

THE ROLE OF FINANCIAL PERFORMANCE IN DIFFERENCE OF TWO MANUFACTURER'S BRAND VALUE

Alexandra SZEKERES, Ivett BARTA, Gergő TÖMÖRI

¹University of Debrecen, Faculty of Economics and Business, Institute of Accounting and Finance, Debrecen, Hungary

szekeres.alexandra@econ.unideb.hu

bartaiivett05@gmail.com

tomori.gergo@econ.unideb.hu

Abstract: Brands are becoming more and more important for enterprises that spend significant amounts on building strong ones. However, the value of brands and the way it should be represented in financial reports is still controversial. Our general objective is to present a calculation method able to estimate brand value that we establish for the calculation method of Interbrand corporation and results of our own survey research. Our specific objective in the course of analysis is to determine Daimler AG Mercedes-Benz's and Nestlé cereal's brand value based on data of 2022. Firstly we calculated the so-called Economic Value of researched enterprises by analysing their financial reports. Applying the results from our survey research we determined the role of brand plays in gaining EVA, which is Brand Income. Finally we calculated a ratio using WACC which we discounted the Brand Income with we obtained the Brand Value. Our survey research is assembled according to Keller's Brand Equity Model. During our research we have confirmed our hypothesis that people filling the survey consider brand to be a more important purchasing aspect in case of Mercedes-Benz than Nestlé cereals; purchasing Nestlé cereals respondents consider brand as the most important purchasing aspect out of the given list; respondents choose analysed brands contra unknown ones which has the same features and price. Final results show that Mercedes-Benz and Nestlé cereals have strong brand knowledge, the Mercedes brand value was several times higher, while the difference between these brand values caused by not the different financial performance but rather the deviation of brand power and strength of the analysed manufacture companies.

Keywords: brand value; IFRS; Interbrand model; manufacturing companies

JEL Classification: M31; M41

1. Introduction

Most companies pay a lot of attention to building a reputation, loyal consumers for their products and a brand. In our study, we want to look at an item that clearly has value for the enterprise and indirectly constitutes its assets, yet is not necessarily included in the accounts. This asset is the brand, the value of which we will examine through the valuation of the internationally renowned Daimler brand Mercedes-Benz and the Nestlé cereal brands. In addition, we will determine how the amount of the brand can be shown in the accounts prepared in accordance with the international accounting standards.

In our research we look at two brands in two very different product categories. One of these categories is the automotive industry, where we assume that the brand is at the forefront of consumers' purchasing preferences. The other product category is the food category, where brand is assumed to play a minor role in product purchases. The analysis of brand equity is therefore carried out by examining two brands in product categories where the role of the brand may differ. The two brands mentioned were chosen because they were included in

the so-called "Best Global Brands" 2022 ranking published by Interbrand, which includes the most valuable global brands for 2022 according to Interbrand's calculations. In this list, Mercedes-Benz was at the top of the ranking among automotive brands and Nestlé among food brands. Today, it is increasingly important for a farmer to be aware of the internal and external factors that affect him: his strengths, weaknesses, opportunities and threats, so that he can plan and make appropriate decisions.

A brand is defined by the American Marketing Association (AMA) as a term, design, symbol or any other feature that distinctly identifies and distinguishes one entity's product or service from those of other entities American Marketing Association (2017). Based on these definitions, a duality appears in the conceptual definition of brand - the need for distinctiveness and the need for identifiability. On the one hand, the seller wants to permanently distinguish the product or service he sells from competing products, and on the other hand, the customer is able to identify the product or service he wants to buy based on the brand (Rekettýe et al, 2016). It is observed that when buying a branded product, the perceived risk of a bad purchase is lower, so the consumer feels less weight in his decision. This was the case, for example, in 2014 with the sales of the Volkswagen Sharan and the SEAT Alhambra. The two car brands had similar equipment and specifications, the only difference was in the economic success of Volkswagen and SEAT. As a consequence, although Volkswagen sold its Sharan models at a higher price, its sales were still higher than those of the SEAT Alhambra. A brand can not only influence consumer perceptions of existing goods, but can also increase future economic benefits and cash flows, including through building brand loyalty and selecting the right consumer group (Meeh-Bunse et al., 2021). The estimation and conceptualisation of brand value has been the subject of some literature (Christopher, 1996; Barth et al, 1998; Haigh, 1999; Chandon, 2003; Arvidsson, 2006; Fehle et al, 2008; Gupta et al, 2020). Brand equity also affects the definition of the value of the company, which is of paramount importance from an investor's perspective (Kiss, 2015, 2016a, 2016b, 2016c, 2017). In the IFRS environment, the requirements for brand names are set out in IAS 38, which governs intangible assets, and IFRS 3, which governs business combinations (Meeh-Bunse et al, 2021).

