

Examination of Corporate Reputation Scores, Market Value and Financial Performance with the Perspective of Corporate Brand Sustainability

Kurumsal Marka Sürdürülebilirliği Perspektifinden Kurumsal İtibar Skoru, Piyasa Değeri ve Finansal Performansın İncelenmesi

Yusuf Ozan YILDIRIM* Aypar USLU**

Abstract

In theory and practice, sustainability research offer important doctrines for carrying corporate brands into the future. As for maintaining the sustainability of corporate brands, researchers imply the necessity of various changing parameters, including corporate reputation. In addition, researchers highlight for long-term corporate reputation firms should also focus their market performance and financial performance. With this perspective, the aim of this paper is to examine the relationship amongst long term sustained corporate reputation, market value and financial performance. In parallel to prior research, reputation is conceptualized by pulse scores from reputation institutes' reports. For the perspective of sustainability, data is put through some filters such as "most repeated corporate brands over 15 years". After sampling, market values and financial performance indicators taken from online credible sources. As a result, 6 corporate brands and 15 years long data a panel has constructed. Finally, the relationship amongst corporate reputation, market value and financial performance is assessed with panel data. According to panel data correlation results, corporate reputation is only significantly correlated with ROE and ROI. Relationship between market value and financial performance indicators is significantly correlated.

Keywords: Corporate brand sustainability, corporate reputation, market value, financial performance

JEL Codes: M30; G10; L10

Öz

Teori ve pratikte sürdürülebilirlik araştırmaları, kurumsal markaları geleceğe taşımak için önemli öğretiler sunmaktadır. Araştırmacılar, kurumsal markaların sürdürülebilirliğini sağlamak için kurumsal itibar da dahil olmak üzere çeşitli parametrelerin değiştirilmesi gerektiğini belirtmektedir. Ayrıca araştırmacılar, uzun vadeli kurumsal itibar için firmaların pazar performanslarına ve finansal performanslarına da odaklanmaları gerektiğini vurgulamaktadır. Bu bakış açısıyla gerçekleştirilen çalışmanın amacı, uzun vadeli sürdürülebilir kurumsal itibar, piyasa değeri ve finansal performans arasındaki ilişkiyi incelemektir. Önceki araştırmalara paralel olarak çalışmada itibar skoru, "reputation institute" raporlarındaki "pulse score" değerlerinden elde edilmiştir. Sürdürülebilirlik perspektifi için veriler "15 yılda en çok tekrarlanan kurumsal markalar" gibi çeşitli filtrelerden geçmiş olup elde edilen örneklem için çevrim içi güvenilir kaynaklardan çalışmanın diğer değişkenleri olan piyasa değerleri ve finansal performans değerleri elde edilmiştir. Sonuç olarak 6 kurumsal marka ve 15 yıllık panel veri ile analizler gerçekleştirilmiştir. Kurumsal itibar, piyasa değeri ve finansal performans arasındaki ilişkinin analiz bulgularına göre; kurumsal itibar sadece ROE ve ROI ile anlamlı bir şekilde ilişkili olduğu bulgusuna ulaşılmıştır. Ek olarak araştırma bulgularına göre piyasa değeri ile finansal performans göstergeleri arasındaki anlamlı bir ilişki tespit edilmiştir.

Anahtar Kelimeler: Kurumsal marka sürdürülebilirliği, kurumsal itibar, piyasa değeri, finansal performans

JEL Kodları: M30; G10; L10

^{*} Dr.Öğr.Üyesi, Dicle Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, yoyildirim@gmail.com, ORCID: https://orcid.org/0000-0002-0346-2660

^{**} Prof. Dr., Marmara Üniversitesi, İşletme Fakültesi, auslu@marmara.edu.tr, ORCID: https://orcid.org/0000-0002-6994-9367

1. INTRODUCTION

Right before the developments that took place in the global sense, there seems happening of a big crisis. Against crisis, humanity is making various efforts to come out stronger from every one of them and taking a step towards to the future. After crises happened in the 1970s, 1980s and 1990s, the issue of sustainability has emerged. Sustainability has paved the way for the pursuit of immortality with works that will carry human nature to the future. In this respect, brands created by people are considered as works that can be carried to future. Brands begin to resemble people in many ways and seen as an element of communication between organizations and people. With this resemblance and communication, brands have started to adapt sustainability to maintain their existence strongly against factors such as disruptive developments, changing environmental conditions, changing consumer behaviors and digitalization.

According to the perspective of sustainability, development of brands can be fed from many elements. Fan (2005) mention sustainability is related to reputation and market value. Dierickx and Cool (1989) explain a stronger position in terms of sustainability can be achieved with an increase in accumulation of total assets. Schultz and Block (2015) states, in terms of sustainability, "Average Growth Rate" of brands is a critical determinant. Lee and Hu (2018) mention sustainability may get stronger if financial performance indicators of firms' such as ROA (Return on Assets) increases. Herbig and Milewicz (1993) interpreted sustainability as the ability of brands to move into the future through their reputation. Tristiarini, Utomo and Setiawanta (2019) noted while reputation increases the market value of firms, sustainability gain importance. Lee and Kwon (2019) explained the relationship between environmental sustainability and market value added in manufacturing firms. Kwon, Lee and Choi (2021) explain strong position of sustainability may send better signals to firms' stakeholders. Yilmaz, Aksoy and Tatoglu et al. (2020) mention when firms balance their efforts on sustainability, firms' financial and market performance get stronger.

When the given literature above is synthesized, sustainability can be affected by many tangible and intangible variables. This research with the perspective of corporate brand sustainability, will combine and further move the work of Lee and Hu (2018) and Tristiarini et al. (2019) by examining the relationship amongst corporate reputation, market value and financial performance indicators (ROA, ROE, ROI). Accordingly, in this research for comprehending the perspective of corporate brand sustainability; sustainability, brand sustainability and corporate brand sustainability will be explained. Following, sample of this study will be determined by examining the brands in the "The World's Most Reputable Companies" reports published by the "Reputation Institute".

