The Effect of Brand Value on the Financing Cost of a Firm

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Abstract

We present a new way of promoting sustainable growth through brand valuation and brand collateralization. We analyze the 229 biggest global companies according to their brand value and find significant evidence for brand value to lower the financing costs of a firm. While an increase in brand value increases debt levels of a firm, it lowers at the same time the cost of debt. This makes the additional debt serve-able and thus, promotes a sustainable development of the firm. Moreover, creating brand value increases revenue, income, earnings, and thus, the stock price of a firm in the next year, and increasingly more in the subsequent year, indicating a long-term sustainable effect. ESG factors are positively affected as well, where positive long-term effects can be seen especially in the social score. We further find a significant reduction of financing conditions by an increase in brand value in the sectors Financials, Healthcare, Logistics, Telecommunication, Textiles, Apparel & Luxury Goods, and Travel.

Keywords: Brand valuation, cost of debt, asset management, collateralization, sustainability.

JEL-Codes: G32, M3.

1 Introduction

Brands are probably the most valuable and still the least understood intangible assets, creating economic value and sustainability. Within the framework

of responsible corporate management and a transparent pursuit of corporate development in the sense of good corporate governance, corporate strategies, brands as well as their influencing factors play a significant role. In order to control corporate governance, brands might be used as a means of investment. Several studies and analysis show that companies with strong and sustainable brands perform better on the capital market as other equities and stocks. Brands contribute more to shareholder value creation than any other asset-tangible or -intangible, therefore the importance of brands increases among shareholders as well as among consumers, investors, managers and employees of enterprises.

What hasn't been analyzed until today is the effect of brands on debt financing. Debt financing especially in Europe but also in other countries plays an important role for company financing. Financing depends on important factors such as credit lines at banks or credit history, and business outlook of the company. Especially in the area of growth capital and digital business models the issue of financing based on equity and debt capital is very important. Strong and valuable brands can act as collateral and enable better and easier access to finance.

Since almost all financing activities are reliant on external capital, the cost for raising and servicing this external capital is of significant importance. The cost of capital depends on various factors such as the type of financing and the company valuation. However, usual company valuation techniques focus usually on future cash flows and earnings, but fall short of taking into account the brand value of a company. Therefore, we are interested in analyzing the effect of brand value on financing costs of a firm.

The financing costs for a firm are measured through the weighted average cost of capital (WACC) which consists of three determining factors. The first factor is the marginal cost of debt capital which is measured through the yield to maturity on outstanding long-term debt, also often referred to as cost of debt. The second factor is described through the second channel of possible funding, the marginal cost of issuance of preferred stocks, which is the rate of return investors require on its stock. The third factor refers to the marginal cost of issuing common equity. Since all three channels require a very active sales and marketing effort in order to attract investors' money, all three funding channels are heavily dependent on the company's brand value.

Creation of brand value takes a long time, a lot of effort, and costs a significant amount of money. Brand value is a term which comprises the combination of various factors such as the trademark logo, name, recognition, and reputation. Certain factors of a brand value such as the recognition, association of the logo and the name with certain ideas or branded statements or visions, are long-lasting in the memory of an investor and can not easily be eradicated. However, other factors constituting brand value such as reputation are extremely fragile and can be harmed pretty easily. However, the overall brand value of a company can be assumed to have a certain effect on a company's financing costs.

The purpose of this paper is three-folded. First, to quantify the effect the creation or increase of brand value has on a firm's financing costs. There exists barely any literature on the quantification of the brand value effects on the cost of debt. For this purpose, we control for other important financial statement components such as the enterprise value, earnings and market capitalization to isolate the effect of brand value on a firm's financing costs. Our first hypothesis we state is the an increase in brand value should lower a firm's financing costs.

Secondly, an important factor in future financing activities will play the economic, social, and governance (ESG) score since only firms meeting certain ESG requirements will be eligible to participate in the capital markets and be able to raise funds, take on bank loans, and issue debt or shares. This change in financing activity will be attributed not only to lawmakers, but also to increasing market expectations that companies engage in sustainable measures in order to promote a sustainable development of their activities in the market place, including activities involving their stakeholders. This transformation towards stakeholder capitalism is going to change the monetary transaction business fundamentally. Therefore we also analyze the effect of brand value creation on ESG measures. Our second hypothesis is that the an increase in brand value should have a positive effect on ESG measures.

Thirdly, we analyze which sectors are mostly affected by a change in brand value and which sectors are not as sensitive to changes in their brand value. Companies which engage in a direct consumer relationship are very dependent on changes in the constituting factors of brand value whereas companies which operate mainly business-to-business, or are government-related, are not as much exposed to changes in brand value. Our hypothesis here is that financing costs in sectors which are very reliant on direct consumer contact are more likely to be positively affected by an increase of brand value than sectors which operate mostly business-to-business.

