HZ_N = \sum_{i=0}^n (A_i + dCF_i) (1 + r_z)^{-i} \quad (3)$$

where  $HZ_N$  is the value of the brand determined by the method of saving expenses (loss of income),  $A_i$  are the expenses associated with the introduction of the brand in individual periods, and  $dCF_i$  is the loss of income in individual periods before the new entrant has been fully established, and  $r_z$  is the cost of equity of the incumbent company.

The consequences of changing the amount of the required rate of return on an investment in an incumbent company to the value of the incumbent company and the value of its brand using the risk difference method and the cost method are shown in Figure 5.

If the risk difference method is applied, the value of the incumbent company and thus the value of its brand will increase as a result of a decrease in the required rate of return. However, the value of the brand determined by the cost method changes only slightly. The method does not actually capture the fact (unlike the risk difference method) that the value of the position of the incumbent company and its relations with the environment (its brand) grow with a lower risk and lower required return on investment, i.e. deteriorating refutability (replicability) of the position of the incumbent producer. The presented concept of the risk difference method also allows expressing the negative value of the brand, i.e., as a burden accompanying the producer in their business activities.

The same conclusion shown in Figure 5 can be drawn if we compare the results achieved by application of the risk difference method and the income valuation approaches including the royalty relief method, which interpret the brand value as its contribution to sales or cash flow generation. The value of a brand is usually defined as follows:

$$HZ_N = \sum_{i=1}^n p * Benefit_i (1 + r_z)^{-i} \quad (4)$$

where  $HZ_N$  is the value of the brand,  $p$  is the share of the brand on sales, cash flows, etc. in comparison to a non-branded producer,  $n$  is the number of years when the benefit persists and  $r_z$  is the cost of equity of the incumbent company.

A comparison of equations (3) and (4) results in the conclusion that such valuations lead to an equally insensitive course of brand valuation with respect to the required rate of return as in the case of cost valuation approaches (see Figure 5). This drawback must then be addressed by adjust-

ing the expected duration of the benefit so that the estimated value of the brand corresponds proportionally to the valuation of the producer and its individual components. However, such adjustments introduce a subjective (arbitrary) element into the valuation. In the case of the risk difference method, no adjustments are needed, as the use of information on the risk of the incumbent and the new producer ensures internal consistency.

## **Discussion**

In this paper a novel valuation brand valuation method is introduced, which is based on the assumption that the principle of a large number of brand valuation methods consists in comparing a certain parameter (e.g. sales, prices, margins, EBITDA, etc.) of a branded and non-branded producer. These methodological approaches differ according to the selected benchmark, the selected parameter and the manner in which the better result of the selected parameter is assigned to the brand (see, e.g., Salinas, 2009). However, we believe that such comparisons lead to systematically biased results, as the comparison is based on entities which have some (albeit less valuable) brands. Therefore, it is deemed methodologically more appropriate to make the comparison with a producer who has no brand and whose existence can be materialised only in the form of a plan. Thus, there are no operational indicators allowing comparison. A comparable quantity of an incumbent producer and a non-existent producer is then the risk (and the related required rate of return) with respect to performing future plans.

Our proposed method is based on a thought experiment, in which the incumbent producer with a brand is compared rather than with an average producer (as what is a common approach in valuing the brand), but with the new entrant on the market. A number of prerequisites must be met to be able to carry out such a thought experiment. An example may be free entry and exit from the sector, a large number of producers with limited production capacity, limited opportunities for economies of scale, etc. To the extent permissible by the thought experiment, the expected course of entry and establishment of a new entrant on the market has been simulated. Compared to the situation of an incumbent producer, its difference lies in the different level of risk taken by a new entrant. The lower level of risk is reflected in the lower cost of capital. Achieving a lower level of risk (and lower cost of capital) for an incumbent producer is what makes a brand valuable (some empirical studies, e.g. Larkin (2013) point out that brands reduce risk). Our approach to brand valuation is innovative in this respect, compared to other already well-established approaches (e.g., Abratt &

Bick, 2003; Lagrost *et al.*, 2010; Reyneke *et al.*, 2014), owing to the fact that in addition to brand valuation, it opens the perspective of a brand as a circumstance changing the risk of other assets.

