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Does the Stock Market Fully Value Intangibles? - Brands and Global Equity Prices

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Abstract
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DOES THE STOCK MARKET FULLY VALUE INTANGIBLES? – BRANDS AND GLOBAL EQUITY PRICES

PURPOSE OF THE STUDY

The purpose of the study is to examine the relationship between brands and stock returns. I study the historical stock performance of global brand stocks, and test whether strong brands outperform the market index. A company is considered a brand stock if it is included in the annually published Interbrand Global Top 100 Brands ranking list. I also investigate whether numeric brand values assigned by Interbrand have an effect on the brand portfolio return.

DATA

The data set consists of all the publicly listed brand owner firms included in the Interbrand Global Top 100 Brands ranking list during 2001-2009. The monthly returns are calculated for a market value-, equal- and brand value-weighted global brand portfolio and analyzed statistically with the CAPM and Fama-French three factor model. The sample is then split into North America, Europe and Asia portfolios to uncover geographical performance differences.

RESULTS

The results suggest that brand stocks behave differently in North America than in Europe and Asia. The North America brand portfolio generates a significantly positive risk-adjusted alpha, which holds for different portfolio weighting methods and controlling for outliers. This result is in line with prior research results. However, results for the Europe and Asia portfolios lack significance and no evidence for outperformance is found. In addition, I find that brand value-weighting does not enhance excess returns, but on the contrary, diminishes the alpha. Findings suggest that numeric brand values may not be accurate after all, and that the stock market seems to assimilate brands better in Europe and Asia than in North America. Thus, future research should address the reasons causing excess returns of American brands.

KEYWORDS: Brand, brand value, brand ranking list, brand stocks, intangible assets, global equity prices, excess returns

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AINEETTOMIEN HYÖDYKKEIDEN ARVOSTUS OSAKEMARKKINOILLA – BRÄNDIT JA GLOBAALIT OSAKKEET

TUTKIELMAN TAVOITTEET

Tutkielman tarkoituksena on tutkia brändin vaikutusta osakkeen kehitykseen. Tutkielma pyrkii selvittämään, ovatko niin sanotut brändiosakkeet tuottaneet historiallisesti markkinaindeksiä paremmin. Brändiosakkeet ovat yrityksiä, joiden omistama brändi on yltänyt vuosittain ilmestyvälle Interbrandin Global Top 100 Brands –rankinglistalle. Tutkielmassa testataan myös Interbrandin määrittämien numeeristen brändiarvojen vaikutusta brändiportfolion tuottoon.

LÄHDEAINEISTO

Aineisto käsittää kaikki pörssilistatut yritykset, joiden omistama brändi esiintyy Interbrandin Global Top 100 Brands –rankinglistalla vuosien 2001-2009 aikana. Brändiportfolion kuukausittaisia tuottoja, painotettuna markkina-arvoilla, samansuuruisilla painoilla sekä brändiarvoilla, testataan tilastollisesti CAPM ja Fama-French three factor regressiomalleilla. Lisäksi aineisto jaetaan erikseen Pohjois-Amerikka-, Eurooppa- ja Aasia-portfolioihin, jotta nähdään mikäli brändiosakkeet tuottavat eri tavalla eri mantereilla.

TULOKSET

Tuloksista käy ilmi, että pohjoisamerikkalaiset brändit ovat tuottaneet historiallisesti paremmin kuin osakemarkkinat keskimäärin. Tulos vahvistaa oletetun hypoteesin ja aikaisempien tutkimusten tuloksen. Eurooppa- ja Aasia-portfolioiden tulokset ovat tilastollisesti epämerkittäviä, ja eivät siten tue hypoteesia. Lisäksi tulokset kertovat, että brändiarvojen käyttäminen painoina portfoliossa heikentää ylituottoja. Tämä tulos vähentää numeeristen brändiarvojen uskottavuutta. Tutkielman johtopäätös on, että brändiosakkeet tuottavat eri tavalla Euroopassa ja Aasiassa kuin Pohjois-Amerikassa. Tulokset viittaavat siihen, että Pohjois-Amerikan rahoitusmarkkinat ylenkatsovat brändeihin liittyvää tuottopotentiaalia enemmän kuin Euroopan ja Aasian rahoitusmarkkinat. Tulevaisuudessa olisi tärkeä tutkia, miksi pohjoisamerikkalaiset brändiosakkeet tuottavat keskimääräistä paremmin.

AVAINSANAT: Brändi, brändin arvo, brändi ranking lista, brändiosake, aineettomat hyödykkeet, kansainväliset osakemarkkinat, ylituotto

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1 Introduction

1.1 Background and motivation for the study

Intangible assets and brands in particular have become increasingly important in the corporate world during the past decade. It has been argued that intangible assets of a firm may account for up to 75% of a firm's market value (Haigh et al., 2004). The power of brands was first recognized by Aaker (1991) who stated that intangible brand properties such as customer brand-name awareness, brand loyalty, perceived brand quality and favorable brand symbolism and associations form the concept of brand equity, which creates competitive advantage and hence provides future earnings streams. Today the importance of branding as a marketing action is widely accepted in both academia and the corporate world. Brands are built, maintained and used to create a definite competitive advantage in the marketplace. Earlier, brands were considered to be especially vital for consumer goods, but lately also corporate brands have acquired more attention. Thus, brands are seen as an advantage also in a business-to-business environment where a well-known company is seen as a trusted partner.

Researchers have defined the concept of brand in several different ways. However, they all conclude that a brand is the identity of a firm and its products, that has a positive effect on the competitiveness of the firm or its products. Kotler et al. (2004) define a brand as a "name, term, sign, symbol or design or combinations of them which is intended to identify the goods or services of one seller to differentiate them from those of competitors". Above all, brand is a concept of marketing and due to its intangible nature, it is challenging to measure, quantify and understand the financial consequences of branding actions of a firm. Several researchers have argued that successful branding leads to tangible outcomes since firms with strong brand equity can easily expand demand for their products and services through internationalization and brand extensions (see e.g. Aaker, 1991 and Srivastava et al., 1998). Furthermore, brands as recognized trademarks provide legal protection for the firm owning the brand against counterfeit products. Additionally, a brand creates sustainable value for a firm by providing the firm the chance to establish premium prices for its goods and gives flexibility to alter these prices without losing customers (Haigh et al., 2004).