Several models can be used to define brand equity (Jones, 2005; Soto, 2008; Vasileva, 2016; Borkovsky, 2017; He-Calder, 2020; Porokhnya, 2020), which indicate which elements of a brand make up and influence brand equity and how they are related to each other. One of the methods used to measure brand equity has been developed by Interbrand, a UK company that has been one of the world's leading consultancies for 40 years. Interbrand's model widely applied in the marketing study (Chu-Keh, 2006; Hanno, 2007; Jia-Zhang, 2013; Rozhkova et al, 2021), and is based on three factors to determine brand equity: operating profit achieved, the role of branding and brand strength, an approximate discount factor to determine the present value of brand equity (Bauer-Kolos, 2017). Here, operating profit achieved is called Economic Value Added (EVA) or residual income, which is determined using the company's IFRS financial statements. The turnover of the company under consideration must be reduced by operating costs, income tax on operating profit and the cost of capital employed, which is paid to equity holders and creditors - because we can only talk about true value creation if the company is able to generate returns in excess of its cost of capital. After the calculation of EVA, the role of branding is defined. The role of branding, according to Interbrand, is a ratio that shows how much of EVA is due to the brand. This percentage is estimated primarily through market research. The share of economic income that includes branding is called brand income. Interbrand calculates the brand strength, after determining the brand equity, as the sum of a risk-free rate and a so-called brand risk premium, which is the share of the risk premium attributable to the brand. The brand strength is the rate at which the brand income is discounted to obtain the present value of the brand income, so brand equity. The stronger the brand, the lower the brand strength ratio (Papp-Váry, 2020). The elements of brand equity are illustrated by Kevin Lane Keller through the Dimensions of Brand Equity model.

2. Data and methods

In our study, we analysed the value of the Mercedes-Benz brand owned by Daimler AG and the Nestlé cereal brands owned by the Nestlé Group. We will estimate the value of these brands based on Interbrand's calculation methodology. It is important to point out that there are several approximate methods and models for determining brand value (Bauer-Kolos, 2017; Gyulavári et al, 2017; Keller-Kotler, 2016), but there is no formally accepted calculation method for this.

The first step is to determine the EVA of the brand. This is done by calculating the return on capital invested and deducting the cost of capital employed, calculated using a weighted average cost of capital. The difference between the ROIC and the WACC is the return above the WACC, multiplied by the value of the capital invested to obtain the economic return of the company. This amount has to be divided among the brands of the company, which we have done as a proportion of each brand's EBIT. The next step is to calculate the brand income. This is the part of the EVA that is due to the brand. The ratio between the two is the role of branding, which we estimated using our questionnaire survey. Brand income is the product of EVA and the role of branding. According to the model, brand income can be considered as a cash flow that arises at regular intervals – in each year's accounts – in equal or steadily increasing amounts and over an infinite period of time - if we start from the going concern principle. Thus, using the perpetuity formula, we obtain the brand value by discounting the brand income by the brand strength. To assess the brand power, a questionnaire survey was conducted online in Hungary, using a randomly selected, non-representative sample of 144 respondents.