2. LITERATURE REVIEW

2.1. Sustainability

Economic systems are highly dependent on social and ecological systems, therefore factors interacting with consumption have significant impact on economic development. (Mead, 1970). When consumption is considered from a marketing view, it is seen that responsibility of limiting individual consumption reveals a phenomenon called "responsible consumption". "Responsible consumption" refers to rational and efficient use of resources in terms of global human population (Fisk, 1973). Studies examining relationship between environmental factors and consumer behavior, implies two crises points at history: energy crisis in 1970s and solid waste crisis in 1980s. These crises also led the way for an opportunity as an outcome. The outcome of these crises aims to reduce the risk for posterity and is called green consumption, which emerged in late 1980s and early 1990s (Heiskanen and Pantzar, 1997). Afterwards some scholars limited their perspective of preserving future with only green consumption and environmental sustainability yet later defined as using and combining social, economic and environmental resources wisely for the future generations (Khan, 1995). In short, sustainability today emerges with the intersection of social, economic and environmental components (Purvis, Mao and Robinson, 2019).

2.2. Brand Sustainability

Brands are considered as one of the important assets of companies. Companies strategically plan brand growth by acting according to changes in customer demands and needs (Crittenden, Crittenden, Ferrell, Ferrell and Pinney, 2011). In this respect, brands allow firms to make progress in a sustainable way (Bartels and Nelissen, 2002). Brands also create awareness to maximize their chances of making a positive contribution to the development of sustainability goals by presenting images and messages (Woodland and Acott, 2007). For brands to be sustainable, a desired feature, a vision or a goal must be supported by elements of reliability and success (Anderberg and Clark, 2013). In addition, expanding the existing use of their products, a modified form of use for new or existing consumers and re-launching old-fashioned products are defined as various other elements (Jestratijevic, Maystorovich and Vrabič-Brodnjak, 2022). Numerous studies in terms of sustainability of brands are presented below in Table 1.

Social	Economic	Environmental
Communication (Shultz and Holbrook, 1999)	Sustainability of Asset Position (Dierickx and Cool, 1989)	Green Marketing (Peattie, 2001)
Corporate Social Responsibility (Kitchin, 2003)	New Product Sustainability (Yada Ip and Katoh, 2007)	Design for Environmental Sustainability (Manzini and Vezzoli, 2003)
Ethical Branding (Fan, 2005)	Life Cycle Sustainability (Kloepffer, 2008)	Tourism Branding and Sustainability (Woodland and Acott, 2007)
Business in Society (Salzmann,	Market Oriented Sustainability	Eco Labels and Sustainability (Horne,
Ionescu-Somers and Steger, 2005)	(Crittenden et al., 2011)	2009)
Corporate Communitacion (Signitzer	Sustainable Consumption	Sustainable Development (Lieb and
and Prexl, 2007)	(Dauvergne and Lister, 2012)	Lieb, 2010)
Ethical Products (Luchs, Naylor, Irwin and Raghunathan, 2010)	Integration of Sustainability and Branding (Kumar and Christodoulopoulou, 2014)	Eco Branding of Cities (Anderberg and Clark, 2013)
Sustainability Marketing Strategies	Brand Sustainability Measures	Green Initiative as Corporate Culture
(Bedek, 2011)	(Schultz and Block, 2015)	(Gupta and Kumar, 2013)
Value Creation (Lampikoski,	Sustainability Marketing and B2B	Environmental Sustainability
Westerlund, Rajala and Möller, 2014)	Branding (Sheth and Sinha, 2015)	Strategies (Walsh and Dodds, 2017)

Table 1: Various Brand Sustainability Topics Grouped Under Pillars

The concept of sustainability regulates habits and focuses on responsible consumption. Responsible consumption is leaded and realized by brands in the market (Iannuzzi, 2017). Sustainability of a brand uncovers the ability to survive in variability. For this survival, economic sustainability is not sufficient. A single-minded focus on economic sustainability can be successful in the short run; however, in the long run all three dimensions of sustainability must be met simultaneously (Dyllick and Hockerts, 2002). Thus, for sustainability brands should be able to adapt to changing conditions, be sensitive to future decisions, be compatible with the ecosystem, be able to cooperate systematically and be active in the economic, social and environmental dimensions of sustainability (Kitchin, 2003). In addition, uniqueness in communication, commitment to core values, social responsibility, corporate reputation, trust creation over time etc. play a key role in being a sustainable brand (Greyser, 2009). In conclusion, to carry the value of the brand to the future, sustainability principles must be transformed into brand-learning and capacity. The main reason for this is seen as the fact that brands continue to carry a valuable meaning and create a continuous value to carry them into the future (Ind, 2007).

2.3. Corporate Brand Sustainability

For corporations, a strategic cooperation effort is required with indicators such as resource conservation, recycling and use of market opportunities for the environment (Fisk, 1998). Accordingly, using these specified indicators, an increasing number of corporations see the sustainability of their brands as an integral part of their business strategies. Factors underlying this trend for corporate brands are explained as increasing environmental and social legislation and regulatory compliance, concerns about scarcity of natural resources and socially responsible financial investments (Jones, Clarke-Hill, Comfort and Hillier, 2008). As for the maintaining sustainability of corporate brands it is necessary to provide diversity among a series of changing parameters such as reducing operational risks, increasing eco-efficiency, increasing brand value and corporate reputation (Salzmann et al., 2005).

The higher the reputation of a corporate brand, the higher the probability of carrying the brand into the future. The basis of this idea is explained by the fact that corporate brands with a good reputation also have valuable assets (Herbig and Milewicz, 1993). In addition, corporate reputation also seen among the sustainability indicators as it reduces operational costs in the recruitment and development processes of employees (Schultz and Block, 2015). Yet, corporate brands should not only focus on reputation to maintain sustainability, but also gain unique advantages with some elements in the market such as corporate commitments, consumer awareness and brand-based advantages (Keller, Sternthal and Tybout, 2002). In short, sustainability of corporate brands can be composed of various elements and strategies suitable for sustainability should be adopted by corporations (Van Marrewijk and Werre, 2003).

In corporate brands, sustainability is becoming a principal factor for reputation. Corporate reputation, which is enriched by the sustainability of corporate brands, is affected by financial and social performance. Corporate reputation is also believed to have a long-term positive effect on market share and market value (Fan, 2005). In addition, sustainability of corporate positions is related to the asset positions of corporations. In this respect, the fact that "assets of the companies cannot be copied or imitated" is seen as a necessity to carry corporate brands into the future. For this to happen, companies must improve themselves in areas such as R&D, know-how, network and complementarity of goods and services (Dierickx and Cool, 1989). Finally, increasing and improving of corporations' asset over time allows the market value of the brand to increase thus ending with stronger sustainability (Schultz and Block, 2015).