The methods proposed so far (e.g., Salinas, 2009) most often address the valuation of a brand by assigning cash flow to the brand. The methods differ from each other only in the way they use in determining the brand's contribution to cash flow. Most often, this is a part of the revenue derived from a hypothetical license fee (royalty relief method), or part of the sales or profit margin based on the analysis of brand attributes (e.g. Haigh, 1997). In contrast, our proposal points to differences in the risk of the incumbent and the new producer. The value of the brand is then derived from different levels of risk.

The risk difference method interprets the brand as a specific category of assets. Although hypothetically compared companies (the incumbent and the new entrant) use the same combination of assets, these combinations are associated with different levels of risk and therefore different rates of return. This implies that the compared firms should be associated with different revenues. However, the fact that one company achieves higher revenue than another does not necessarily mean that it is more valuable (even after taking into account the risk). The risk of loss is significant, reflected by the risk difference method in the requirement for a different rate of return in the case of an investment in a new entrant. The change in the level of risk is then attributed to the brand.

The risk difference method does not associate the return (and risk) to the individual assets used, but works with the risk as a whole. On the contrary, the excess return method or the concept of weighted average return on assets (WARA), assume that the individual assets produce a fixed return (rent) (e.g., Schauten *et al.*, 2010). Both approaches understand the company only as a combination of individual assets and their returns, regardless of their use (the rest is eventually attributed to an unidentified form of assets — goodwill). Our methodological approach takes also into account the context of the use of these combined assets and grants the assets a return according to the risk level of their use.

The brand is not just another asset in the ordinary sense of the word. Strictly speaking, if the brand is not only perceived as a symbol (e.g., the logo, inscription, or slogan) and also its content is reflected (relationship between entities, association with certain values, or trust), it does not satisfy the usual defining features of the asset, as it is not fully under the producer's control. The brand, in terms of the relationships established with its environment, is a factor changing the risk taken by the producer.

This approach disturbs the commonly understood concept reflected in valuation methods, namely, that the total value of the company is a linear combination of the values of its components. However, this approach has its weaknesses, which is obvious from the existence and development of the goodwill item. Goodwill is often understood as a consequence of the valuator's incapacity to identify all assets (e.g., Smith & Richey, 2013). If the valuator were able to identify all assets and value them properly, there would be no goodwill. However, the emergence of a "gap" between the valuation of individual components and the valuation of the whole is attributable (at least in part) to a change in the risk incurred by the producer. Two equally equipped producers in terms of assets engaged in the same activity, addressing the same clients and operating in the same locality, may incur substantially different risks in their activities resulting from the difference in the fact that one producer already has established (and verified through years, for example) relationships with its environment (customers, suppliers, employees, etc.), while the other producer is just starting up and faces considerable doubts (for example, whether they will gain a sufficient number of customers).

If this "well-established position" in the market is interpreted as a brand (however, symbolically represented in any manner), the brand is what significantly contributes to the market value of the company. The brand cannot be understood as an "ordinary" asset, but as a circumstance changing the risk of other assets.

## **Conclusions**

This paper presents a novel brand valuation method based on the risk difference. Building on the thought experiment, an incumbent with a brand is compared rather than with an average producer, which is a commonly used approach, with a new entrant to the market. We argue that in comparison to existing methods, our methodological approach reduces the number of unobservable inputs in the brand valuation process, and thus increases the accuracy and reliability of its results. Our method supports both researchers and practitioners to establish a better understanding between the well-established financial theories and new directions in brand valuation research.

A significant limit for the application of the proposed method is the fact that the plans of the new entrant will not affect the plans of the incumbent producer and that the incumbent will not react to the new entrant. This pre-

sumption limits the application of the method to producers operating in markets complying with the conditions set out in Table 4.

In the case that these conditions have not been fulfilled (e.g., there are only a few producers on the market), it is very likely that producers will react to each other. The incumbent will seek to make it more difficult for the new entrant to penetrate the market. Producers' actions (and their plans) will interact with each other, which can make it very difficult to draw up financial plans for the incumbent and the new entrant (or variants of their interactions).