The variation between the brand values shown above can be broken down by a total of 5 factors using the absolute difference method:

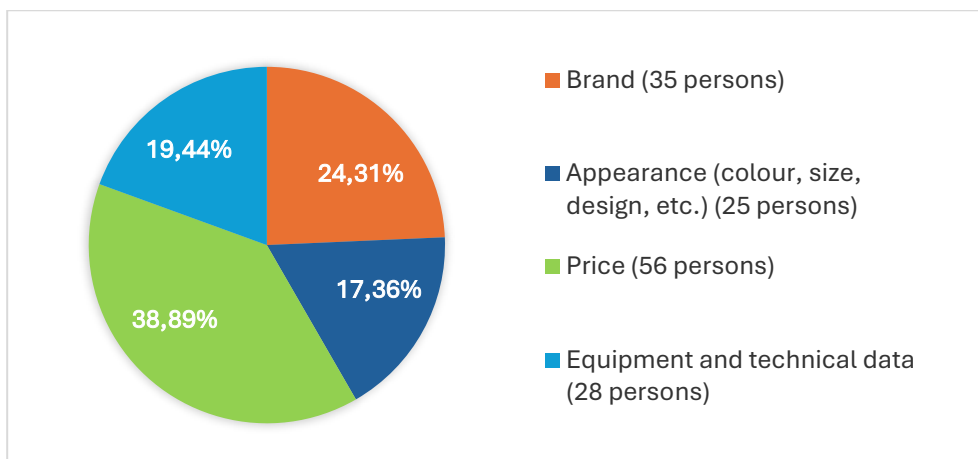
$$\begin{aligned} \text{Brand value} &= \frac{\text{EVA} * \text{Marketing Power}}{\text{Brand Strength}} = \\ &= \text{Equity} * \left(\frac{1}{1 - \text{Debt ratio}} \right) * (\text{ROIC} - \text{WACC}) \\ &\quad * \text{Marketing Power} * \frac{1}{\text{Brand Strength}} \end{aligned}$$

The method of absolute margins is suitable for showing the impact of the multiplying factors shown in the above formula on brand equity.

3. Results

3.1. The brand power and strength

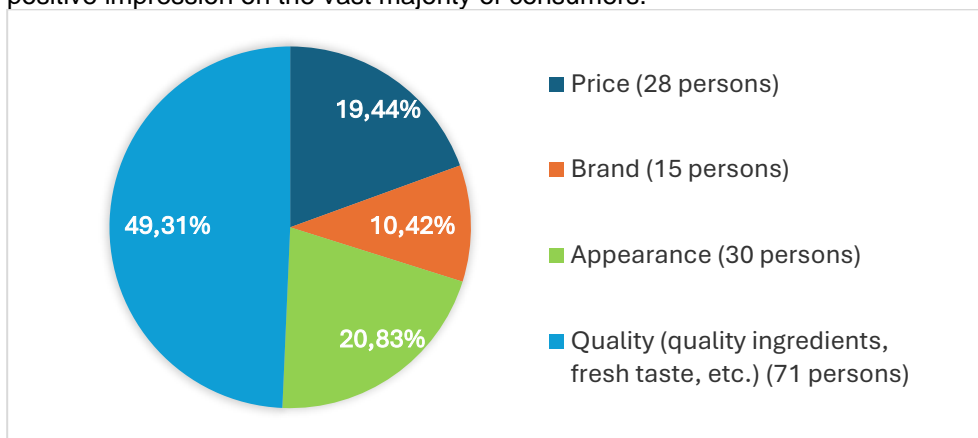
Among the respondents to the brand power questionnaire, one third were under 30 years old, and the rest were older. Almost two thirds of respondents had an average financial situation, less than a fifth had an above average financial situation, 13% had a below average financial situation, just under 4 people, or nearly 3% of the 144 respondents, had a financial situation significantly below average, and 5.55% of respondents chose not to answer. The role of branding was therefore determined according to which of the four predefined purchasing criteria (price, appearance, perceived trustworthiness, brand) was considered the most important by which many people.



Figure

1: Most important aspect of buying a car according to respondents (n=144)
Source: Own editing based on the questionnaire used

As shown in the Figure 1, a fifth of the 144 respondents said that brand is the most important factor when buying a car, so the role of branding is estimated at 24.31% based on the Keller model at the Mercedes. The questionnaire used in the research indicated that the Keller model shows that Mercedes-Benz brand awareness is strong, with products of good quality and an impressive appearance and relatively high prices. The brand provides added value to the consumer, as well as an experience and symbolic meaning. Overall, it leaves a positive impression on the vast majority of consumers.