3. RESEARCH DESIGN

Enriching and maintaining corporate reputation for long period may count as sustainability (Herbig and Milewicz, 1993; Fan, 2005; Greyser, 2009; Schaltegger and Wagner, 2011). From this perspective, this research aims to find an answer to the question of whether there is a relationship between long term maintained corporate reputation, financial performance and market value. Even though there is a relationship between determined variables determined in previous research, this research's aim reflects an importance for sustainability perspective with a long term preserved corporate reputation thus determined variables try to reveal the factors that companies should pay attention to in the long term. According to the variables to be used for answering the research question, we have examined similar previous works and results for better understanding and constructing the relationship. As a result, similar past studies and their findings are summarized in table 2.

	Table 2. Ominiar 1 revious Works and Results
Work	Results
Black, Carnes and Richardson, 2000	(Data Set Dated 1982-1996/Fortune) Significant effect of reputation scores on ROA coefficient %5
Schultz, Mouritsen and Gabrielsen, 2001	(Data Set Dated 1988-2000/Fortune) Insignificant relationship between Reputation and ROA (max r=%10,1). Significant relationship between Reputation and Financial Performance (max r=%28).
Roberts and Dowling, 2002	(Data Set Dated 1984-1998/Fortune) Significant relationship between reputation and ROA was found in lagged data (r=%5).
Cravens, Oliver and Ramamoorti, 2003	Reviewed past research for reputation and stated that financial indicators can explain a maximum of 10% of reputation.
Rose and Thomsen, 2004	(Data Set Dated 1996-2001/Business magazines across the world) Insignificant effect of reputation scores on market value, equity ratio, price, image.
Eberl and Schwaiger, 2005	Effect of corporate reputation on book value (equity), total asset and total sales could not be determined for the companies in the DAX
Smith, Smith and Wang, 2010	Found that companies with high reputation score have strong and significant relationship between their financial indicators.
Caliskan, Icke and Ayturk, 2011	According to reputation scores in Capital magazine, insignificant relationship between reputation and Market Value, ROA, ROE. In lagged condition, significant relationship between roe and reputation (r=%10)
Fernandez-Gamez, Gil- Corral and Galán- Valdivieso, 2015	They used their own data for reputation. Effect of corporate reputation (for Spain) on varket value (%18) has been determined
Weng and Chen, 2017	(Data Set From "Excellence in Corporate Social Responsibility") Annual significant correlation scores for 11 years between reputation scores and ROA, ROE, Dept Ratio
Vig, Dumičić and Klopotan, 2017	(Dataset obtained with Fombrun's reputation quotient) Effect of corporate reputation on ROA (%10), ROE (%10), EVA (%5) has been determined.
Alshehhi, Nobanee and Khare, 2018	Examined with which indicators corporate reputation was studied together in past research. 53 times with ROA, 27 times with ROE, 15 times with ROI, 10 times with Market Value. Correlation was found significant in half of the studies
Ginesti, Caldarelli and Zampella, 2018	(Data Set From "Italian Competition Authority") Significant relationship amongst reputation and ROA (r=%18), ROE (r=%15), ROI (r=%16) is examined

Table 2: Similar Previous Works and Results

According to table 3, results indicate there may be a relationship between reputation scores, market value and financial performance indicators. In addition, works indicate for the perspective of sustainability and significance of results it is better to use superior performing reputation scores. The definitions and formulas of the variables used in the study are explained in Table 3.

In the light of given information, to determine the sample with a perspective of corporate brand sustainability, reports from "Global RepTrak 100" published by the "Reputation Institute" (through oldest available report from 2009 to 2023) were examined. Accordingly, all the companies in the top 10 from the reports of last 15 years are summarized (See Appendix 1).

Table 3: Variables and Definition							
Variables	;	Definition	Formula				
Reputation Score		A quantitative indicator for better understanding and comparing a corporation's reputation	Reputation Institute measures corporation's reputation with their own scale composed of leadership, performance, products/services, innovation, workplace, governance and citizenship				
Market Value		The total value of the current shares owned by shareholders.	Closing price (dated 31/12) *number of total shares				
Financial Performance Indicators	ROA	The ratio that shows how much profit the company has made in total assets it has.	ROA = (Net Income / Total asset) *100				
	ROE	The ratio that shows how much the company has made in total shareholders' equity it has.	ROE = (Net Income / Stockholders' Equity) *100				
	ROI	The ratio that shows profitability to evaluate investment	ROI = (Net Income / Cost of Investment) *100				

Note: All variables are taken from credible open sources. There was no need of ethical approve for collected secondary data.

Table 4 summarizes repeat frequency of the top 10 corporate brands for 15 years. In addition, in Table 4 it is seen that the most repetitive corporate brands are mostly composed of entertainment, technology and automotive industry.

Table 4: Repeated Brands at Re	ports for 15 Vears	(Average Repeat: 7.22)
Table 4. Repeated Drahus at Re	ports for 15 rears	(Average Repeat. 7.22)

Brands	Repeat	Brands	Repeat	Brands	Repeat
Lego	13	BMW Group	8	Adidas	5
Disney	12	Microsoft	8	Ferrari	3
Sony	12	Daimler	7	Netflix	3
Canon	11	Bosch	7	Volkswagen	3
Rolex	11	Apple	6	Harley-Davidson	3
Google	9	Intel	6	Rolls-Royce	3

Note: More than 2 repeats in appendix 1

At this point in the research, the sampling process was conducted using some considered necessary constraints. First, within the scope of corporate brand sustainability in order to determine superior performing corporate reputation scores, above average repeated corporate brands have chosen. Second, since published reputation scores are irreplaceable data in terms of credibility, corporate brands missing ¼ of the reputation scores were excluded. Finally, calculation of "market value" variable used in the study requires corporations traded in stock markets. As a result, 6 corporate brands were chosen in the sampling process: Disney, Sony, Canon, Google, BMW Group and Microsoft. in the sampling process. Reputation Scores (Also called RepTrak Pulse) of the corporate brands are shown in the table 5 below.

First, Reputation Institute's Report of "The Global RepTrack" is published at the beginning of each year and assess previous year for each company. In other words, reputation scores for 2023's report is the score of 2022. In addition, most repeated amongst most reputable companies in Table 5, are given according to their repetition order (Disney \rightarrow Microsoft).