The application of the risk difference method requires the development of a plan by the new entrant from the moment of its entry until the moment of levelling its cash flow to the incumbent. In the case of large producers in a market with significant market concentration, the plan may be disproportionately complex in terms of practical applicability. In the case of producers with a strong position, it may be difficult to achieve their position and the related plan would not be sufficiently credible (convincing). The applicability of the risk difference method is considerably limited or even ruled out in such cases.

Further research should focus on industries with several major producers achieving significant economies of scale, etc. In these situations, incumbents are more likely to respond to a new entrant and actively prevent it from gaining market share. New entrants should take into account that their entry into the market will change the conditions in the industry and thus take an additional risk against the situation specified in this paper. Building an own brand is more challenging, and the associated costs represent a significant part of the sunk costs; these usually lead to a reduction in supply in the industry (e.g., Pepall *et al.*, 2010). Hence, the valuation model must be expanded to take into account: 1) the reaction of incumbents to new entrants and the reduction in the number of potential customers; 2) the resulting shift in the expected rate of return as the new entrants are not likely to achieve the profitability that incumbents achieved before their entry.

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## Annex

**Table 1.** Theoretical approaches to brand definition

Aspects	Cognitive approach	Socio-psychological approach	Socio-cultural approach
Creating brand meaning and control	Producer's manager	Producer's manager, individual consumer, and socio-cultural environment	Producer's manager and culturally influential persons
The relationship of the brand to the consumer	Product / producer information	Context, orientation, world order, product classification in it, and relation to the brand	Values, attitudes, and identity (without product)
The relationship of consumers to the brand	Mutual exchange – something for something (rational approach)	Different types of relationships, and emotional element	Identifying with the values and own identity
Permanence of brand meaning	Fixed	Variable	Fixed
Brand threat	Unclear / opposite communication of the marketer	Changing the meaning of a brand in relation to the consumer	Culture change

Source: own elaboration according to Avery & Keinan (2015).

**Table 2.** Taxonomy of brand valuation methods

<b>Approach</b>	<b>Model (Author)</b>	<b>Weaknesses of the approach</b>
<b>Historical cost of creation</b>		What attributes to reflect? How to appreciate history? Relevance of (distant) historical prices
<b>Replacement cost and reproduction cost</b>	e.g. Smith and Richey (2013)	Is it possible to (purposefully) recreate something that is unique? Unresolved issue of time and context of origin.
<b>Comparison with another transaction</b>		<b>Market Approach</b> Finding a comparable transaction.
<b>Price premium</b>	<b>Income Approach</b> Brand Rating (Icon Brand Navigation) Price premium / multiple based on P/E (Trout & Partners) Herp model based on the conjoint analysis Sander model based on Hedonic analysis (Sander, 1994) Unspecified (AUS Consultants)	The need for a generic product The higher price may be the result of higher quality, different strategies, different advertising expenses, quality of service, guarantees, etc. How to isolate the influence of the brand?
<b>Demand drivers/Brand strength analysis</b>	Brand balance sheet (AC Nielsen) Brand performer (AC Nielsen) Advanced brand valuation (GfK – PwC – Sattler) BEEs, BEE (BBDO) Brand economics (BrandEconomics) Brand finance „Earnings Split“ (Brand Finance) Brand stammina model (Brandient) Brand metrics (Brand Metrics) Brand role model (InterBrand) Prophet influence model (Prophet) Semion (Semion Brand Broker) Unspecified (Equilibrium Consulting, FutureBrand) AUS Consultants	How to isolate the influence of a brand from other influences (e.g., the interaction between price and quantity or differences in the strategy)?
<b>Gross margin comparison</b>		The influence of market segment choice and the influence of production scope. The issue of finding a “regular” producer
<b>Operating profit comparison</b>	AUS Consultants	The influence of the choice of the market segment, the influence of the scope of production, and the existence of fixed costs The issue of finding a “regular” producer The issue of comparable choice (flexibility) of inputs