Figure

2: Most important aspect of buying a car according to respondents (n=144)
Source: Own editing based on the questionnaire used

As shown in the Figure 2, 10.42% of respondents consider brand to be the most important of the four criteria when buying cereals. It should also be noted that brand is the least important of the four criteria according to the respondents. In half of the cases, quality was cited as the most important purchasing factor. Similar to the Mercedes-Benz brand, the rate of 10.42% will represent the branding role of Nestlé flakes according to the analysis of the Keller model. Awareness of Nestlé cereals is particularly strong, both in terms of brand recall and brand recognition. However, we were unable to form an opinion on brand image for several aspects. The brand's products are perceived as very tasty by respondents and the packaging of the products is considered attractive by a large majority, but opinions are divided on the price of the products. The added value of the brand in the area of health is questionable, and there does not seem to be a clear symbolic meaning for the brand in the

same area. However, the divided opinion may also indicate that people's perceptions of cereals are changing and that they will subsequently see the brand as an added value or as an individual, social value, as an opportunity for a healthy lifestyle. In terms of attitude, it can be said that it is positive for the majority of respondents.

3.2. The calculation of Brand Income

To determine the economic return per Mercedes-Benz brand, it is first necessary to determine Daimler's return on capital employed. The company's earnings before interest and tax, less the German income tax rate of 15%, and multiplied by the average stock of invested capital, yield the following ROIC:

$$ROIC_{Daimler} = \frac{EBIT * (1 - t)}{Invested\ capital} = \frac{20458 * (1 - 0.15)}{198\ 377} = 8.77\%$$

The WACC is calculated as the weight and cost of equity and debt multiplied by the weight and cost of debt, adjusted for the tax effect of debt. In the case of Daimler, the WACC is based on the average cost of capital for the automotive industry in Western Europe, which was 4% in 2022 (Damudaran, 2022). The EVA per Mercedes-Benz brand was calculated as a proportion of the EBIT generated by the individual Daimler brands. Mercedes-Benz Cars accounts for 80% of the total EBIT of Daimler Group, so that the same proportion of the calculated economic income can be considered as the EVA attributable to the brand within the corporate EVA.

$$EVA_{Mercedes} = 198\ 377 * (8.77\% - 4.00\%) * 80\% = 7563\ million\ EUR$$

Based on Interbrand's methodology, after determining the brand equity, the brand strength was calculated, which was used to discount the predicted brand equity to obtain the brand's present value, so the brand equity. The risk attributable to the brand was calculated using the CAPM, which was also used to calculate the brand equity, after adjusting the risk premium for the branding role defined earlier. If the long term treasury bond rate is 1.51% and the risk premium to use for equity is 5.07%, then with an industry beta of 1.22 (Damudaran, 2022), the risk weighted by the brand power (, so the brand strength is 6.34%. Discounting the brand income by this value gives the brand equity:

$$Brand\ Value_{Mercedes} = \frac{7563 * 24.31\%}{6.34\%} = 29000\ million\ EUR$$

The calculation of the EVA of Nestlé cereals can be done in a similar way as before. The EBIT minus the tax rate and then divided by the capital invested gives the ROIC:

$$ROIC_{Nestlé} = \frac{EBIT * (1 - t)}{Invested\ capital} = \frac{12\ 326 * (1 - 0.15)}{97\ 104} = 10.79\ %$$

In the case of Nestlé, the WACC is based on the average cost of capital for the food processing industry in Western Europe, which was 3.74% in 2022 (Damudaran, 2022). The Brand income of cereals in EUR was calculated as a proportion of the operating results generated by each type of Nestlé product. The operating profit for the cereals product type representing 22.22% of total operating income (Statista, 2022). On this basis, the economic revenue per Nestlé cereal brand is estimated at around €2 390 million:

$$EVA_{Nestlé} = 97\ 104 * (10.79\% - 3.74\%) * 22.22\% = 1521\ million\ EUR$$

If the long term treasury bond rate is 1.51% and the risk premium to use for equity is 5.07%, then with an industry beta of 0.71 (Damudaran, 2022), and the weight of 22.22%, the risk attributable to the brand, so the brand strength is 1.89%. Discounting the brand income by this value gives the brand equity:

$$\text{Brand Value}_{\text{Nestlé}} = \frac{1521 * 10.42\%}{1.89\%} = 8385 \text{ million EUR}$$