We find that an increase in brand value lowers significantly the financing costs of a company. In articular, we find that financing costs are mostly affected by the brand value, followed by enterprise value, earnings, and market cap. The effect of brand value on cost of debt is stronger than on the WACC, implying that the other target capital structure components offset the effect on cost of debt. Moreover, we find brand value to have a longer-lasting cost reduction effect on cost of debt than on the WACC. While increasing brand value increases debt, probably because of higher marketing costs and costs for building up reputation, it lowers the costs for taking on debt, which means that it makes the debt serviceable. Once Brand value is created, it constitutes an asset, which can be used as collateral for financing. Therefore, it has a netting effect with respect to the higher debt levels.

Further, we find that brand value increases the aggregate economic, social, and governance score. Looking at the single ESG pillars, we identify that brand value promotes mostly social responsibility, followed by the environmental score and governance score. In terms of effect in time we can see that brand value increases social score long term, while the environmental score doesn't change, and that the effect of brand value on governance score fades over time. From our analysis we can thus deduct that brand value has the most long-term effect on social responsibility.

Therefore, we would like to present next our approach of brand value creation and come up with answers concerning the following research questions, namely

- How does Brand Value affect financing costs of a firm?
- How can Brand Value contribute to a sustainable development of a firm?
- What role does Brand Value play for collateralization?

For this purpose we use data collected by the European Brand Institute and utilize their database in order to calculate the brand values of our sample.

The European Brand Institute analyses brand portfolios of companies in their valuation as this is more the European approach of brand management. Furthermore, they incorporate a brand specific analysis of consumer demand which varies among the different industry segments

Moreover, we can see that Brand value mostly affects sectors, which are more dependent on direct consumer relationships, rather than on business-to-business activity. Our paper is structured as follows. In chapter 2 we provide a literature review of existing analyses regarding brand value. In chapter 3 we then discuss how brands create value. Chapter 4 introduces our approach to brand valuation we use in order to conduct our analysis. In chapter 5 we describe our data and methodology we use. In chapter 6 we present our results and conclude in chapter 7.

2 Literature

Brand valuation concerns a wide variety of valuation techniques which poses some obstacles when it comes to the determination of a brand value. Unlike in other markets, where one can utilize the capital asset pricing model to determine an asset's price, there exists no market for brands. Another obstacle is the difficulty to separate brand equity from other intangible assets such as goodwill. Therefore it is often merged in the balance sheet under goodwill. Abratt and Bick (2003) review brand valuation approaches and highlight often neglected issues such as the discount rate, growth rate and useful life. They classify five different categories of common valuation approaches, which are Cost-based approaches, Market-based approaches, Economic use or income-based approaches, Formulary approaches, and Special situation approaches. While they provide a very useful overview and insights in the topic of brand valuation, they fall short of analyzing or highlighting the impact of brand value on a firm's financial statements, resp. financing capabilities.

Brand value creation has an important effect on a company's stock price. We analyze the long-term effect on the stock price of a firm as well as on other financial statement components such as enterprise value, earnings and market capitalization. However, some studies focus on the sole effect of brand capital on a firm's stock return. Belo et al. (2014) study the role of brand capital for firm valuation. They find that firms with low brand capital investment rates have higher average stock returns than firms with high brand capital investment rates. Also, they find that more brand capital intensive firms have higher average stock returns than less brand capital intensive firms. Their results show the positive effect of brand capital on a company's stock return. In contrast to their research, we provide deeper insights into the dynamics of brand capital over time as well as over other important financial statement components. Moreover, while the authors use just on advertising expenditures accounting data we incorporate a more sophisticated framework for determination of brand value.

In order to quantify the sustainable effect of brand value on a firm's development, one needs to understand the relationship between brand value and cost of capital. Fischer and Himme (2014) analyze the drivers of cost of capital by looking at the joint role of non-financial metrics such as brand equity, customer satisfaction, and corporate reputation. They find that customer satisfaction has a significant impact on cost of equity/debt while brand equity and corporate

reputation only show a negative direct association with the cost of debt. While their paper analyzes the joint effect of these variables, our paper focuses on the sole effect of brand value on the cost of capital and its distinct impact on the cost of capital. Further, we extend our analysis to the increasingly important ESG metrics, since ESG measures will be a significant determining factor for cost of capital in the future.

Cardoso and Laruccia (2020) study the question of brand valuation from an economic value added perspective as a real source of competitive advantage that can be sustained over time. They measure brand value using six different a approaches, i.e. the marginal Free cash flow contribution of a well known brand over the free cash flow stream of a generic brand, discounted at the WACC. While their approach introduces a very interesting approach to brand valuation, their approach falls short of analyzing the effect brand value creation has actually on the cost of debt and on sustainability measures of a firm. In contrast to their research we focus on exactly these effects and also identify the sectors which are significantly sensitive to brand value creation.