**Table 2.** Continued

<b>Approach</b>	<b>Model (Author)</b>	<b>Weaknesses of the approach</b>
<b>Royalty relief</b>	Intangible business model (Absolute BRAND, Intangible Business) Brand finance model (Brand Finance) BEVA (BBDO/EY) Valmatrix (Consor) (AUS Consultants)	The issue of determining the amount of the licence fee, calculating the cost of capital, estimating the situation in the industry or the uniqueness of the position Complexity of licence agreements
<b>Excess cash flows</b>	AUS Consultants Houlhan Advisors	Identification and valuation of all remaining assets and interactions between them
<b>Excess margin</b>	VALCALC (Consor) Intangible Scorecard (Baruch Lev) AUS Consultants	Identification and valuation of all remaining assets and interactions between them
<b>Value of a company with and without a brand</b>	AUS Consultants	Finding a producer with an identical asset mix (with no brand only)
<b>Competitive equilibrium analysis</b>	Competitive equilibrium analysis (Villafañe & Associates)	The influence of other factors such as distribution, marketing, investment, or price
<b>Core brand value plus the value of other brand related assets</b>	Brand Value Equation Method (Consor)	Highly subjective
<b>Model based on customer lifetime value</b>	Firscher's Model	Specific (limited) understanding of the brand
<b>Difference in price to sales ratios</b>	Damodaran's Model	Determination of the indicator for a non-branded producer
<b>Other approaches</b>		
<b>Formulas based on accounting data</b>	Hirose et al. approach	Relevance of accounting data to market values
<b>Residual approach: the firm value minus the value the tangible assets</b>	Central model (Consor)	Other intangible assets
<b>Stock price movements</b>	Simon & Sullivan (1993)	The issue of dividing the value of a firm in individual components

Source: own elaboration based on Salinas & Ambler (2009) and Salinas (2009).

**Table 3.** Risks incurred by the incumbent producer, risks incurred by the new entrant, and related requirements in terms of the rate of return

<b>Incurred risks</b>	<b>Incumbent producer (risk and the investor's request for additional return)</b>	<b>New entrant (risk and the investor's request for additional return)</b>
<b>Risk / uncertainty of the producer's industry</b>	Risk $r_1 \approx$ additional return $y_1$	Risk $r_1 \approx$ additional return $y_1$
<b>Risk / uncertainty related to the operation of a specific business</b>	Risk $r_2 \approx$ additional return $y_2$	Risk $r_2 \approx$ additional return $y_2$
<b>Risk / uncertainty in relation to the capacity to organise relations with the external environment on the sustainable basis in the long term</b>	--	Risk $r_3 \approx$ additional return $y_3$
<b>Sum of incurred risks</b>	$r_1 + r_2$	$r_1 + r_2 + r_3$
<b>Returns requested by the investor</b>	$y_1 + y_2$	$y_1 + y_2 + y_3$

**Table 4.** Brand valuation based on the risk difference — the set of assumptions

<b>No</b>	<b>Assumptions</b>
1	The brand represents the product and its producer at the same time, or the manner of using / consuming the product
2	Zero or minimal barriers to entering a specific market
3	The market is represented by a large number of producers, but their production capacity is limited
4	The entry of another producer to the market does not have a significant effect on the existing producers – they will not fundamentally change their behaviour
5	The situation in the industry is relatively stable, i.e., the sector is not undergoing unrestrained growth or technological change, which could cause a long-term deteriorating position in the event of delayed entry
6	A newly entering competitor has no ties to the industry which could be used for its entry (e.g., it is not a major supplier or customer, it does not serve a similar market, etc.)
7	The moment at which it may be stated that the new entrant has succeeded in gaining a foothold in the market should be reasonably distant in time

**Table 5.** Brand valuation approach based on the risk difference — the methodology

<b>Step</b>	<b>Description</b>
1	Determining the market value of a company with an incumbent brand
2	Deriving from the cash flow plan of the incumbent company
3	Deriving of the cash flow plan from the establishment of a new firm to the situation of an incumbent company (specifying the time horizon when this event is likely to occur)
4	Termination of the financial plan related to the new entrant; substituting the remaining future cash flow by the value of the incumbent company
5	Deriving of the internal rate of return on investment in setting up a new business
6	Application of the internal rate of return on an investment in a new entrant to the cash flow of an incumbent firm
7	The brand value of the incumbent company as the difference between the value of the incumbent company (its cash flows) while reflecting the appropriate level of risk and the value of the incumbent company (its cash flows) and while reflecting the level of risk corresponding to the investment in the new entrant