3.3. Examination of factors affecting the difference in calculated brand values

The examined factors' effect to the difference between Mercedes and Nestlé brand value showed in the Table 1.

Table 1: Examining the effects of factors affecting the variation between detected brand values using the absolute difference method based on IFRS reports 2022 data

Factor Effects	Mercedes	Factor Effects						Nestlé
		1.	2.	3.	4.	5.	6.	
1. Equity (in a billion EUR)	86.54	-43.75	42.79	42.79	42.79	42.79	42.79	42.79
2. 1 / (1 - Debt ratio)	2.29	2.29	-0.02	2.27	2.27	2.27	2.27	2.27
3. ROIC-WACC	4.77%	4.77%	4.77%	2.28%	7.05%	7.05%	7.05%	7.05%
4. Brand ratio based on EBIT	80.00%	80.00%	80.00%	80.00%	-57.78%	22.22%	22.22%	22.22%
5. Brand power in %	24.31%	24.31%	24.31%	24.31%	24.31%	-13.89%	10.42%	10.42%
6. 1 / Brand Strength	15.77	15.77	15.77	15.77	15.77	15.77	37.14	52.91
BRAND VALUE (in a billion EUR)	29.0	-14.7	-0.1	6.8	-15.2	-3.3	5.9	8.4

Source: Own calculation based on IFRS reports

The value of Mercedes cars was estimated to be some €20 billion higher than that of one of Nestlé's brands, based on IFRS accounts. The higher brand value of Mercedes was significantly affected by the fact that the average value of assets financed by owners and operations was estimated to be almost €44 billion higher in absolute terms than Nestlé, based on IFRS data to date. The higher equity of Mercedes would have resulted in a higher difference between brand values of around €14.7 billion. The effect of the financing capital structure can be separately identified in the difference in the estimated brand values, as the total amount of capital employed can be derived from equity through the proportion of interest-bearing debt. On this basis, the higher brand value of Mercedes cereals cannot be explained by the higher proportion of interest-bearing debt drawn by Mercedes's creditors, which alone induced a difference of EUR 0.1 billion in favour of Mercedes. The part of the return on invested capital (ROIC) above the average cost of capital (WACC) paid to equity holders and creditors, which also determined the size of the economic return, would have increased the difference between the two brands in monetary terms about €6.8 billion, in favour of Nestlé, if all other factors had been equal for the 2 companies. However, the former positive difference was offset multiply by the fact that the EBIT share of Mercedes within Daimler was four times than the EBIT share of cereals within Nestlé, which results more

than €15.2 billion, and which could ultimately reduce the size of the difference between the two brands significantly. In addition, in the empirical study, Nestlé cereals were perceived by customers as having a significantly lower brand equity than Mercedes, so the role of branding was found to be significantly stronger in the latter company's customer perception, which explained an additional brand equity difference of €3 billion in favour of Mercedes. In contrast, the role of brand strength as a discount factor improved the monetary advantage of Nestlé's cereals brand, which is in a better financing debt position, compared to the Mercedes.

Overall, therefore, if only the potential return on financial investment is taken as a basis for estimating the brand value, the value of Nestlé cereals would not be in a significantly more favourable position than currently estimated compared to Mercedes. If, on the other hand, the financial risks borne by the financiers of the two companies were considered to be the same as their realised return and only the customer perception, the role of the brand, was taken into account in the model calculation, the advantage would be clearly in favour of the Mercedes brand.