Another important effect brand value creation has, is one on the sustainable development of a firm. To understand the long-term effect it is important to analyze not only the effect of brand value on cost of capital, but also on sustainability metrics such as ESG. Laukannen (2020) conducts an empirical analysis about the effect of ESG ratings and corporation financing costs. Since all listed firms are required to disclose their impact from environmental, social, and governance (ESG) practice by 2030 at latest, the analysis of the impact of ESG ratings on the cost of capital is of highest importance. He finds that ESG rating has a significant negative relationship, i.e. lowering the financing costs, with cost of debt, conventional bond yield spreads and bank loan margin spreads. However, his analysis falls short of incorporating brand value as an additional factor which serves as input for lowering financing costs. Our results contribute to the understanding by how much the creation of brand value financing costs can be lowered by boosting the ESG metrics.

Cernikovaite (2015) examines how the brand value would influence economic value added (EVA) of a firm. They assess brand value and the other factors influence on economic value added using multiple linear regression model and find that financial performance of the brand is heavily dependent on market growth ability and marketing investments on the brand. She also finds that a company's brand value and profit before interest and taxes (EBIT) has a positive influence on EVA, while capital structure or weighted average cost of capital (WACC) has a negative influence on EVA. Our results indicate that the cost of debt can be significantly lowered through brand value creation, and thus, would contribute to a positive effect on a firm's EVA.

In Fischer and Himme (2017), the authors describe how brand investments contribute to the financial health of firms. Their model shows how advertising and other investments increase customer-based brand equity (CBBE) that in turn impacts financial leverage and credit spread and ultimately elevates the level of financial resources. Their results suggest that marketing and finance executives need to consider the dynamic interaction of their decision and performance variables to fully evaluate the effects of their decisions on the firm's financial health. The insights provided by the authors are a very important basis for our analysis. However, the authors focus more on the effect of policies to increase brand equity while we stress more the quantification of the impact of

brand value on key financial statement constituents and their long-term effects, as well as the identification of key industries which are more sensitive to brand value creation. Nadanyiova et al. (2019) provide a theoretical basis of the brand as well as brand value and its relation with financing. They investigate the dependence between the advertising costs and brand value in technology industry. They find that advertising costs and brand value are linearly dependent and that financing of adverts has a direct effect on brand value. The paper highlights the importance of advertisement to create brand value but doesn't go further into depth regarding the effects of brand value creation on operation-linked processes such as financing. Therefore, our framework extends and develops further the concept of brand value creation to the long-term effects on sustainability and the identification of the most affected sectors in industry.

Hrebicek (2000) describes value-based brand management as an important way to increase the brand value through value-based brand management. Value-based brand management is a holistic management approach to increase the value of the brand and, therefore, the enterprise value. It bridges the gap between the consumer markets and capital markets, it takes the point of views of all stakeholders into account, it seeks for rapid results and sustainable brand performance, it connects internal key performance indicators with financial goals, customer reviews and brand development and it is the first step to the management within network organizations (Hrebicek (2000), p.132).

Moreover, Hrebicek (2000) describes how brands drive shareholder value. Brands drive shareholder value through brand assets and brand performance. Brand assets like customer base, preference, stakeholder relations etc. contribute to a better brand performance with faster market penetration, higher price premiums, potential brand transfers, lower sales and service costs, higher loyalty etc. and therefore leading to higher shareholder value through the acceleration and increase of cash flows reduce the volatility of cash flows and increase terminal value of cash flows. (Hrebicek (2000), p.130).

Furthermore, Hrebicek (2000) stresses the problem of the often inverse relationship of brand value and brand development costs. Higher costs for the development of a brand do not necessarily represent a more valuable brand. Often less successful brands cause more brand expenditures. As a result, cost methods would depict that less successful brands with higher brand expenditures are more valuable than successful brands which are developed with less expenditure but more brand management know-how. (Hrebicek (2000), p.126). The cost approach is one of the substance-oriented brand valuation approaches. The other group is the income oriented approaches. (Hrebicek (2000), p. 124, Table 2).

One of the problems in brand valuation is posed by the reporting convention in the balance sheet since brand value is not reported separately but indistinguishable included in the position of intangible assets. Hrebicek (2003), stresses this problem. He lists the constituents of intangible assets. Intangible assets including at least human capital, customer capital, supplier capital, investor capital, process capital, location capital and innovation capital, with brand being a crossover of all those.

Hrebicek (2003) further highlights the importance that a framework for additional reporting should be consistent using standardized nomenclature, definitions and methods of calculation in order to be transparent for internal and external reporting.