**Table 6.** Case Study — the producer and the brand valuation

<b>Known facts about the producer</b>	<b>Parameter value</b>
<b>The branding of the producer, his product, and the method of its consumption coincide</b>	“Old City” – the producer is a restaurant in a 300,000-inhabitant city
<b>Is information on the market value of the producer available?</b>	Yes, the market value of the producer = 556 monetary units (input variable)
<b>Is there a (consensual) financial plan and the resulting cash flow plan?</b>	Yes, see Table 7, column 7
<b>Is this an industry with many small producers?</b>	Yes, there are many similar producers operating in the same market
<b>Is there a possibility to easily enter and leave the industry?</b>	Yes, the limits include only: - Initial capital expenditure (100 monetary units) - Need to acquire operationally necessary assets (100 monetary units) - Negative cash flow in the first and second period (75 monetary units and 25 monetary units, respectively)
<b>Is there a prospect that the new entrant will reach the position of an incumbent producer whose brand is valued?</b>	Yes, 4 time periods, see financial plan in Table 7, columns 8 to 12

**Table 7.** Case study — cash flow forecast (data in monetary units)

Period	Starting conditions				Incumbent company		Establishing a new entrant				Expenses related to building the brand	
	1	2	3	4	5	6	7	8	9	10		11
0	Fixed expenses	Maintenance marketing (included in the fixed cost)	Direct expenses per customer	Revenue per customer	Number of customers	Cash flow (5 - 4) * 6 - 2	Acquisition of operationally necessary assets	Initial expenses	Advertising cost (included in the initial expenses)	Number of customers	Cash-flow (5 - 4) * 11 - 2 - 8 - 9	
0							-100	-100	-80		-200	-80
1	100	10	1	2	150	50				25	-75	-125
2	100	10	1	2	150	50				75	-25	-75
3	100	10	1	2	150	50				100	0	-50
4	100	10	1	2	150	50				150	50	0
											<b>Sum</b>	<b>-330</b>

**Table 8.** Case study — brand valuation of the incumbent company based on the loss of income (data in monetary units)

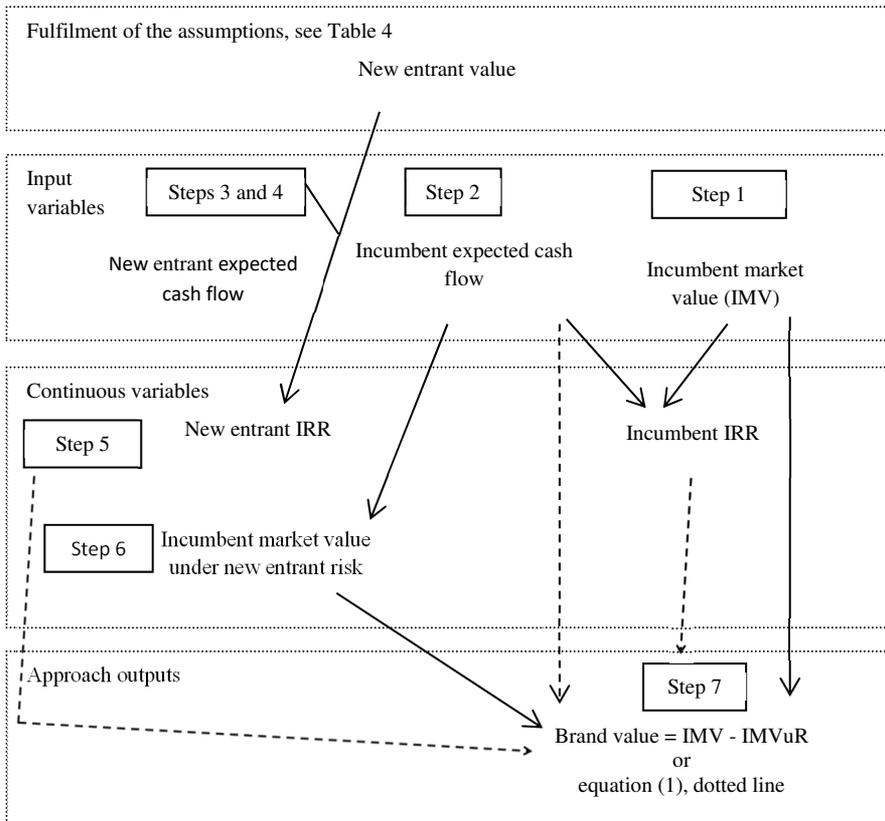
	Loss of income (investment in a new brand)	Discount factor $\frac{1}{(1+r)^i}$ r = 9 %	Present value
Expenses related to the brand introduction (i = 0)	80.00	1.00	80.00
Loss of cash flow in the 1 <sup>st</sup> year (i = 1)	125.00	0.9174	114.70
Loss of cash flow in the 2 <sup>nd</sup> year (i = 2)	75.00	0.8417	63.10
Loss of cash flow in the 3 <sup>rd</sup> year (i = 3)	50.00	0.7722	38.60
<b>Sum (brand value determined by the cost approach as the sum of accrued expenses and the opportunity costs)</b>			<b>296.40</b>