The main reason why the value of brands and their significance is often disregarded in finance is due to the fact that International Accounting Standards forbid firms to recognize internally created brands on their balance sheets (IAS 38, 36). To the contrary, brands obtained through

an acquisition are recognized as assets on the balance sheet at the purchase date's fair value according to the purchase method of IFRS. The purchase price exceeding the book value of assets is considered as goodwill. This drawback has led to financial statements' inability to accurately reflect the financial positions of firms since not all intangible assets are included in the balance sheet. This is further proved by the widening gap of book values stated in financial statements and market values determined by the stock market (e.g. Lev et al., 1999).

During the past few decades brand consulting firms such as Interbrand, Brand Finance and Millward Brown have emerged to answer to the challenge of accurate brand valuation. These consultancies have become known particularly for publishing brand ranking lists annually. These ranking lists are based on the quantitative brand value that the consultancies assign to each brand. One of the most renowned brand consultancies is Interbrand, which was founded in 1974. Interbrand has been valuating and ranking American brands since 1984 and global brands starting from 1999 and is considered as the market leader of brand valuation due to its long experience. In 2010, the best ranked global brand, Coca-Cola, had a brand value of $70 billion representing 47% of the firm's $149 billion market value (22.2.2011).

The accuracy of the financial brand values estimated by brand consultancies has been discussed in the corporate world often. This has lead researchers to study the value relevance of these brand rankings. Barth et al. (1998a) discovered that brand valuations published by an independent agency are relevant and reflected in share prices. In addition, they found that brand value is positively associated with advertising expenses, operating margins and market share. Moreover, Kerin et al. (1998) find a significant positive relationship between brand values and market-to-book ratios of American consumer goods companies included in the Financial World magazine's "The World's Most Valuable Brands" ranking list during 1995 and 1996.

Furthermore, several studies have explored the relationship between intangible assets and stock market performance. Research and development as well as advertising expenditures have been proved to be behind abnormal stock returns (e.g. Lev et al., 1996 and Chan et al., 2001). Excess returns are caused also by patents (Deng et al., 1999) and software developments (Aboody et al., 1998). Edmans (2011) concludes that firms with high level of employee satisfaction generate superior long-term returns after controlling for industries, risk and a set of observable firm characteristics. Finally, Madden et al. (2006) find that strong American brands deliver greater long-term stock returns with less risk compared to a relevant

benchmark. Hence, it seems that the market fails to incorporate intangible assets fully into stock valuations even though the existence of intangible assets is well known.

However, the financial benefits of building brand equity are yet partly unknown and need to be studied further. Little is known about how the stock market values the capability of market-based assets such as brands to improve current and future market performance (Srivastava et al., 1998). The only study concerning the stock performance of brand owners ("brand stocks") is the study by Madden et al. (2006), which covers only American brands during the time period 1994-2001. Hence, the research of stock market performance of brand stocks needs to be updated and also other than American brands, such as European and Asian brands, need to be studied in order to understand whether brand owner firms in different continents perform similarly.

1.2 Research problem

The aim of this thesis is to study the relationship between strong brands and stock returns. In my research I attempt to answer the following research question:

"Do strong brands i.e. brands included in the Interbrand Global Top 100 Brands ranking list outperform the stock market in the long run?"

If as hypothesized, excess returns are generated by strong brands, I further aim to answer the following additional questions:

"Do the hypothesized excess returns caused by brand value and brand ranking list inclusion disappear eventually as the market learns about the relevance of brand value and brand rankings?"

And

"Does brand value-weighting of portfolio returns enhance the excess returns; in other words, do owners of particularly strong brands with the highest brand values earn higher excess returns than owners of weaker brands with smaller brand values, which drives up the overall brand portfolio return?"

This thesis contributes to existing research on the relationship between brands and stock market performance by using a global brand ranking list as a primary data source for the past

nine years, which has not been done before. Hence, I test the explanatory power of Madden et al.'s (2006) research done on top American brands during 1994-2001 on global brands during 2001-2009. Following Madden et al. (2006), I use the brand ranking lists published by Interbrand during the past nine years to avoid opportunistic bias. Selecting stocks from a brand ranking list, allows me to analyze firms with proven emphasis on branding actions, since Interbrand's brand ranking list distinguishes companies according to their brand equity building. I further expand Madden et al.'s (2006) research by studying global, North American, European and Asian brand portfolios separately. Moreover, I test whether excess returns disappear eventually following Edmans' (2011) study on employee satisfaction. In addition, following Edmans (2011) I test how newcomers on the brand ranking list perform and whether the performance of the most strongest brands that remain on the list during the entire study period differ from the original brand portfolio. Finally, I use three different portfolio weighting methods, market value-, equal- and brand value-weighting, instead of solely traditional market value-weighting, to attain robust results.

1.3 Empirical study

The relationship between brands and stock market performance is studied empirically by univariate analysis of raw portfolio returns and statistically by regression analysis. I form a brand portfolio annually during nine years according to Interbrand's Best Global Brands ranking list. Monthly excess returns for the market value-, equal- and brand value-weighted portfolios are compared to the risk-free rate, the market portfolio return and an industry-matched benchmark portfolio. After running the traditional CAPM regression, the brand portfolio returns are adjusted for risk with the Fama-French three factor model, which tests for the size and value anomalies. The robustness of the results is tested by forming two additional portfolios of the sample, testing for longevity of excess returns and forming a winsorized portfolio, where the best and worst performing stocks are eliminated from the sample to ensure that they do not drive the statistical results.

This study suffers from a few limitations out of which the most relevant is the omitted variable bias. This refers to the situation where an additional variable, which is not included in the risk model, causes the results instead of the explanatory variable (the brand in this case). In addition, the sample size in this thesis is rather small, consisting of approximately 80 stocks per year. This naturally decreases the credibility of the statistical regression results.