3 How Brands create Value

A brand is not just a logo or a trademark but an identity that distinguishes a business and its products in the marketplace and from the competition. It is the public face of a company or region and/or its products and services and a collection of perceptions, including its people, assets, products, services and conduct. A company's brand makes it recognizable to the world and creates a lasting and therefore valuable impression on the customer's mind.

The Important Role of intellectual property rights (IPRs):

As intellectual property (IP) and intellectual property rights (IPRs) play an increasingly important role in corporate strategy, the accurate valuation of IP remains a major obstacle to their emergence as a tradable asset class. The intangible assets created through the processes of innovation represent a major share of the value of today's businesses. Despite their fundamental importance, the understanding of IP and IP rights does, however, differ widely amongst businesses large and small.

The European View:

The importance of intellectual property rights (IPR) to society and the economy has become increasingly clear in recent years. They support directly or indirectly 35% of jobs, almost 39% of the EU's GDP and 90% of external trade. According to latest studies, large companies are four times more likely to own IP rights than smaller companies - 40% of larger firms have registered rights, compared with 9% of SMEs. They also show that companies that own IP rights perform better than those that do not. Businesses that own Intellectual Property Rights generate more revenue per employee than those that do not, have more employees and pay higher salaries to their workers and that this relationship is particularly strong for SMEs.

The OECD View:

An increasing proportion of the assets owned by SMEs are non-physical or "intangible". While they are seldom recognized in company accounts, these intangibles are major contributors to business value. The assets have been demonstrated by many studies to be closely associated with high levels of growth (in both turnover/profitability and employment). Investment in intangibles is therefore desirable for individual SMEs, driving competitive differentiation and merger/acquisition activity, as well as for national economies.

Despite the recognised importance of intangible assets to the success of SMEs, these assets are of limited utility when they seek to attract external sources of financing. This holds especially true for innovative, fast-growing ventures that typically own few tangible assets, but are relatively intangible asset rich.

These intangibles-rich firms, which are most often SMEs, routinely encounter problems obtaining debt finance because they lack the tangible collateral which both banks and their regulatory environments continue to view as a necessary safeguard and alternative "exit route". Although these firms rely heavily on

external equity funding for their early stage development, the difficulties of attracting enough equity financing are compounded by the relative scarcity of complementary debt instruments at their disposal as they grow. When firms mature and the risk of failure decreases, the need to leverage their assets to secure debt financing is likely to increase as equity investments become an increasingly expensive and unattractive option.

It follows that better availability of debt-based finance should unlock more growth and enable firms to invest and innovate. While intangible assets have relevance across a range of funding types and purposes, such as grants, soft loans and equity instruments, market failures and hence the rationale for policy intervention are most apparent when it comes to debt financing.

Collateralization:

Better understanding and recognition of the connection between a business's commercial success and its use of intangibles has the potential to make lending safer rather than riskier, whether secured or unsecured. There are a number of hurdles that need to be overcome in order for debt financing collateralized by intangible assets to become more widely established.

At present, regulations designed to ensure capital adequacy do not recognise intangibles as having realisable value. This could be overcome once lenders accumulate sufficient experience to share risk data with regulators. It is therefore crucial to address data gaps in this area. Specifically, lenders are unlikely to amass sufficient loss and recovery data in the absence of government intervention, even though these data are required to satisfy regulators regarding the level of intangible value on which reliance can reasonably be placed.

Governments have recognised the importance of enabling fast-growing, intangible asset rich firms to access appropriate sources of financing, and that market failures are especially critical for these types of SMEs. In some countries, the main approach used to stimulate the flow of credit to innovative businesses has been to use guarantees that are linked to the enterprises rather than secured against their assets.

However, a steadily increasing number of countries, particularly in Asia, have gone further and set up special schemes to address the challenges associated with collateralizing intangible assets. In certain cases, "ringfenced" funds have been established by development banks; in others, combinations of subsidies and guarantees have been used to encourage private sector engagement.

However, one common feature of these examples is that they acknowledge the need for interventions that enable risk exposure to be managed. It is also evident that data gathering, sharing and analysis will be critical to success - both in operating such schemes, and in determining their effectiveness.

4 Brand valuation

Common concepts of brand valuation focus either on Cash flow valuation or the growth of earnings based upon the reinvestment rate and return on invested capital (ROIC), as mentioned in Cardoso and Laruccia (2020), and or on behavioral aspects. Cizinska and Krabec (2016) analyze behavioral-qualitative value drivers in a variable interdependent model for valuing brands. By identifying

key behavioral-qualitative factors from sales dynamics and customer satisfaction the authors determine the amount of cash flow attributable to the brand. In contrast to the common approaches, we conduct a four-step procedure in order to figure out the brand value of a company. We refer here to the approach developed by the European Brand Institute (2019).