Based on reputation scores in table 5 several observations have been made. First, 2 company is from entertainment industry, 1 from automotive industry, 2 from information technology sector and 1 from hardware & software sector. Second, Microsoft moving in the narrowest band and Canon moving in the widest band. Third, although it is the company with the highest reputation score among the determined companies, it is seen that the only company in a decreasing trend in general is the BMW Group. Fourth, according to average of reputation scores, Disney has the highest and Canon has the lowest scores. Lastly, when the reputation score averages of corporate companies are examined, it is seen that Disney is in the 1st place both in the average and repetition.

Examination of Corporate Reputation Scores, Market Value and Financial Performance with the Perspective of Corporate Brand Sustainability

	Table 5: Reputation Scores for Determined Corporate Brands								
	DISNEY	SONY	CANON	GOOGLE	BMW GROUP	MICROSOFT			
2008	79.44	72.21	69.08	78.80	-	-			
2009	77.97	78.47	-	78.62	77.77	74.47			
2010	79.51	79.05	78.07	79.99	79.42	77.29			
2011	78.92	79.31	76.98	78.05	80.08	77.98			
2012	77.76	76.30	76.02	77.15	78.39	76.23			
2013	77.30	75.90	75.70	77.30	77.20	75.00			
2014	77.11	76.49	76.64	78.26	78.98	76.11			
2015	78.20	76.70	76.90	78.10	77.90	77.00			
2016	79.19	77.74	78.28	78.22	76.93	77.12			
2017	77.40	77.30	77.40	77.70	76.10	75.80			
2018	-	-	-	-	-	77.00			
2019	78.10	76.10	75.70	75.90	74.50	77.00			
2020	77.50	77.00	77.60	76.40	76.10	77.10			
2021	75.00	76.10	76.50	74.30	76.50	75.90			
2022	73.80	75.90	76.20	74.10	74.70	74.70			
Average	77.66	76.76	76.24	77.35	77.27	76.34			
Range	73.80-79.51	72.21-79.31	69.08-78.28	74.10-79.99	74.70-80.08	74.47-77.98			
Max-Min	5.71	7.10	9.20	5.89	5.38	3.51			

Source: Reputation Institute. (2023). The Global Reptrak 100: The World's Most Reputable Companies (2009-2023), Date of access: 15.05.2023, https://www.reptrak.com/rankings/

After defining the reputation scores of the corporate brands, the market values of the sample were calculated. While calculating the market values, the formula of "closing price (dated 31/12) *number of total shares" was used for each year. In the table 6 below, market values are given for each company on a yearly basis.

Table 6: Market Value (as of 12/31) for Determined Corporate Brands (In Billion Dollars)

	DISNEY	SONY	CANON	GOOGLE	BMW GROUP	MICROSOFT
2008	42.05	24.54	40.78	194.52	19.19	172.93
2009	60.21	29.03	51.86	392.10	26.16	269.93
2010	70.93	35.83	63.45	378.60	49.84	237.15
2011	67.43	18.10	52.73	416.96	42.88	218.12
2012	88.48	11.57	44.77	462.93	61.55	224.17
2013	134.62	17.77	36.08	746.05	75.50	311.48
2014	160.12	23.43	35.09	358.69	70.22	382.19
2015	173.80	31.18	33.31	532.65	68.90	441.84
2016	165.92	35.38	30.93	545.03	60.71	481.90
2017	162.56	56.72	40.16	729.90	67.33	659.51
2018	163.38	61.28	29.36	726.39	52.67	781.28
2019	259.50	83.46	29.17	927.66	52.83	1201.83
2020	328.30	124.87	20.05	1193.20	57.39	1680.38
2021	281.74	156.71	25.45	1934.21	65.11	2524.08
2022	158.56	94.23	22.02	1152.55	58.60	1786.90

Source: Yahoo Finance (2023). Market Value, Date of Access: 19.05.2023, https://finance.yahoo.com/quote

According to table 6, Microsoft has the highest market value and Canon has the lowest as of 2022. Market value of BMW group and Canon is in a fluctuating course, market values of others tend to increase in general. In addition, a general decrease in the market value of all brands was observed for 2022. This decline in 2022; is thought to be caused by various post-pandemic factors such as monetary contraction activities, general recession and supply chain crisis.

Bingöl Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi Yıl/Year: 2023 Cilt/Volume: 7 Sayı/Issue: 2

Table 7: Return on Asset (as of 12/31) for Determined Corporate Brands (In Percentage)							
ROA (%)	DISNEY	SONY	CANON	GOOGLE	BMW	MICROSOFT	
2008	7.09	-0.84	5.10	13.31	4.44	24.28	
2009	5.12	-1.14	1.80	17.76	0.87	20.95	
2010	6.38	0.63	2.10	16.83	17.57	23.18	
2011	6.91	-4.52	2.40	14.62	15.65	21.93	
2012	7.32	-2.26	4.00	12.39	3.96	12.62	
2013	8.08	0.73	3.90	12.31	3.96	15.95	
2014	9.30	1.11	5.60	11.47	3.82	12.29	
2015	10.34	0.75	5.80	11.23	5.04	6.65	
2016	9.86	-0.20	5.80	12.34	3.76	11.10	
2017	11.56	2.87	6.20	6.86	4.57	5.64	
2018	11.09	4.07	5.46	14.08	3.19	13.14	
2019	5.07	3.02	2.94	13.19	2.01	15.95	
2020	-2.42	4.45	2.08	13.76	1.57	17.22	
2021	1.52	3.06	4.88	22.21	5.45	21.60	
2022	1.63	2.88	5.05	16.71	7.01	18.82	

Source: Macro Trends (2023). ROA, Date of Access: 19.05.2023, https://www.macrotrends.net/stocks/charts/

Return on Asset (ROA) values (dated 12/31) of the determined corporate brands are given in Table 7 above. When the ROA values are examined, it is observed that brands that can stay in the double digits for almost all years are Google and Microsoft. It is also seen that the least fluctuation of ROA values is belonged to Canon. Finally, ROA values of the Sony have been negatived at a rate of 1/3 in 15 years.