1.4 Results

I find that American brand stocks outperform the market index after controlling for risk factors, portfolio weighting methods and outliers. On the contrary, results for European and Asian brand stocks lack significance, which causes the main hypothesis to be rejected. The excess returns do not seem to disappear eventually as the alphas remain positive throughout the first five years of the study period. Furthermore, I conclude that brand value-weighting does not enhance excess returns on average, but instead tends to decrease the alphas. Results suggest that brands are assimilated differently by the stock market in North America than in Europe and Asia.

1.5 Structure of the study

This thesis is structured in the following way. Section 2 covers the main concepts and prior research from the fields of marketing and finance related to intangible assets and especially brands, and aims to link these two research areas together. In section 3 the hypotheses are presented whereas Section 4 discusses the data and methods used. Finally, section 5 presents the core analysis and results. Robustness tests are discussed in section 6 and finally section 7 concludes and provides ideas for further research.

2 Prior research and theoretical motivation for why brands might be related to excess returns

This section is divided into four parts comprising of background information about brands and prior finance research relating to brands and other intangibles. The first subsection presents the definitions for intangible assets and brands, and in addition introduces brand related concepts relevant for the thesis. The second subsection discusses potential reasons for why brands might be related to excess returns. After this, the most relevant prior research is presented and finally the fourth subsection discusses brand investing, which links the thesis into practical life.

2.1 Brands and essential concepts

In this subsection I discuss the most essential concepts related to brands, starting from defying an intangible asset and moving on to defying a brand. After this I present two brand equity models that aim to demonstrate the link between brands and creation of shareholder value. Finally, I move on to discussing the financial nature of brands and briefly introduce the core idea of brand valuation.

2.1.1 Definition of an intangible asset

An asset is broadly defined as any physical, organizational or human attribute that enables a firm to generate and execute strategies that enhance its efficiency and effectiveness in the marketplace (Barney, 1991). According to International Accounting Standards, an asset is a resource controlled by a firm as a result of past events and which is expected to generate economic benefits in the future (IAS 38). Assets can be either tangible or intangible, included in the balance sheet or not, and internally or externally created (Constantin et al., 1994). However, the value of an asset, whether tangible or intangible, is realized, directly or indirectly, in the external marketplace. Srivastava et al., (1998) conclude that in order to create value, an asset has to be firstly, convertible to exploit an opportunity and/or to prevent threat, secondly possessed only by a few firms, thirdly difficult to imitate by competitors and

finally it should not have perfect substitutes, which guarantees that competitors cannot create similar assets.

An intangible asset can be defined as an identifiable, non-monetary asset lacking physical substance (Troberg, 2007). Examples of intangible assets are brands, technology, customer loyalty, human capital and employees' commitment (Barth et al., 1998). Wild et al. (2003) on the other hand have categorized intangible assets in the following way:

- Goodwill
- Patents, Copyrights, Tradenames and Trademarks
- Leases, Leaseholds and Leasehold Improvements
- Exploration Rights and Natural Resource Development Costs
- Special Formulas, Processes, Technologies and Designs
- Licenses, Franchises, Memberships and Customer Lists

IAS 38 has set three critical requirements for intangible assets, which are identifiability, control over a resource and existence of future economic benefits. If these criteria are not met, an asset cannot be recognized on the balance sheet, which is the case for internally created brands for instance. Unlike the financial values of tangible assets, which are rather simple to determine, the future tangible benefits of intangible assets face high uncertainty. Despite the vague nature of intangible assets, they represent today one of the firm's most valuable assets (Wild et al., 2003).

In accounting, IFRS 3 states that only acquired intangible assets are recognized on the balance sheet whereas internally generated intangible assets are not. The primary reason behind excluding these intangible assets on the balance sheet is the difficulty of measuring their financial values reliably. To solve this problem, several brand focused consultancies have emerged during the past few decades who have attempted to come up with credible brand valuation models. However, until today, not one of the models is recognized as an official model by the International Accounting Standards.

2.1.2 Definition of a brand

Probably the most remarkable intangibles assets are brands due to their undeniable power that affects consumer behavior and therefore also the financial performance of firms. For years, marketing scholars have recognized the significance of cultivating and maintaining brand presence and awareness to evoke consumers to develop loyalty to a company's products (Kotler, 2000). Brand related factors such as brand advertising, brand age and brand entry order have been argued to form a significant proportion of a company's intangible assets. For instance, Simon et al. (1993) state that over 80% of the intangible asset value of food-processing companies is formed by brands.

In the early days, brands were known primarily as logos. However, today the concept of brand is associated with several different matters. Kotler et al. (2004) state the meaning of a brand in the following way:

"A brand is a name, term, sign, symbol or design or combinations of them which is intended to identify the goods or services of one seller to differentiate them from those of competitors"

Other definitions of the brand include the following:

"A distinctive name with which a consumer has a high level of awareness and a willingness to pay either a higher price than on average or make a higher than otherwise purchase frequency" Barth et al. (1998).

and

"Brand asset is a name and/or symbol (a design, a trademark and a logo) used to uniquely identify the goods or services of a seller from those of its competitors, with a view to obtaining wealth in excess of that obtainable without a brand" Tollington (2002).

Kotler (2000) states, that the most enduring aspects of a brand are its values, culture and personality. These can be thought of as the "brand DNA", the innermost idea of the brand. To conclude, brands encompass tangible and intangible attributes that appropriately differentiate products (Murphy, 1990). These attributes cause consumers to either pay a premium for the branded product or service or alternatively purchase the product or service more frequently.

2.1.3 Brand equity models

In this subsection, I first discuss the current relationship between marketing and finance, after which I briefly present the concept of shareholder value, made famous by Alfred Rappaport in 1986. Then I introduce two brand equity models, one by Aaker (1994) and the other by Srivastava et al. (1998). Additionally, I elaborate how these models have been further exploited in other studies.

Traditionally, the purpose of marketing activities has been seen as increasing the success of products in the marketplace. The financial results of marketing efforts have been measured by the increase of sales volume, market share and gross margin. However, recently the top management of firms has set the enhancement of shareholder returns as a goal also for marketers. Measuring the net present value of cash flows has become an additional indicator of the effectiveness of marketing actions. (Day et al., 1988.) Hence, marketers have realized that assets like the customer base and distribution channels have to be effectively transformed into returns for shareholders (Hunt et al., 1995). Altogether, organizations should understand the financial consequences of their marketing actions.