In the first step we conduct brand strength analyses which are comparative analyses in the segment and sector of the brand or brand portfolio nationally and internationally, as well as comparative analyses across the segments and national markets, incorporating the European Brand Institute database. This includes historical development and trends, as well as the competitive situation by taking market growth and market attractiveness, and the market position by calculation of the market share, market share development, and profitability. Further, it includes the identification of target groups by determination of awareness, satisfaction, and customer loyalty, consideration of investments by taking into account communications budget, resp. the Share of Voice, and determination of the market and internationalization potential.

In the second step, we perform a financial analysis by conducting market and sector analyses in order to perform economic segment forecasts as well as to back out segment- and sector-specific risk rates, or discount rates. This includes the analysis of the market and segment in which the brand is embedded, as well as an analysis of macro- economic key figures and forecasts based on publicly available information from the World Bank, IMF, EU, etc. The forecasts and financial risk analysis is based on historical development as well as on the forecast of future developments, where we take the revenue forecasts for the brand company 5 years in detail, perpetual growth rate and company-specific risk rates or discount rates.

In the third step we determine the brand-specific cash flows and capitalization interest rate. The calculation basis of the brand-specific cash flows is comprised of the following four factors. The Brand Strength from Step 1, the brand-specific revenue forecasts from Step 2, a brand-specific demand analysis (i.e. analysis of the impact of the brand on the purchase decision- this is, for example, greater in the segment Consumer Goods than in the segment Industry) and the analysis of license analogies (Royalty Relief Method) for the target brand or brand portfolio. Based on these factors, the brand-specific cash flow, i.e. the after tax cash flow solely attributable to the brand or brand portfolio, is determined.

The brand-specific capitalization interest rate after tax, Z, is determined from the analysis of the Brand Strength from step 1 and the segment-specific or, in the further, company-specific discount rate from step 2.

In the fourth step we calculate the brand value based upon the brand-specific cash flows, BCF, by discounting the BCFs in the forecasted period, T, and taking into account the perpetual growth, g, with the brand-specific discount rate, Z:

$$BV = \sum_{t=1}^{T} \frac{BCF_t}{(1+Z)^t} + \frac{BCF_T}{(Z-g)} \frac{1}{(1+Z)^T}, \tag{1}$$

where BV is the brand value of a company, T is the valuation period (detailed planning of BCF for period T, T=5), Z is the brand-specific capitalization interest rate, BCF_t is the brand cash flow in period t after tax, BCF_T is the brand

cash flows starting from period T, and g is the nominal perpetual growth rate of brand cash flows.

5 Data & Methodology

In order to determine the effect of brand value on a firm's financing costs we use Refinitiv's yearly historical balance sheet data of the 229 most valuable brands as of 2019, from 2010 to 2019, according to European brand Institute ranking. The brand values for each of the 229 companies over the 10 years of back test is calculated according to our approach explained in section 4. Then we calculate the correlations between financial statement components and corresponding firm brand value are average values across all companies and industries. The 229 companies are spread out across 40 sectors listed in the Appendix. In order to identify sector-specific effects we aggregate all available sectors to 13 main sectors according to their similarity of activity. The 13 sectors we end up analyzing are Automobile, Financials, Food & Beverage, Healthcare, IT & Software, Logistics, Media, Metals & Mining, Telecommunication, Textiles, Apparel & Luxury Goods, Trade, Travel, and Utilities & Energy.

5.1 Identification of most affected financial statement components

First we conduct an instantaneous correlation analysis between the brand value of company $BV_i(t)$ and financial statement component $FS_j(t)$ of company i, in order to identify the financial statement components of firms which are

$$\rho_{BV_i(t),FS_{ij}(t)} = corr[BV_i(t), FS_{ij}(t)], \tag{2}$$

as well as a lagged correlation analysis between brand value of company $BV_i(t)$ and financial statement component $FS_{ij}(t+1)$ of company i:

$$\rho_{BV_i(t),FS_{ij}(t+1)} = corr[BV_i(t), FS_{ij}(t+1)]. \tag{3}$$

Once we obtain the correlation coefficients $\rho_{ij}(t,t)$ and $\rho_{ij}(t,t+1)$, we take the average value across all companies to identify the financial statement components which are most significantly impacted by a change in brand value,

$$\bar{\rho}_{BV_i(t),FS_{ij}(t)} = \frac{\sum_{n=1}^{10} corr[BV_i(t), FS_{ij}(t)]}{n} \tag{4}$$

and

$$\bar{\rho}_{BV_i(t),FS_{ij}(t+1)} = \frac{\sum_{n=1}^{10} corr[BV_i(t), FS_{ij}(t+1)]}{n}, \tag{5}$$

where n is the number of analyzed companies.