Table 8: Return on Equity (as of 12/31) for Determined Corporate Brands (In Percentage)

ROE	DISNEY	SONY	CANON	GOOGLE	BMW	MICROSOFT
2008	13.69	-0.26	4.30	14.97	5.71	48.72
2009	9.38	-4.38	1.70	19.88	4.48	40.14
2010	11.22	2.52	1.50	20.20	13.46	43.92
2011	12.41	-20.54	2.70	18.22	71.28	40.11
2012	13.39	-12.39	4.20	16.14	17.68	22.37
2013	14.22	3.89	4.00	15.69	16.09	28.32
2014	16.32	-6.05	6.10	14.49	15.29	23.02
2015	18.43	3.92	5.70	13.86	21.58	14.44
2016	18.86	-1.11	6.50	14.85	15.03	31.54
2017	23.57	1577	7.20	8.40	16.80	17.00
2018	21.29	20.37	8.84	18.34	11.37	39.45
2019	10.66	14.26	4.82	17.79	7.69	42.89
2020	-5.47	21.38	3.45	19.03	5.78	42.19
2021	3.35	12.78	7.45	31.56	17.39	48.39
2022	3.40	12.71	7.77	23.54	19.62	39.32

Source: Macro Trends (2023). ROE, Date of Access: 19.05.2023, https://www.macrotrends.net/stocks/charts/

Return on Equity (ROE) values of corporate brands are given in Table 8 above. When the ROE values are examined, it is observed that data act in a comparable way with their ROA values. According to table 8, best performance of ROE is belonged to Microsoft and worst performance is belonged to Sony. Least fluctuation of ROE values amongst brands is again belong to Canon. Finally, the highest earning compared to shareholders' equity is seen on BMW Group in 2011.

Examination of Corporate Reputation Scores, Market Value and Financial Performance with the Perspective of Corporate Brand Sustainability

ROI	DISNEY	SONY	CANON	GOOGLE	BMW	MICROSOFT
2008	12.16	0.79	3.10	11.44	57.18	62.77
2009	11.23	-0.96	0.90	15.97	90.13	62.87
2010	14.18	10.25	1.10	22.11	96.38	49.01
2011	15.96	-0.99	1.30	27.01	106.21	38.44
2012	16.08	17.75	2.50	19.90	12.06	24.50
2013	16.58	14.99	2.60	18.44	11.47	29.44
2014	19.87	-11.29	3.80	16.37	9.35	24.77
2015	22.45	7.38	4.10	16.61	78.89	14.59
2016	22.18	3.07	4.40	17.68	9.43	23.72
2017	21.28	20.18	4.80	16.93	9.42	19.63
2018	20.88	18.34	6.57	16.04	7.81	24.88
2019	7.35	17.27	3.48	17.36	5.70	29.17
2020	-3.17	16.42	2.80	18.67	3.74	33.37
2021	3.57	14.42	5.90	30.83	9.92	39.97
2022	4.37	14.18	6.70	27.77	9.26	38.04

Source: Macro Trends (2023). ROI, Date of Access: 19.05.2023, https://www.macrotrends.net/stocks/charts/

Return on Investment (ROI) values are given in Table 9. When ROI values examined; Disney's values decreased after 2018, BMW Group's value peaked in 2011, Canon's values are in a narrow band, and Microsoft displayed the best ROI performance.

4. RESULTS

Within the scope of the research conducted, it is presented how the research was designed in the perspective of sustainability and how the secondary data to be used were obtained to test the relationship amongst variables. After obtaining the research data, the data were converted into a format that can be tested as panel data. Before the conversion of variables, it is necessary to read descriptive of variables.

Variables	Unit	Mean	Min.	Max.	Std. Dev.	J-B	р.	n
Reputation Score	0p-100p	76.94	69.08	80.08	1.74	77.40	0.00	82
Market Value	Billion \$	295.23	11.57	2524.08	461.57	334.41	0.00	90
ROA	%	7.89	-4.52	24.28	6.60	6.67	0.03	90
ROE	%	15.24	-20.54	71.28	14.21	34.82	0.00	90
ROI	%	19.17	-11.29	106.21	20.96	188.06	0.00	90

Descriptive of variables used in the study are given at table 10. According to above table 10, Reputation Scores approximately range between 69-80 in which Reputation Institute defines this range as "Strong". Average Market Value of determined brands is 295 billion \$. ROA, ROE and ROI's negative values mostly come from year 2011 for Sony (The 2011 PlayStation Network Outage).

Panel data created on the brand (6) *year (15) axis, 90 observations were obtained in general. Due to missing values in reputation scores (total observation for reputation score is 82) we used an unbalanced panel for further analysis. According to Agung (2013), when using a regression model with an unbalanced data, a certain amount of inflating can occur between error terms. For this reason, if regression is used, the correlation between error terms should also be examined. Other than regression, in correlations models data must be standardized for comparability. Standardization process for various data in general can be done by applying logarithm. To determine the test to be applied for correlation analysis, first, the normal distribution of the data should be explained. Accordingly, the J-B (Jarque-Bera) value explains the normal distribution of the variables. If the J-B value is less than 5 and its significance (p) is greater than 0.05, variables are normally distributed. With given information above, based on nonparametric statistics at Table 10 for J-B values (6.67-334.41) correlation amongst variables is tested with Spearman's rho.

Table 11: Correlation Results for 2008-2022										
	RS	MV	ROA	ROE	ROI					
Reputation Score	1									
Reputation Score										
Market Value	-0.043	1								
Walket value	0.688									
Return on Asset	0.107	0.665	1							
Keturn on Asset	0.313	0.000*								
Dokum on Equity	0.225	0.574	0.812	1						
Return on Equity	0.033*	0.000*	0.000*							
Determ on Investment	0.226	0.456	0.597	0.755	1					
Return on Investment	0.033*	0.000*	0.000*	0.000*						

Accordingly, first table for correlation dated between 2008-2022 is shown above. Table 11 shows some significant correlation amongst variables. Return on Investment (ROI) and Return on Equity (ROE) are significantly correlated with each other and all variables. Return on Asset (ROA) and Market Value (MV) have only insignificantly correlated with Reputation Scores. Finally, when p values for Reputation Score are examined, Reputation Score is significantly correlated with ROE and ROI.