Aaker et al. (1994) argue interestingly that the weak link between finance and marketing causes corporate funding to shun marketing departments. Marketing managers in general find it difficult to justify the need for funding since the results of marketing actions are difficult to plausibly quantify. This results in limited investment in marketing and therefore might restrict the creation of shareholder value. This argument is supported by Srivastava et al. (1998) who point out, that marketing expenditures, unlike other capital expenditure, cannot be depreciated over time, but have to be expensed, i.e. paid immediately. This causes marketing related assets to be undervalued and not highly appreciated inside organizations.

The concept of shareholder value was first introduced by Alfred Rappaport in 1986. He states that a company creates value for its shareholders when the shareholder return exceeds the required return on equity. In other words, shareholders' money should be used to earn a higher return than what shareholders can earn by themselves by investing in other assets carrying the same amount of risk. The return to shareholders or shareholder value is formed out of two components; the present value of cash flows during the growth period and the long-term terminal value of the business at the end of the growth period. This valuation method used to determine firm value is known as the Discounted Cash Flow (DCF) model, which is one of

the most common models used in practice in the financial world (Palepu et al., 2007). The growth period is a period of time for which future cash flows can be estimated reliably enough, usually ten years at the maximum. However, in practice equity analysts and other finance professionals are able to estimate cash flows for a maximum of five years due to the difficulty of forecasting the future state of the economy. Hence, a significant proportion of firm value rests on the future growth potential of the firm and different risk factors that are associated to the future performance.

Srivastava et al. (1998) introduce a set of principles that create shareholder value. First of all, cash flows should be created as quickly as possible. The acceleration of cash flows is important because the risk involved and the time value of money decrease the value of later cash flows. Secondly, cash flow has to be increased. This may result either from higher revenues or from lower costs, working capital and fixed investments. Thirdly, the risk associated with cash flows should be minimized. This can be reached by decreasing the volatility and vulnerability of cash flows, which leads to stable and predictable cash flows. In addition, lower risk results in a lower cost of capital or discount rate, which is used in calculating the present value of future cash flows. Finally, the long-term residual value of business activities should be enhanced with for instance investing in high customer loyalty and expanding the customer base or product range.

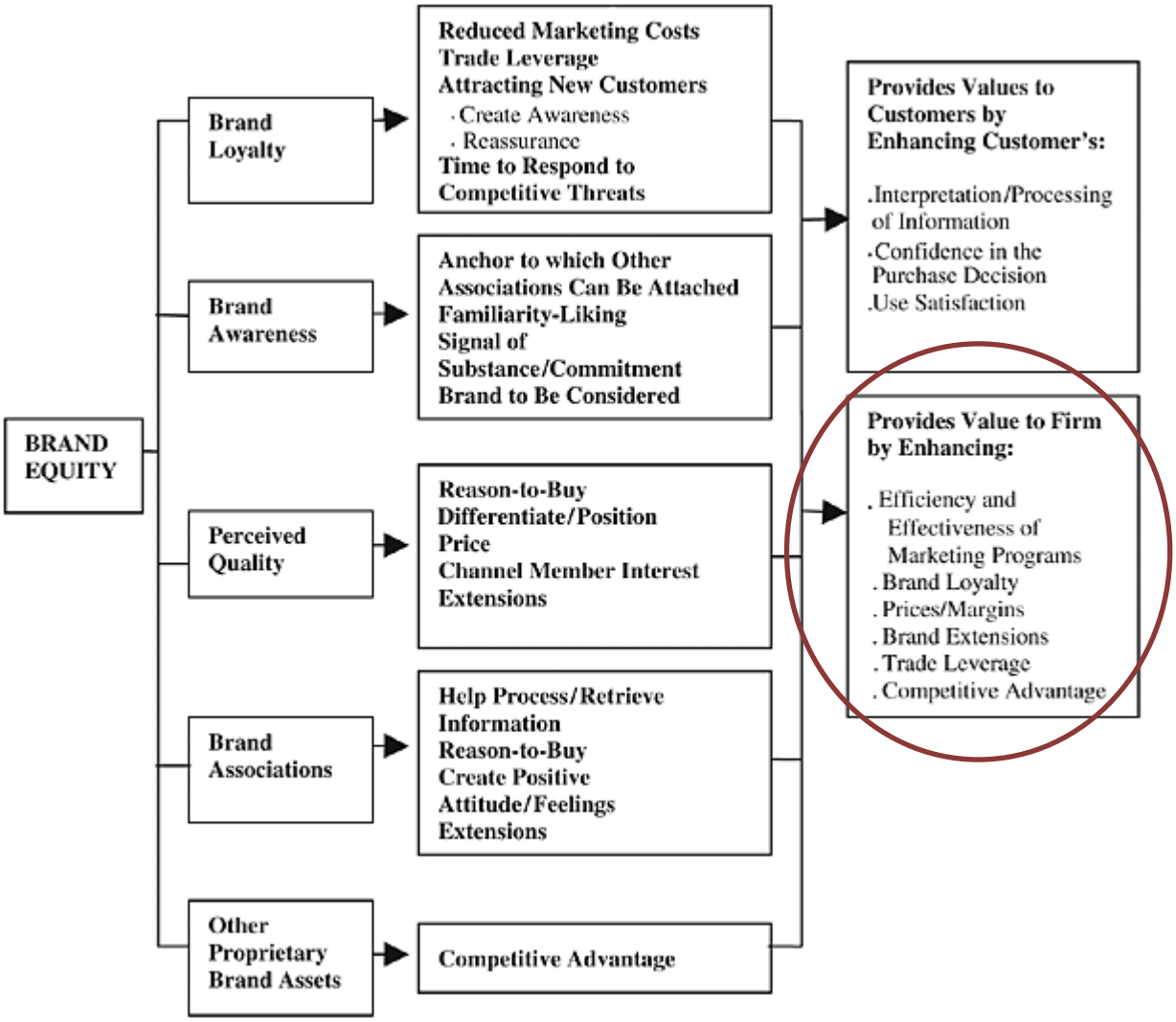
In marketing literature the term brand equity refers to the ultimate strength of a brand that leads to tangible value generated by all the branding actions a firm engages in. Keller (1993) defines brand equity as marketing effects uniquely attributable to a brand. Examples of branding actions are creating brand awareness through advertising and other means of promotion, investing in the high quality of products and services and emphasizing customer satisfaction through a successful customer experience. During the past two decades marketing researchers have attempted to construct a clear link between marketing actions, specifically those related to branding, and finance. Interest towards and motivation for brand equity research stems ultimately from the need to estimate the value of brands for accounting, merger, acquisition and divestiture purposes as well as to improve the productivity of marketing (Keller, 1993). Thus, economic aspects are essential also in brand research.