5.2 Effect of Brand Value on WACC

Next we want to test the instantaneous as well as lagged effect of the brand value on the financing costs of a firm, measured through its WACC. For this purpose we control for the most commonly known factors which affect the financing costs of a firm, which are the market cap, enterprise value, and earnings. First we

estimate the instantaneous effect of the financial statement components on the WACC,

$$WACC_i(t) = \alpha + \beta_1 Brand\_value_i(t) + \beta_2 MarketCap_i(t) + \\ + \beta_3 Enterprise\_value_i(t) + \beta_4 EBITDA_i(t). \quad (6)$$

Next we estimate the lagged effect of the financial statement components on the WACC at t+1,

$$WACC_i(t+1) = \alpha + \beta_1 Brand\_value_i(t) + \beta_2 MarketCap_i(t) + \\ + \beta_3 Enterprise\_value_i(t) + \beta_4 EBITDA_i(t). \quad (7)$$

The reason why we control for the market cap, enterprise value, and earnings, is that these are the financial statement components we find to have the strongest influence on the WACC. We report these findings in Table 1.

6 Results

Table 1 reports the correlations between the brand value of a company and its financial statement components in the same year, as well as one year later.

	$\bar{\rho}_{BV_i(t),FS_j(t)}$	$\bar{\rho}_{BV_i(t),FS_j(t+1)}$
Pre-tax cost of debt	-0.17	-0.06
After-tax cost of debt	-0.16	-0.04
Market Cap EUR [mln]	0.26	0.48
Total Debt incl leases EUR [mln]	0.36	0.22
Total Debt excl leases EUR [mln]	0.33	0.26
Cash EUR [mln]	0.17	0.14
Enterprise Value EUR [mln]	0.32	0.44
Book Debt to capital ratio	0.11	0.02
Book Debt to Equity Ratio	0.11	-0.02
Stock price EUR	0.27	0.42
WACC	-0.06	0.10
Cost of equity	-0.05	0.04
Return on Equity	0.02	0.14
Net Profit Margin EUR [mln]	0.05	0.19
Pre-tax Operating Margin	0.01	0.17
Effective Tax Rate	-0.12	-0.10
Net Income EUR [mln]	0.22	0.31
Operating Income EUR	0.23	0.39
Revenues EUR	0.40	0.45
EBIT EUR	0.35	0.44
EBITDA EUR	0.41	0.47
Environmental Pillar Score	0.13	0.13
Social Pillar Score	0.22	0.25
Governance Pillar Score	0.11	0.07
ESG	0.07	0.12
DEBT / Total Equity	0.12	0.00
WACC Tax Rate	-0.14	-0.10

Table 1: Correlation results for $\bar{\rho}_{BV_i(t),FS_j(t)}$ and $\bar{\rho}_{BV_i(t),FS_j(t+1)}$ from 2010-2019.

We find five key findings in our analysis. First, the results indicate a strong support for our hypothesis that brand value lowers a firm's financing costs. The correlation between brand value and the cost of debt found to be negative in the same year as well as in the subsequent year. This means that increasing the brand value allows a company to raise capital at a cheaper cost in the same year. Markets seem to price in brand value creation instantaneously, which goes conform with the financial market hypothesis. We can identify several significant positive sensitivities in other financial statement components too such as market cap, total debt, enterprise value, the stock price revenues, and earnings.

Second, we find brand value to behave a stronger impact on cost of debt than on the WACC. Since cost of debt is one component of the target capital structure, this implies that the other factors determining the WACC are actually offsetting this effect since the correlation between brand value and the WACC is less than between brand value and cost of debt. Moreover, we can see that brand value has a more sustainable effect on the cost of debt than on the WACC.

Third, we can see a positive relationship between brand value and the aggregated ESG, including its pillars, measured through the the environmental, social, and governance score. We further find that brand value impacts most the

social pillar score, followed by the environmental and governance score. This positive relationship proves that creating brand value has an influence on a company's policy measures, which promote social responsible behavior of the company towards society and its stakeholders.

Fourth, we find evidence for significant long-term effects of brand value creation in the components market cap, enterprise value, operating income, revenues, earnings, as well as the ESG scores. An increase in the time-lagged components implies a sustainable effect of brand value on these components. While for some components, the effect of an increasing brand value dissipates after one year, the effect prevails, and even amplifies for the above-mentioned components. This effect leads to a strong feedback effect in operational activity and earnings and thus, indicates a sustainable development of the firm.

Fifth, the effect of brand value on debt needs an in-depth analysis. We can see that an increase of brand value leads to an increase of debt levels, resp. vice versa. The reasons for that might be manifold. One straight forward explanation could be that due to a more marketing activity the companies need more money to finance that and take on more debt. But that explanation might be too blatant. What might be a causal reason for increased debt levels might be that an increased marketing activity increases public outreach and exposure, i.e. increases sales, which causes in turn an increase operational activity, which again, in turn requires more capital which is financed by debt. This effect is exactly what we can see in the positive effects of brand value on higher operating and net income, revenue, and earnings. However, the elevated debt levels are not of concern due to the negative effect of brand value on the cost of debt. Since an increase of brand value reduces financing costs, this new debt becomes serviceable.