4. Conclusion

In our study, we determined the brand equity of Mercedes-Benz and Nestlé cereals by following the calculation methodology of the British company Interbrand, using our own calculations and a questionnaire survey we compiled. As a result, we found that the Mercedes-Benz brand is worthier than the Nestlé cereal brands. Interbrand has valued the Nestlé brand at amount of €10.921 million, while the Mercedes-Benz brand at a amount of €56.103 million (Interbrand, 2022), so our calculations for Nestlé are close to the value calculated by Interbrand (which may be due mainly to differences in the questionnaire results), although both results show that the Mercedes brand value was several times higher. In the case of Nestlé, the comparison of the results is not meaningful as Interbrand's calculations are not only for Nestlé cereals but for all Nestlé brands. In addition, my questionnaire findings revealed that both global brands have strong brand awareness, and from the sample surveyed, consumers basically consider them to be trustworthy, to perform as expected, and most of them have positive attitudes towards them. It was also found that brand equity in international accounting can basically be shown by an enterprise if the brand name is not its own - internally generated - but acquired from an external, independent source. On the one hand, respondents say that brand is a more important consideration when buying a car than when buying cereals. On the other hand, it was also confirmed that quality is a more important criterion than brand when buying cereals, and that respondents would prefer a well-known brand to an unknown or less well-known brand for the same parameters and price.

The use of the calculations presented here may be advisable not only for brands, but also for products that are about to be launched on the market, for example. Given the topicality of the subject and its wide range of practical applications, there are many opportunities for further research. In our view, it is certainly worthwhile to increase the sample size of the research, so the number of respondents - those who fill in the questionnaire. This will increase the accuracy and reliability of the results of the research. The questionnaire we have compiled was completed by 144 people, which is a small sample. It may be advisable to carry out a similar experiment with up to several thousand people. In addition, a sample that is representative of the brand is needed. In addition, you need to have a population that is representative of the brand. This requires ensuring an appropriate gender and age distribution of respondents, or even a distribution of nationalities for global companies. In some circumstances, it may be appropriate to narrow the survey sample according to what the company is looking for. If, for example, your main customer base is young men, it may be worth looking at their demographic group and then following their needs.

As there are other methods for determining the brand value, it may be advisable to use other calculation methods. Further development of the research could include the aforementioned extension of the basic data. By using their internal data and having a clear understanding of their operations and plans, individual companies can make more efficient, accurate and detailed calculations of their own brand equity. The use of the calculations presented here may be advisable not only for brands, but also for products that are about to be launched on the market.