According to Aaker (1991) brand equity creates competitive advantage, which again leads to future revenue streams. Aaker's (1995) brand equity model below demonstrates the tangible outcomes created by brand equity and how they further lead to enhanced firm value. Brand

equity is formed out of five attributes: Brand loyalty, brand awareness, perceived quality, brand associations and other proprietary brand assets. Each of these lead to clear tangible outcomes for instance reduced marketing costs, new customers, commitment to brand, price premiums, brand extensions and overall competitive advantage. In the end of the chain, financial advantages are manifested as efficiency and effectiveness of marketing efforts, higher margins due to premium pricing and high volume and sales increase generated by brand extensions.

Figure 1: Aaker's (1995) Brand equity model

The Figure below presents the brand equity model of Aaker (1995) where brand equity is formed out of five attributes: Brand loyalty, brand awareness, perceived quality, brand associations and other proprietary brand assets. These attributes create tangible outcomes for a firm, which are presented in the middle column of the model. Finally, the tangible outcomes transform into value for customers and for shareholders. The red circle emphasizes the creation of shareholder value, which is essential in this thesis.



(Aaker, 1995 in his book "Building Strong Brands")

Aaker's (1995) brand equity model has also been used in empirical research. For instance, Kim et al. (2003) study the relationship between Aaker's brand equity attributes and the financial performance in a luxury hotel atmosphere. They find that brand loyalty, awareness and image have a significant positive effect on profitability whereas quality is not linked to financial performance. Thus, the brand in itself and emphasizing its "DNA" should be the core strategies in reaching good financial results and not overreached quality management. However, changes in quality perceptions among heavy users have a significant affect in financial performance suggesting that customer retention is one of the most effective ways to increase firm value (Thomson et al., 2004).

Srivastava et al. (1998) introduce the term of market-based assets, which refer to assets that are created in the interface of the firm and entities operating in the external environment. These assets can be divided into relational and intellectual market-based assets. Relational assets are formed from the relationship between the firm and its key external stakeholders. Examples of these are brands and channel equity out of which the former is created by good customer relationships and the latter results from successful business partner relationships. Intellectual assets are on the other hand different types of knowledge a firm possesses from its business environment including competitors, customers, suppliers and channels. A mutual aspect of these two types of market-based assets is their intangible nature. They cannot be inventoried, but instead they can be measured by their stock, which is the specific amount of information possessed by a firm for example about customers' purchase criteria or by their flow, which is the increase or decrease in the value of stock.

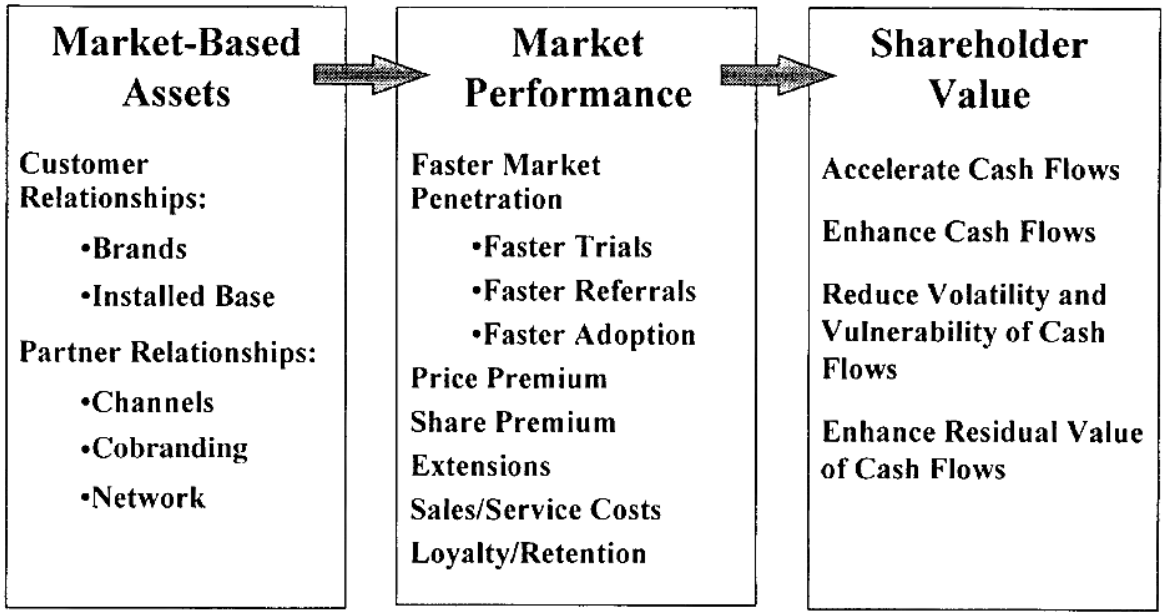
Following Aaker's (1995) brand equity model, Srivastava et al. (1998) state that market-based assets create value in the following five ways:

1. Good relationships with and knowledge of customers, suppliers and channels lead to lower service and sales costs;
2. Brand and channel equity enable the firms to charge a premium on their products and services;
3. Customer loyalty and switching costs build barriers to entry for competitors;
4. Other resources become more productive for instance as loyal customers respond to marketing efforts with ease;
5. A strong brand can be expanded into new product categories and markets.