**Table 9.** Case study — the value of the brand at different levels of the cost of investment in the incumbent company

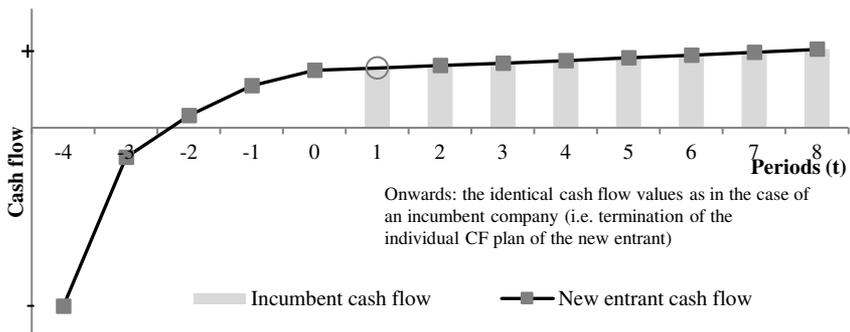
Required ROI in an incumbent company (in per cent)	Value of an incumbent company (in monetary units)	Cost of capital of the investment in a new entrant (in per cent)	Value of the incumbent company while reflecting the risk of the new entrant (in monetary units)	Brand value of the incumbent company (in monetary units)
5.00	1,000	57.10	88	912
6.00	833	46.95	106	727
7.00	714	38.82	129	585
8.00	625	32.10	156	469
9.00	556	26.42	189	366
10.00	500	21.52	232	268
11.00	455	17.22	290	164
12.00	417	13.42	373	44
13.00	385	12.32	499	12
14.00	357	12.32	720	-15
15.00	333	12.32	1,205	-39
16.00	313	12.32	3,145	-60
17.00	294	12.32	-6,579	-78

Note:  $r_Z$  is the required rate of return of an investment in an incumbent company,  $CF_Z$  are the cash flows of an incumbent producer, and a CFN are the cash flows of a new entrant.