We are aware that this doesn't state a causal relationship. It is valid to say that the relationship may rest on a recursive feedback effect. On the one hand, creating brand value creates the above observed financial statement components effects, on the other hand, operational activities causing the development of these components might comprise or lead to creation of brand value, i.e. a rise in debt might be used for brand value creation purposes. However, due to the homogeneous sensitivity of the affected set of financial statement components, the results suggests a causal direction of brand value affecting the financial statement components.

6.1 Sector analysis

In our second analysis we detect the sectors which are most sensitive to changes in brand value. Table 2 reports the sectors in which we find a significant reduction of the WACC by the Brand Value.

- Automobile
- Financials***
- Food & Beverage
- Healthcare***
- IT & Software
- Logistics***
- Media
- Metals & Mining
- Telecommunication***
- Textiles, Apparel & Luxury Goods***
- Trade
- Travel***
- Utilities & Energy

Table 2: Effect of brand value on company WACCs in each sector. Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.10 ' ' 1.

We can see that Brand value mostly affects sectors which are more dependent on individual consumer behavior, rather than on corporate business structures, than other sectors. These sectors are Financials, Healthcare, Logistics, Telecommunication, Textiles, Apparel & Luxury Goods, and Travel. In the Financial sector, where trust is a key component for a successful existence, a strong brand is important to build up consumer confidence. In Healthcare, trust plays a similar important role, especially when it comes to health. Strong brands suggest that one can entrust someone's life to the corresponding healthcare provider, respectively can trust the healthcare provider with respect to its financial coverage. Logistics and Telecommunication sectors are reliant on their customer's beliefs and satisfaction regarding their service in terms of speed, accuracy, punctuality, coverage, and reliability. For Apparel & Luxury Goods and Travel, brand value constitutes an important factor with respect to quality and status. Therefore, brand value plays a more important role in these sectors than in sectors which operate mainly business-to-business, such as Metals & Mining, and Utilities & Energy. The only intriguing results we encounter is that brand value creation doesn't seem to have a significant impact on the financing costs in the Automobile sector. The reasons for that might lie in the fact that the main cost drivers for the automobile sector are labor and raw materials which are considered to be fixed costs. Therefore, the financing costs to cover these fixed costs are not sensitive to changes in brand value.

7 Conclusion

Financing is crucial for the operational activity of a company. Most financing activities are conducted via external capital. The costs for financing these activities are usually measured through the weighted average cost of capital (WACC), which takes into account the existing target capital structure and shows through which channels the company is receiving its financing and how much it has to pay for it. Since most European companies are financed through debt capital, which is one component of the WACC, a reduction in financing costs would have a significant positive impact on long-term borrowing capacities of the whole economy. We conduct an analysis which tests the effect of brand

value creation on the financing costs of a firm, as well as on other financial statement components. In particular, we focus on the cost of debt financing channel and find a stronger cost-reduction effect of brand value on cost of debt than on the WACC. This implies that other target capital structure components offset the cost-reduction effect of brand value on cost of debt. Moreover, the effect appears to be more sustainable than through other financing channels. Our findings support the hypothesis that an increase in brand value lowers the financing costs of a firm. Brand value correlates positively with several important performance indicators like revenues, earnings, net income, return on equity, the stock price, enterprise value, and other financial ratios. The positive impact of Brand on cost of debt and financing is interesting because strong brands prove to enable better equity financing and also better and cheaper financing with debt capital.

Further, we find that brand value elevates debt levels due to increased business operating activities. However, since the increase in brand value lowers the financing costs at the same time, this debt becomes serviceable and thus, contributes to a sustainable long-term development of the company. Moreover, in order to analyze the sustainable effect of brand value creation we investigate the long-term effect of brand value on the ESG pillar scores. Our results show that brand value correlates positively with the social pillar score of the aggregate ESG score, as well as with the environmental and governance pillar score. We find evidence for a positive short-term effect between brand value and all three ESG pillars, while a long-term effect is only detectable in the social pillar score. This implies that brand value enhances social responsible behavior of a company towards society, and its stakeholders in general.

The key-takeaways are that brand value reduces the cost of debt, increases revenue, income, earnings, and the stock price, and promotes social responsible behavior. Increasing Brand value increases debt, probably because of higher Marketing costs and costs for building up reputation, but since it lowers the costs for taking on debt, it is serviceable debt. Through the significant reduction of financing costs, brand value serves as an asset which can be collateralized and serve as collateral for financing purposes.