The entire process of shareholder value creation by market-based assets is illustrated in Figure 2 below. In this model, shareholder value is equal to higher, less volatile cash flow, which is reasonable because operative cash flow is the ultimate measure of financial performance of the raw core business that a firm engages into. Hence, if cash flow is weak or negative the firm is unprofitable and therefore destroys the investment that shareholders have made in the firm.

Figure 2: Linking market-based assets to shareholder value

This Figure presents Srivastava et al.'s (1998) model describing the relationship between market-based assets, market performance and shareholder value. Market-based assets are defined as brands and other similar types of intangible assets relating to marketing. This model demonstrates how these market-based assets improve firm performance in various ways, which further on translates into improved cash flow generation and hence increases shareholder value.



(Srivastava et al., 1998)

The Srivastava et al. (1998) model is widely supported by prior research. Among others, Keller (1993) argues that customers are likely to respond quickly to marketing efforts if the brand awareness is high and the brand attitude is positive. Zandan (1992) finds that personal computer firms with strong images namely IBM, Hewlett-Packard and Compaq experience three to six months faster adoption of their next-generation products than competitors with a weaker image. Therefore, sales and marketing costs are lower for strong brands. Bowen et al. (1998) state that loyal customers are less likely to switch to a competitor solely because of price. Furthermore, they conclude that loyal customers tend to make more frequent purchases than non-loyal customers.

The generation of profitable growth is today in the center of the corporate world. Brands contribute to growth primarily through product development (line and category extensions) and market development (new channels and geographic markets) (Keller et al., 2006). Brand extensions enable firms to fill out their product ranges, expand into new markets and license brand names to be used in other product categories (Srivastava et al., 1998). Extensions are a natural way to capitalize on the initial investment made to the existing brand. It is important to note however, that branding actions include also risks. One of the largest concrete risk factors among different branding actions is the overextension of the brand, which results in poor fit between product categories and the parent brand. A too wide product range with too many price points might dilute the value of the brand as the messages of different products are inconsistent. In a situation like this, customers become confused and no longer understand the core idea of the brand. Studies have shown that extensions are more successful for well-known prestigious brands that can also expand to more diverse categories. In addition, brands present in various product categories due to previous extensions can more easily continue to extend further. (e.g. Aaker et al., 1990; Keller et al., 1992.)

Co-branding and co-marketing alliances are also a way to increase consumers' exposure to the brand and hence revenues (Bucklin et al., 1993). Sharing brands and customer bases enables firms to lower operational costs by leveraging on the other firm's existing resources, increase revenues by reaching new markets or offering new products and avoiding the fixed investment costs of creating a new brand or extensions (Srivastava et al., 1998). It has been estimated that the introduction of a new brand costs approximately $100 million and has a 50% chance of failure (e.g. Ourusoff, 1993).

Barth et al. (1998) argue that the net effect of all brand benefits is that branded products generate higher operating earnings over time than unbranded products. Thus, strong brands provide tangible outcomes such as cost savings, better margins, a loyal customer base and the option to increase and diversify business with the introduction of new products and entering new geographical markets. These all should translate into increased and more stable and predictable cash flows that result in higher returns for shareholders.

2.1.4 Brands and financial metrics

Until today, brand focused marketing studies have concentrated mainly on qualitative research exploring how brand equity affects consumer behavior for instance. In contrary, limited effort has been put in exploring the financial, legal and social impacts of brands. When studying the financial outcomes of branding actions, the stock price, the market capitalization and the Tobin's q ratio are critical metrics (Keller et al., 2006). In this subsection, I briefly discuss the relationship between intangibles assets and the aforementioned financial variables.

A financial ratio closely related to the relationship between the market value of a firm and its tangible and intangible assets is the Tobin's q created by James Tobin in 1969. Tobin's q is calculated as the ratio of the market value of a firm and the replacement cost of its tangible assets meaning property, plant, equipment, inventory, cash and investments in stocks and bonds (Tobin, 1969, 1978). Firms that have a Tobin's q-value of 1.0 do not hold any intangible assets because the market value of the firm equals exactly the replacement cost of the firm's tangible assets. Thus, no surplus is left for intangible assets. In this case earnings and cash flows are generated sufficiently only to realize a competitive return on invested capital (Kerin et al., 1998). On the contrary, firms with a Tobin's q ratio above 1.0 have a competitive advantage in relation to their peers and hence generate excess return on invested capital. A high Tobin's q ratio is therefore a sign of the possession of intangible assets.

This view is supported by a study done by Lindenberg et al. (1981) who discover that firms producing undifferentiated commodity products have lower Tobin's q ratios than firms producing packaged consumer goods. Furthermore, Hirschey et al. (1985) find a positive relationship between R&D and advertising expenditures and the market value of a firm and Tobin's q-ratios. In addition, q-values vary according to the amount of intangible assets (Morck et al., 1988).

If brands are a credible source of future earnings and cash flows, their value should be taken into account when calculating the market value of the stock. Supporting this argument, Kerin et al. (1998) state that firms are worth more in financial terms when intangible assets are taken into account than if they are disregarded. This leads to the hypothesis that firms with intangible assets and a Tobin's q ratio above 1.0 create also shareholder value. A firm creates wealth for its shareholders when its market value of equity capital exceeds the book value of

its assets (i.e. M/B ratio > 1.0) (Varaiya et al., 1987). Hence, an M/B ratio of 1.0 sustains shareholder value and a ratio below 1.0 destroys it.

Capraro et al. (1997) study M/B ratios of Fortune 500 companies and find that ratios are approximately 3.5 suggesting that more than 70% of the market value of these companies lies in intangible assets. Also Simon et al. (1993) argue that the difference between the market value of a firm and the book value of its assets or their replacement cost is attributable to intangible assets. Lane et al. (1995) continue that intangible assets such as brand names provide a firm the opportunity to create earnings beyond those generated by tangible assets only. Moreover, Lusch et al. (1994) state that intangibles such as corporate culture, customer relationships and brand equity are strongly linked to firm performance. However, these arguments incorporate the belief that intangible assets such as brands are assimilated by the stock market. However, still today firms focus mainly in tangible assets when monitoring and evaluating company performance due to the lack of valuation models of intangible assets. In the next subsection, I shed light on the concept of brand value and attempts made to create a plausible valuation method for brand assets.