References

1. American Marketing Association (2017). *Definitions of Marketing*, [online]. Available: <https://www.ama.org/the-definition-of-marketing-what-is-marketing/>
2. Arvidsson, A. (2006). Brand value. *Journal of Brand Management*, 13, 188-192.
3. Barth, M. E., Clement, M. B., Foster, G., and Kasznik, R. (1998). Brand values and capital market valuation. *Review of Accounting Studies*, Vol. 3, pp. 41-68.
4. Bauer, A., and Kolos, K. (2017). *Márkamenedzsmet*. Akadémia Kiadó, Budapest, p. 140
5. Borkovsky, R. N., Goldfarb, A., Haviv, A. M., and Moorthy, S. (2017). Measuring and understanding brand value in a dynamic model of brand management. *Marketing Science*, vol. 36, No. 4, pp. 471-499.
6. Chandon, P. (2003). Note on measuring brand awareness, brand image, brand equity and brand value. *Fontainebleau: Insead*. pp. 1-12.
7. Christopher, M. (1996). From brand values to customer value. *Journal of Marketing Practice: applied marketing science*, vol. 2., No. 1, pp. 55-66.
8. Chu, S., and Keh, H. T. (2006). Brand value creation: Analysis of the Interbrand-Business Week brand value rankings. *Marketing Letters*, vol. 17, pp. 323-331.
9. Fehle, F., Fournier, S. M., Madden, T. J., and Shrider, D. G. (2008). Brand value and asset pricing. *Quarterly Journal of Finance and Accounting*, pp. 3-26.
10. Gupta, S., Gallear, D., Rudd, J., and Foroudi, P. (2020). The impact of brand value on brand competitiveness. *Journal of Business Research*, vol. 112, pp. 210-222.
11. Haigh, D. (1999). *Understanding the financial value of brands*. Brussels: European Association of Advertising Agencies.
12. Hanno, R. (2007). *Brand equity assessment: Interbrand brand value effect on investor decisions* (Doctoral dissertation, University of New Brunswick, Faculty of Business Administration).
13. He, J., and Calder, B. J. (2020). The experimental evaluation of brand strength and brand value. *Journal of Business Research*, vol. 115, pp. 194-202.
14. Interbrand (2022). *Best Global Brands 2022* [online] Available: <https://interbrand.com/>
15. Jia, Y., and Zhang, W. (2013). *Brand equity valuation: an optimized interbrand model which is based on the consumer perspective*. In international academic workshop on social science (IAW-SC-13). Atlantis Press. pp. 325-330.
16. Jones, R. (2005). Finding sources of brand value: Developing a stakeholder model of brand equity. *Journal of Brand Management*, vol. 13, pp. 10-32.
17. Keller, K. L., and Kotler, Ph. (2016): *Marketingmenedzsmet*. Akadémia Kiadó, Budapest
18. Kiss, A (2015): Empirical Analysis of the Role of the Firms' Value Drivers, *Network Intelligence Studies*, Vol. 3, No. 2, pp. 91-96.
19. Kiss, A (2016a): Value Creation and Different Dimensions of Value in Corporate Practice, *Annals of the University of Oradea Economic Science*, Vol. 25, No. 1, pp 651-660.
20. Kiss, A. (2016b): A vállalat értékét befolyásoló tényezők szerepének vizsgálata angolszász és kontinentális vonatkozásokban. *Közép-Európai Közlemények*, vol. 9, No. 2, pp. 107-116. ISSN 1789-6339
21. Kiss, A. (2016c): The empirical examination of changes related to value drivers in the effects of the 2007-2008 crisis. *Applied Studies in Agribusiness and Commerce*, vol. 10, No. 4-5, pp. 31-35. DOI:10.22004/ag.econ.257104
22. Kiss, A. (2017): An Empirical Analysis of the Effects of the 2007-2008 Financial Crisis on Changes in the Value Creation of Firms in Individual Industrial Sectors. *Annals of the University of Oradea Economic Science*, vol. 26, No. 1, pp. 405-412.
23. Meeh-Bunse, G., Luer, K., and Litfin, Th. (2021): The consistent feature: Brand equity accountig – A current view from the perspective of IFRS and marketing, In: Proceedings of FEB Zagreb 12th International Odyssey. *Conference on Economics and Business*. pp. 92-106

24. Papp-Váry, Á. (2020). *A márkanév ereje*. A sikeres brandépítés alapjai. Ludovika Egyetemi Kiadó Nonprofit Kft., Budapest, p. 213.
25. Porokhnya, V., Kravets, O., Didenko, A., and Penev, V. (2020). Model of brand value management as a process of strategic increase of enterprise value. In E3S Web of Conferences (Vol. 166, p. 13026). EDP Sciences.
26. Rekettye, G., Bányai, E., Fojtik, J., Hetesi, E., Nagy, Á., Prónay, Sz., Révész, B., Szűcs, K., and Töröcsik, M. (2016). *Bevezetés a marketingbe*. Akadémia Kiadó, Budapest, p. 234
27. Rozhkova, D., Rozhkova, N., Gonzalez Serna, D., and Blinova, U. (2021). *Brand valuation of the Russian bank: Interbrand model*. In The 2018 International Conference on Digital Science. Cham: Springer International Publishing. pp. 219-230
28. Soto, T. (2008). Methods for Assessing Brand Value: A Comparison between the Interbrand Model and the BBDO s Brand Equity Evaluator model. diplom. de.
29. Statista (2023): *Nestlé groups EBIT margin by product category* [online] Availability: <https://www.statista.com/statistics/268901/nestle-groups-ebit-margin-by-product-category/>
30. Vasileva, S. (2016). *Brand evaluation: a review of interbrand and Millward Brown models*. In The Priority Directions of National Economy Development: International Scientific Conference.