**Figure 1.** Risk difference method — the structure and variables involved

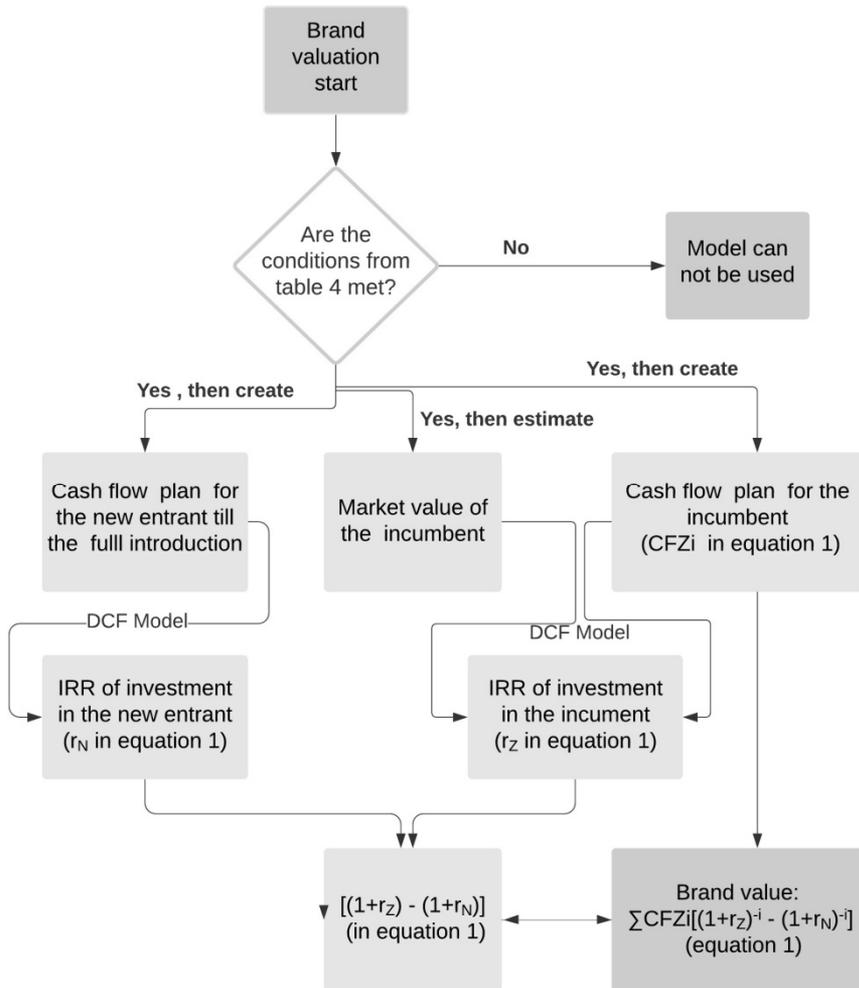


**Figure 2.** Cash flow of an incumbent company versus investment in establishing a new entrant (model example, data in monetary units)

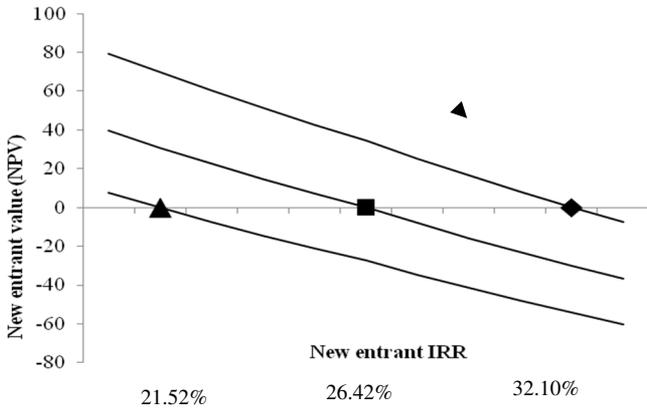
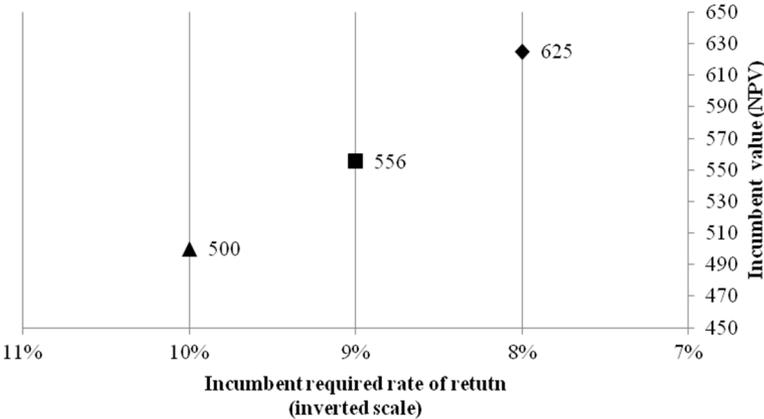


Note: The values are illustrative. According to the financial plan, it will take four periods for the new entrant to reach the performance of the incumbent company.

**Figure 3.** The proposed brand valuation method — how to apply?



**Figure 4.** Case study — relationship between the required rate of return of the incumbent and new entrant (applied for the cash flows, see the case study)



When incumbent IRR = 8 % → incumbent NPV = 625; new entrant IRR = 32.1 % (◆)  
 When incumbent IRR = 9 % → incumbent NPV = 556; new entrant IRR = 26.42 % (■)  
 When incumbent IRR = 10 % → incumbent NPV = 500; new entrant IRR = 21.52 % (▲)

**Figure 5.** Case study — brand values while using the risk difference method