2.1.5 Brand value and valuation methods

The idea of quantitative brand value is not the most essential matter in my thesis because the brand values assigned by an independent brand agency are taken as given and not analyzed critically. However, brand value and brand valuation methodologies are discussed briefly in this subsection because the data used in this thesis is closely related to these concepts. Later on in subsections 4.1.1 and 4.1.2, Interbrand as an independent brand agency and their brand valuation methodology are presented in more detail.

To better understand whether brands are beneficial for firm value and shareholders, they need to be measured with a quantitative approach. Moreover, an interesting question is whether brands lead to tangible outcomes, which are valued by the stock market, such as increased sales, new products and new markets for existing products? It is generally accepted that successful, established brand names are corporate assets with a financial value that creates shareholder value (Aaker, 1996). During the mid-1980's M&A boom, brands become relevant as acquirers paid eight to ten times the amount of the target firm's earnings (Kerin et al., 1998). These premiums were seen as the price of the target's intangible assets, meaning

primarily brands. For example in 1989 a Cadbury Schweppes executive noted that out of the $220 million acquisition price of the Procter & Gamble owned soft-drink business Hires and Crush, only $20 million accounted for the physical assets. The remainder was referred to as "brand value" (Schlossberg, 1990).

Murphy (1990) argue that brand value is the value of earnings and cash flows that can be clearly linked to a successful established branded product or service. On the other hand, brand value can be understood as the financial accounting concept "value-in-use", which is the firm value attributable to a specific asset managed by firm-specific skills (Barth et al., 1995). Haigh et al. (1997) state that brand value represents the financial worth of a brand to its current owner.

Several independent brand agencies have created methods to assign numeric value for brands. In general, we arrive to an estimation of brand value by first identifying and isolating future earnings and cash flows attributed to a brand from the total future earnings and cash flows of the firm. After this, the future "brand earnings and cash flows" are discounted using the risk-adjusted cost of capital rate to arrive to the net present brand value (Kerin et al., 1998). Often "brand earnings" are distinguished from earnings generated by unbranded products of peer firms producing generic products. For instance, sales of Gillette razors would be compared to sales of unbranded razors. As a rule of thumb, brand earnings have to form at least 5 – 10% of the owner firm's sales to assure credibility (Simon et al., 1993).

Brand strength on the other hand is used to determine the appropriate discount rate for calculating the net present value of brand earnings. Brand strength is measured by using both qualitative and quantitative factors including brand recognition, leadership, loyalty, growth potential, geographical spread, stability, market, trend, financial and marketing support and international trademark protection (Lefton et al., 1996; Andrew, 1997). A high level of brand strength signifies a high probability of maintaining brand earnings in the future. This is concretized by applying a lower discount rate when calculating the net present value of brand earnings.

2.2 Reasons behind excess stock returns

Excess return of a stock is the abnormal stock return above the risk free rate or an appropriate benchmark index. Theories explaining equity returns are linked to the Efficient Market Hypothesis as well as to the rationality of investors. The most common reasons mentioned in previous research concerning intangible assets and excess returns, are the mispricing assumption and the compensation for additional risk-bearing assumption. I discuss these two in the following two subsections.

2.2.1 Mispricing of stocks

In general, mispricing is a common factor used to explain excess returns. If an asset is known to have a positive effect to the firm's future net cash flows, then the value of this asset should be reflected in the observed market value of the firm (Hall et al., 2005). Traditionally, the market value of a stock can be defined as the present value of future cash flows discounted at a suitable interest rate and adjusted for inflation and risk (Copeland et al., 1994). Also Kerin et al. (1990) agree that cash flow has a crucial role in determining a firm's market value in the financial markets.

According to the Efficient Markets Hypothesis (EMH), a share price fully reflects all the available information on expected cash flows to shareholders. Thus, the market value of a stock is seen as the most accurate measure of a firm's tangible and intangible assets. (Fama, 1970, 1991.) If capital markets are perfect, the share price reacts immediately to all new information that has a significant effect on firm valuation. Therefore, a tangible variable that is beneficial to firm value will immediately be capitalized by investors and hence will not result in mispricing of the stock.

According to Edmans (2011) firms with high employee satisfaction (i.e. firms included in the "America's Best Places to Work" ranking list) have higher firm value, but the stock market fails to capitalize on this information immediately. Moreover, he argues that intangibles only affect the stock price when they later on translate into tangible outcomes that are again valued by the stock market. Based on the previously presented brand equity models, it is reasonable to believe that brands do have tangible consequences such as increased future sales because branded products are easier to sell. Additionally, a firm with a recognizable global brand can

expand into new markets more easily than its generic competitor, which further increases turnover and provides stability through geographical diversification.

Edmans (2011) suspects that an alternative explanation behind mispricing and excess returns is the ranking list inclusion per se causing for instance socially responsible mutual funds to buy these stocks. He finds however that this reasoning explains only 0.02% of the annual outperformance due to the small amount of SRI funds, which causes their purchases not to have real price impact. Furthermore, he finds that institutional investors underweight companies on the ranking list. Thus, institutional ownership does not explain outperformance either. Also, Frieder et al. (2005) find that institutional holdings are significantly and negatively related to a term that captures brand recognition. In the case of brands, there are some mutual funds that invest in global brands and luxury brands because they believe these stocks to outperform the market due to several different reasons, which I will discuss later in section 2.4. However, testing whether brand focused mutual funds' purchases are behind hypothesized excess returns is out of the scope of this thesis. Moreover, Edmans' (2011) conclusion about the small number of SRI funds is presumed to hold also for brand mutual funds, which decreases the reasonability of studying their purchases in detail.