There is a powerful reason to believe that change is inevitable which implies a substantial growth potential of the intangible economy. Intangibles have long surpassed tangibles as a percentage of GDP and are increasing in all developed countries. Beyond this, investment in brands may increasingly separate leading high profit companies from laggard companies. Our data currently allows confirmation of this and the conclusion that companies leading in brand investment do perform better. This raises potential for several further questions: Would banks give lower interest rates if the brand is stronger? Which information booth banks need to integrate brands value into their credit rating analysis? New brand directed financing or the increased securitization of brands could increase the level of financing available as well as better direct it.

Further research also has to focus on the effect of an increased brand value on the financing mix, i.e. what type of financing sources are easier to access with an increased brand value or better reputation.

Appendix

- Aerospace & Defense
- Air Freight & Logistics
- Automobiles
- Banks
- Beverages
- Building products
- Capital Markets
- Chemicals
- Communications Equipment
- Consumer Finance
- Diversified Financial Services
- Diversified Telecommunication Services
- Electric Utilities
- Electronic Equipment, Instruments & Components
- Entertainment
- Food & Staples Retailing
- Food Products
- Health Care Equipment & Supplies
- Health Care Providers & Services
- Hotel, Restaurant & Leisure
- Household Durables
- Household Products
- Industrial Conglomerates
- Industry Group
- Insurance
- Interactive Media & Services
- Internet & Direct Marketing Retail
- IT Services
- Media
- Metals & Mining
- Multiline-Retail
- Multi-Utilities
- Oil, Gas & Consumable Fuels
- Paper & Forest Products
- Personal Products
- Pharmaceuticals
- Professional Services
- Semiconductors& Semiconductor Equipment
- Software
- Special Retail
- Technology Hardware Storage & Peripherals
- Textiles, Apparel & Luxury Goods
- Tobacco
- Trading Companies & Distributors
- Wireless Telecommunication Services

Table 3: List of all 40 Refinitiv sectors.

References

Abratt, R. and Bick, G., 2003. Valuing brands and brand equity: Methods and processes. Journal of applied management and entrepreneurship, 8(1), pp.21-39.

Belo, F., Lin, X., Vitorino, M.A., 2014, Brand capital and firm value, *Review of Economic Dynamics, Volume 17, Issue 1*, pp. 150-169, ISSN 1094-2025, https://doi.org/10.1016/j.red.2013.05.001.

Cardoso, Luiz Gustavo Mauro and Laruccia, Mauro Maia, The Quest for Brand Value, 2006, CLADEA, Available at SSRN: https://ssrn.com/abstract=1337325

Cernikovaite, Miglė Eleonora, 2015, Brand value impact on company's economic value added evaluation model, *Contemporary research on organization management and administration. 2015, Vol. 3, No. 1*, pp. 77-84. ISSN 2335-7959.

Cizinska, R., and Krabec, T., 2016, Behavioural-qualitative value drivers in a variable interdependent model for valuing brands. International Advances in Economic Research, 22(1), 105-106. doi:http://dx.doi.org/10.1007/s11294-015-9554-8

European Brand Institute, 2019, Brand Valuation Methods, Factsheet Valuation & Strategy, EBI-Global GmbH, pp.1-21.

Fischer, M., and Himme, A., 2017, The financial brand value chain: How brand investments contribute to the financial health of firms, International Journal of Research in Marketing, Volume 34, Issue 1, pp. 137-153, ISSN 0167-8116, https://doi.org/10.1016/j.ijresmar.2016.05.004.

Fischer, M., and Himme, A., 2014, Drivers of the cost of capital: The joint role of non-financial metrics, *International Journal of Research in Marketing*, Volume 31, Issue 2, pp. 224-238, ISSN 0167-8116, https://doi.org/10.1016/j.ijresmar.2013.10.006.

Hrebicek, Gerhard, 2000, Wertorientiertes Markenmanagement, Wertorientiertes Management, ed. A. Wagenhofer and G. Hrebicek, Stuttgart: Schäffer-Poeschl, pp. 117-144.

Hrebicek, Gerhard, 2003, Corporate Governance als Brücke zwischen Anleger und Management, Handbuch Corporate Governance, ed. G. Hrebicek and M. Fichtinger, Vienna: self-publishing company, pp. 47-61.

Laukkanen, Hermanni Samu Kalevi, 2020, ESG Rating and Corporation Financing Costs: Evidence from Nordic Countries, University of Vaasa, school of Accounting and Finance, Master Thesis, DOI: http://urn.fi/URN:NBN:fi-fe2020120199013 (Last accessed: Oct 26, 2021)

Nadanyiova, M., Kliestikova, J., and Olah J., 2019, Financing of adverts and its impact on the brand value, *Littera Scripta, 2019, Volume 12, Issue 2*, pp.96-107.