Created panel data is dated between 2008-2023 but test with two set of correlation. Cause of epidemic in 2020 one set for correlation excludes years 2020-2021-2022. Notion lying behind this procedure is in general Covid-19 not only influenced people but also companies. Thus, we limited years between 2008-2019 and checked again for if there will be any change. Table 12 below shows correlation results for 2008-2019. Accordingly, when compared to table 11, p values for "r" ratios have slightly reduced but no new significant correlation is detected. In addition, even though correlation was insignificant between "reputation score" and "market value," r ratio turned into positive way. Finally, in general r ratios for significant correlations have slightly increased.

	RS	MV	ROA	ROE	ROI
Reputation Score	1				
Reputation Score					
Market Value	0.089	1			
Market value	0.457				
Return on Asset	0.159	0.685	1		
Keturn on Asset	0.180	0.000*			
Baturn on Equity	0.302	0.561	0.794	1	
Return on Equity	0.009*	0.000*	0.000*		
Return on Investment	0.282	0.422	0.544	0.725	1
Return on Investment	0.017*	0.000*	0.000*	0.000*	

Table 12: Correlation Results for 2008-2019	ults for 2008-2019	Results	Correlation	Table 12:
---	--------------------	---------	-------------	-----------

5. CONCLUSION

In this research, relationship amongst corporate reputation, financial performance and market value has examined with the perspective of corporate brand sustainability. According to scholars, one way of long-term sustainability comes from maintaining corporation's reputation. World-wide most reputable brands have chosen to reflect this frame for sustainability. On the other hand, before interpreting the results it's necessary to mention limitations of it. To get a dataset coherent with the sustainability notion, the first limitation comes from eliminating brands with a filter of superior performing reputation scores. In addition, data of reputation score being limited/censored and accessible time length of data being not too long are other limitations of this work. Working with limited time and limited brands in frame for sustainability exposes only limited possibility to generalize the results to all corporate brands.

Cravens et al. (2003) especially imply corporate reputation consist of mostly intangible values and explain financial performance dimension of reputation can only reflect maximum 10 percent of

total reputation. To review the results of this work, it is better to understand reached values and ratios cannot reflect both total reputation and sustainability. However, long term-maintained reputation can regulate, accelerate and contribute to both financials and sustainability. At the results of this research relationship between reputation score and market value couldn't find but as Smith et al. (2010) said superior performing in reputation brings high correlation among financial indicators. According to results, all financial indicators and market value being highly correlated supports previous works. Thus, this result shows indirect route that increase at market share also results financial indicator to increase eventually financial indicators cause increase in long termmaintained reputation. In addition, low scores of detected low correlation ratios are also seen as parallel result with previous works (see table 3).

Alshehhi et all. (2018), extensively reviewed past literature and found ROA and Reputation worked together in several research and are mostly related. On the other hand, even though ROE and ROI have not studied with reputation as many as ROA, half of previous results indicates low correlation amongst ROE, ROI and reputation. Accordingly, in this research correlation amongst ROE, ROI and Reputation Scores being significant means efficiency of equities and investments can improve reputation. Combining both work Lee and Kwon (2019) and Kwon et al. (2021), increase in reputation with effective stakeholders' equity and investments lead and increase at sustainability, in accordance this increase can give signals to their stakeholders and may eventually increase financials such as market value added. In addition, in the world of finance anything can be related to everything that's why even though firms give strong signals to their stakeholders; decision to make investment is not solely dependent on reputation.

In this work with a curiosity of "whether conditions of epidemic happened in 2019 could change the results" have also tested. As a result, at the non-pandemic period significancy of results didn't change but "r" ratios have slightly increased. With a statistical perspective this slightly shifts can be an overlook but speaking of marketing perspective a slight difference in financials can mean loss of billions of dollars. That's why effect of Covid-19 shouldn't be ignored while interpreting results. On the other hand, even though recessive conditions after pandemic have effect on almost anything, according to results from both timelines indicates continued strong return on investments and equities is still correlated with reputation. This can be interpreted as even though a world-shaking crisis, increase in ROI&ROE lead to an increase in long-term maintained reputation. Finally with a sustainability perspective assembling both previous works and results from this work can be interpreted in accordance with determined positive relationships as maintaining corporate reputation for long period may count as sustainability (Herbig and Milewicz, 1993; Fan, 2005; Greyser, 2009; Schaltegger and Wagner, 2011) and increase at reputation may lead an increase over financials (Caliskan et al., 2011; Schultz and Block, 2015; Lee and Hu, 2018, Tristiarini et al., 2019; Yilmaz et al., 2020).

Contribution to Literature of Sustainability; In order to examine relationships amongst determined variables with a perspective of corporate brand sustainability, this research respectively focused on previous works for sustainability, brand sustainability and corporate brand sustainability. Consequently, this research contributes to the literature with a classification of the studies on brand sustainability in accordance with columns of sustainability (see Table 1) and academic interpretation of the findings.

Marketing Implications: Two decades past over the notion of Peattie (2001) "sustainability as a significant challenge for marketing" and sustainability still maintains its challenge mysteriously. Brands with brands that implement successful marketing strategies against the challenge continues to extend their existence to future generations. When looked at the results of this work with a marketing perspective, intangible assets for corporate brands such as reputation may not be directly correlated with market value and financial performance indicators but can act together with investments and equities. In addition, one of the components of corporate reputation is financial performance and reputation drive only a small portion of financial performance. Keller et al. (2002)

mentions gaining sustainability perspective for corporate brands is not only being fed with reputation but also fed with corporate commitments, consumer awareness and brand-based advantages. In conclusion, there can be a suggestion with an insight of "there is actually a need for differentiated marketing management for reputation in order to overcome challenge of sustainability."

Further Research: In this research we used secondary data for reputation score from reputation institute's reports. Even tough reliability and precision of data source not much critical from many perspectives, to get statistically better results its recommended to use primary data for reputation. An aspect of using longitudinal dataset gives perspective over a wide period thus, it is also recommended to use primary and longitudinal data together. The idea lies behind this recommendation is, when past research for the subject is reviewed it's seen that the possibility of meaningful statistics increases as the depth/length of the data increases. In addition, it's recommended to expand the research with not only superior performing reputable brands but also other corporate brands. In addition, in this research sustainability is neither measured nor used as a secondary data thus, as a suggestion to reflect a part of sustainability and corporate reputation the work can be revised with corporate brand sustainability, the research can be revised, and a regression model can be used with various financial indicators.

References

Agung, I. G. N. (2013). Panel data analysis using eviews. New York: John Wiley & Sons.

- Alshehhi, A., Nobanee, H., & Khare, N. (2018). The impact of sustainability practices on corporate financial performance: Literature trends and future research potential. *Sustainability*, *10*(2), 494.
- Anderberg, S., & Clark, E. (2013). Green and sustainable Øresund region: Eco-branding Copenhagen and Malmö. Igor Vojnovic (ed.) Part of: Urban Sustainability: A Global Perspective (591-610), East Lansing: Michigan: Michigan State University Press
- Bartels, G. C. and Nelissen, W. (2002). Marketing for sustainability: Towards transactional policymaking. New York: John Wiley & Sons.
- Bedek, A. (2011). Sustainability marketing strategies: examples of best practices in Croatia. *International Journal of Management Cases*, 13(2), 33-43.
- Black, E. L., Carnes, T. A., & Richardson, V. J. (2000). The market valuation of corporate reputation. *Corporate Reputation Review*, *3*, 31-42.
- Caliskan, E., Icke, B., & Ayturk, Y. (2011). Corporate reputation and financial performance: evidence from Turkey. *Research Journal of International Studies*, 18(1), 61-72.
- Cravens, K., Oliver, E. G., & Ramamoorti, S. (2003). The reputation index: Measuring and managing corporate reputation. *European Management Journal*, 21(2), 201-212.
- Crittenden, V. L., Crittenden, W. F., Ferrell, L. K., Ferrell, O. C., & Pinney, C. C. (2011). Marketoriented sustainability: a conceptual framework and propositions. *Journal of the Academy of Marketing Science*, 39(1), 71-85.
- Dauvergne, P. & Lister, J. (2012). Big brand sustainability: Governance prospects and environmental limits. *Global Environmental Change*, 22(1), 36-45.
- Dierickx, I. & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1511.
- Dyllick, T. & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11(2), 130-141.

- Eberl, M., & Schwaiger, M. (2005). Corporate reputation: disentangling the effects on financial performance. *European Journal of Marketing*, 39(7/8), 838-854.
- Fan, Y. (2005). Ethical branding and corporate reputation. *Corporate Communications: An International Journal*, 10(4), 341-350.
- Fernandez-Gamez, M. A., Gil-Corral, A. M., & Galán-Valdivieso, F. (2016). Corporate reputation and market value: Evidence with generalized regression neural networks. *Expert Systems with Applications*, 46, 69-76.
- Fisk, G. (1973). Criteria for a theory of responsible consumption. Journal of Marketing, 37(2), 24-31.
- Fisk, G. (1998). Green marketing: multiplier for appropriate technology transfer?. *Journal of Marketing Management*, 14(6), 657-676.
- Ginesti, G., Caldarelli, A., & Zampella, A. (2018). Exploring the impact of intellectual capital on company reputation and performance. *Journal of Intellectual Capital*, 19(5), 915-934.
- Greyser, S. A. (2009). Corporate brand reputation and brand crisis management. *Management Decision*, 47(4), 590-602.
- Gupta, S. & Kumar, V. (2013). Sustainability as corporate culture of a brand for superior performance. *Journal of World Business*, 48(3), 311-320.
- Heiskanen, E. & Pantzar, M. (1997). Toward sustainable consumption: Two new perspectives. *Journal of Consumer Policy*, 20(4), 409-442.
- Herbig, P. & Milewicz, J. (1993). The relationship of reputation and credibility to brand success. *Journal of Consumer Marketing*, 12(4), 5-11.
- Horne, R. E. (2009). Limits to labels: The role of eco-labels in the assessment of product sustainability and routes to sustainable consumption. *International Journal of consumer studies*, 33(2), 175-182.
- Iannuzzi, A. (2017). Greener products: The making and marketing of sustainable brands. CRC press.
- Ind, N. (2007). Living the brand: How to transform every member of your organization into a brand champion. Kogan Page Publishers.
- Jestratijevic, I., Maystorovich, I., & Vrabič-Brodnjak, U. (2022). The 7 Rs sustainable packaging framework: systematic review of sustainable packaging solutions in the apparel and footwear industry. *Sustainable Production and Consumption*, *30*, 331-340.
- Jones, P., Clarke-Hill, C., Comfort, D., & Hillier, D. (2008). Marketing and sustainability. *Marketing Intelligence & Planning*. 26(2), 123-130.
- Keller, K. L., Sternthal, B., & Tybout, A. (2002). Three questions you need to ask about your brand. *Harvard Business Review*, *80*(9), 80-89.
- Khan, M. A. (1995). Sustainable development: The key concepts, issues and implications. Keynote paper given at the international sustainable development research conference, 27–29 march 1995, Manchester, UK. *Sustainable Development*, 3(2), 63-69.
- Kitchin, T. (2003). Corporate social responsibility: A brand explanation. *Journal of Brand Management*, 10, 312-326.
- Kloepffer, W. (2008). Life cycle sustainability assessment of products. The International Journal of *Life Cycle Assessment*, 13(2), 89-95.
- Kumar, V., & Christodoulopoulou, A. (2014). Sustainability and branding: An integrated perspective. *Industrial Marketing Management*, 43(1), 6-15.

- Kwon, H. B., Lee, J., & Choi, L. (2021). Dynamic interplay of environmental sustainability and corporate reputation: a combined parametric and nonparametric approach. *Annals of Operations Research*, 1-33.
- Lampikoski, T., Westerlund, M., Rajala, R., & Möller, K. (2014). Green innovation games: Valuecreation strategies for corporate sustainability. *California Management Review*, 57(1), 88-116.
- Lee, J., & Kwon, H. B. (2019). The synergistic effect of environmental sustainability and corporate reputation on market value added (MVA) in manufacturing firms. *International Journal of Production Research*, 57(22), 7123-7141.
- Lee, Y. M. & Hu, J. L. (2018). Integrated approaches for business sustainability: The perspective of corporate social responsibility. *Sustainability*, *10*(7), 2318.
- Lieb, K. J. & Lieb, R. C. (2010). Environmental sustainability in the third-party logistics (3PL) industry. *International Journal of Physical Distribution & Logistics Management*, 40(7), 524-533.
- Luchs, M. G., Naylor, R. W., Irwin, J. R., & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5), 18-31.
- Manzini, E. & Vezzoli, C. (2003). A strategic design approach to develop sustainable product service systems: examples taken from the 'environmentally friendly innovation'Italian prize. *Journal of Cleaner Production*, 11(8), 851-857.
- Mead, M. (1970). Responsible Simplification of Consumption Patterns. Ekistics, 324-326.
- Peattie, K. (2001). Towards sustainability: the third age of green marketing. *The Marketing Review*, 2(2), 129-146.
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 14(3), 681-695.
- Reputation Institute. (2023). The Global RepTrak 100: The World's Most Reputable Companies (2009-2023), Date of access: 15.05.2023, https://www.reptrak.com/rankings/
- Roberts, P. W., & Dowling, G. R. (2002). Corporate reputation and sustained superior financial performance. *Strategic Management Journal*, 23(12), 1077-1093.
- Rose, C., & Thomsen, S. (2004). The Impact of Corporate Reputation on Performance: Some Danish Evidence. *European Management Journal*, 22(2), 201-210.
- Salzmann, O., Ionescu-Somers, A., & Steger, U. (2005). The business case for corporate sustainability: literature review and research options. *European management journal*, 23(1), 27-36.
- Schaltegger, S. & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business strategy and the environment*, 20(4), 222-237.
- Schultz, D. E. & Block, M. P. (2015). Beyond brand loyalty: Brand sustainability. *Journal of Marketing Communications*, 21(5), 340-355.
- Schultz, M., Mouritsen, J., & Gabrielsen, G. (2001). Sticky reputation: Analyzing a ranking system. *Corporate Reputation Review*, *4*, 24-41.
- Sheth, J. N. & Sinha, M. (2015). B2B branding in emerging markets: A sustainability perspective. *Industrial Marketing Management*, 51, 79-88.
- Shultz, C. J. & Holbrook, M. B. (1999). Marketing and the tragedy of the commons: A synthesis, commentary, and analysis for action. *Journal of Public Policy & Marketing*, 18(2), 218-229.
- Signitzer, B. & Prexl, A. (2007). Corporate sustainability communications: Aspects of theory and professionalization. *Journal of Public Relations Research*, 20(1), 1-19.

- Smith, K. T., Smith, M., & Wang, K. (2010). Does brand management of corporate reputation translate into higher market value?. *Journal of Strategic Marketing*, 18(3), 201-221.
- Tristiarini, N., Utomo, S. D., & Setiawanta, Y. (2019). The Capability of Risk as a Corporate Reputation Driver to increase Market Value. *Quality-Access to Success*, 20(168), 54-62
- Van Marrewijk, M., & Werre, M. (2003). Multiple levels of corporate sustainability. Journal of *Business Ethics*, 44, 107-119.
- Vig, S., Dumičić, K., & Klopotan, I. (2017). The impact of reputation on corporate financial performance: Median regression approach. Business Systems Research: *International journal of the Society for Advancing Innovation and Research in Economy*, 8(2), 40-58.
- Walsh, P. R., & Dodds, R. (2017). Measuring the choice of environmental sustainability strategies in creating a competitive advantage. *Business Strategy and the Environment*, 26(5), 672-687.
- Weng, P. S., & Chen, W. Y. (2017). Doing good or choosing well? Corporate reputation, CEO reputation, and corporate financial performance. *The North American Journal of Economics and Finance*, *39*, 223-240.
- Woodland, M. & Acott, T. G. (2007). Sustainability and local tourism branding in England's South Downs. *Journal of Sustainable Tourism*, 15(6), 715-734.
- Yada, K., Ip, E., & Katoh, N. (2007). Is this brand ephemeral? A multivariate tree-based decision analysis of new product sustainability. *Decision Support Systems*, 44(1), 223-234.

Yahoo Finance (2023). Market Value, Date of Access: 19.05.2023, https://finance.yahoo.com/quote

Yilmaz, M. K., Aksoy, M., & Tatoglu, E. (2020). Does the stock market value inclusion in a sustainability index? Evidence from Borsa Istanbul. *Sustainability*, 12(2), 483.

Ethics Statement: The authors declare that ethical rules are followed in all preparation processes of this study. In case of detection of a contrary situation, BİİBFAD Journal does not have any responsibility and all responsibility belongs to the authors of the study

Author Contributions: 1st author contributed to the determination of the subject, literature, data analysis. 2nd author contributed to review of subject and general conclusion of research. 1st author's contribution rate is approximately 60%, 2nd author's contribution

Appendix 1. List of Top 10 Rankings According to Reputation Score															
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Ferrero	Google	Google	BMW Group	BMW Group	Disney	BMW Group	Rolex	Rolex	Rolex	Rolex	Lego	Lego	Rolex	Lego	1
IKEA	Sony	Apple	Sony	Disney	Google	Google	Disney	Lego	Lego	Lego	Disney	Rolex	Ferrari	Bosch	2
Johnson & Johnson	Disney	Disney	Disney	Rolex	BMW Group	Daimler	Google	Disney	Google	Disney	Rolex	Ferrari	Lego	Rolls- Royce	з
Petrobas	BMW Group	BMW Group	Daimler	Google	Rolex	Rolex	BMW Group	Canon	Canon	Adidas	Ferrari	Bosch	Rolls- Royce	Harley- Davidson	4
Sadia	Daimler	Lego	Apple	Daimler	Sony	Lego	Daimler	Google	Disney	Microsoft	Microsoft	Harley- Davidson	Mercedes- Benz	Canon	IJ
Nintendo	Apple	Sony	Google	Sony	Canon	Disney	Lego	Bosch	Sony	Sony	Levi's	Canon	Harley- Davidson	Rolex	6
Christian Dior	Nokia	Daimler	Microsoft	Microsoft	Apple	Canon	Microsoft	Sony	Adidas	Canon	Netflix	Adidas	Bosch	Miele	7
Kraft Foods	IKEA	Canon	Wolkswag en	Canon	Daimler	Apple	Canon	Intel	Bosch	Michlein	Adidas	Disney	Paypal	Sony	œ
Mercadona	Wolkswag en	Intel	Canon	Nestle	Lego	Sony	Sony	Rolls- Royce	BMW Group	Netflix	Bosch	Sony	Netflix	Nintendo	9
Singapore Airlines	Intel	Wolkswag en	Lego	Lego	Microsoft	Intel	Apple	Adidas	Microsoft	Bosch	İntel	Microsoft	İntel	Mercedes- Benz	10

Bingöl Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi Yıl/Year: 2023 Cilt/Volume: 7 Sayı/Issue: 2