A high brand value and brand ranking might act also as a proxy for other firm characteristics that may cause overperformance in the stock market. A known brand can be used as a recruitment tool in attracting motivated and talented workforce as well as more competent management. Firms with a high brand value also tend to have solid financial performance due to their large market shares, which may result in investments in R&D, advertising and other intangible matters. Hence, brand value might correlate positively with other intangibles. Especially the nature of brands and building brand equity can be seen similar to the nature of R&D investments. It is thus reasonable to assume that since prior research has found a link between intangibles and stock market overperformance, similar results should arise in this thesis. However, the correlation between brands and other intangible assets is not investigated in this thesis, but would be a promising area of future research.

Edmans (2011) also mentions a hypothesis that states that superior returns might be a correction of temporary undervaluation instead of a direct benefit of employee satisfaction. This hypothesis stems from the belief that the market assimilates satisfaction or some other intangible attribute as a wasteful expenditure having a negative effect on shareholder value. This notion reduces the initial valuation of the stocks. This approach has been supported by

Hong et al. (2009) who find that "sin" stocks' abnormal returns were caused by their initial undervaluation. However, I do not examine whether brand stocks traded at a discount compared to their peers at the beginning of the study period.

However, the mispricing of a firm with a high brand value might not be permanent. Edmans (2011) finds that the returns for firms included in the "America's Best Places to Work" ranking list decline sharply in the fifth year even for firms that remain on the list for all five years. Furthermore, buying stocks that drop from the list or alternatively not updating the portfolio according to the most current list, results in lower returns than when the portfolio is updated annually. Edmans (2011) argues that there are two reasons behind this. First of all, the firms included in the list vary during different years. This results the value of intangibles and therefore also their mispricing to fall over time. Secondly, the market may learn about the true value of intangible assets as they materialize into positive tangible outcomes. This again leads the stock market to correct the underpricing.

2.2.2 Brands as risk factors

Brand stocks may experience initial underpricing also because brands can be seen as risk factors. Chan et al. (2001) argue that due to the longer lasting benefits of R&D investments compared to benefits resulting from tangible assets, the risk profile of a R&D investment is different from that of a physical investment. Also Saarela (2005) states that since R&D investments are typically more intensive in the early stage, the level of disclosure to investors is lower than for tangible investments. Berk et al. (2004) describe R&D-intensive firms to experience risks relating to the uncertainty of the success of R&D investments and the time and money needed to complete R&D projects. In addition, there are risks associated with actions of competitors and changes in the operating environment. Several researchers have aimed to prove that excess returns related to R&D intensity are caused by these additional risks. Chambers et al. (2002) find constant, but volatile excess returns of 3.5-4.9% on average lasting up to ten years for R&D-intensive companies. They argue that these persistent excess returns cannot be resulting from mispricing, but risk-bearing on the contrary. Also Ho et al. (2004) conclude that US-listed R&D-intensive firms have greater systematic risk caused by greater business and operating risks of these firms.

Most of these risks related to R&D investments are also interlocking with brands. A company possessing a valuable trademark, is naturally increasingly dependent on the future success of the trademark. For instance, think about what would happen to The Coca-Cola Company or for Microsoft if their brands suddenly lost their reputation entirely. This would inevitably lead to plunged company performance and a stock price nosedive because these companies' business leans on the positive image of their globally recognized brands. It might be difficult to imagine a situation where Coca-Cola would lose its position as the ultimate favorite soft drink in the world, but it is not unthinkable. Brands are first and foremost recognized in consumers' minds and they are strongly linked to universal trends and the general lifestyle that continuously evolve in the global marketplace. Consumer behavior theories also state that large masses of consumers follow "opinion leaders" and "early adapters", who decide what is trendy to consume at the moment. Hence, purchase behavior is a sum of trends and what is seen as "cool" by the "innovators" and "early adapters" consumer groups. (Kotler et al., 2006.)

To strengthen the plausibility of the brand risk standpoint, we can look at the cases of some brands that have once been prestigious and highly ranked on various brand ranking lists, but who have lost their market positions due to lost essence of their brands. Nokia for instance was once a synonym for a mobile phone, but has during the past few years lost its leading position to other players, namely Apple, Research In Motion and Samsung whose brands are seen as more trendy, exciting and modern in relation to Nokia. Another example is American International Group, AIG, which is one of the worst performing brands once listed on the Interbrand Global Top 100 Brands ranking list. AIG lost its position in the turmoil of the American subprime crisis in 2008. A third example is Eastman Kodak Company, the once leading camera producer that failed to innovate and get a grip of the digital camera trend and hence ran into financial difficulties. The reasons behind the failures of these three companies are manifold and not only related to their brand image. However, the rallying point of these three cases is the inability to manage the brand successfully in the changing business environment. A leading brand can lose its position quickly if the company fails to rejuvenate the brand and keep it constantly up-to-date.

2.3 Prior research

Prior research concerning intangible assets and especially brands is rather limited, but can be divided into two groups. First, I present briefly research covering the credibility of numeric brand values. These studies use the numeric brand value data provided by brand ranking lists and aim to figure out whether brand value is related to firm performance. Even though I do not use actual brand values, but only firms included in the Interbrand Global Top 100 Brands ranking list as data in my thesis, it is important to certify that brand ranking lists are a credible source of information and that brand values are not completely insubstantial. Though I do not analyze specific brand values assigned for firms included in the Interbrand Global Top 100 Brands ranking list, but take them as given, it is important that "the right 100" brands are included in the list. The relative order of the brands on the list is unimportant since all 100 brands are included in the data sample as long as they are publicly listed and have share price data available. However, the brand values are used as portfolio weights besides market value weights and equal weights to test whether their alleged relevance holds in this study.

The second part of prior research concentrates on the relationship between brands and other intangible assets and the stock performance. Also, studies based on other types of ranking lists are discussed because these are of similar nature than my thesis studying brand ranking list participants.

2.3.1 Studies on the credibility of numeric brand values

Value relevance of accounting data refers to measuring the relationship between accounting information and different market variables (Easton, 1999). Thus, information that better explains the price or return is argued to be value relevant, i.e. better reflected in a firm's stock price. The majority of value relevance research on intangible assets concentrates on intangible assets, whose financial value is determined by outside parties or researchers and which are not recognized on the balance sheet (Kallapur et al., 2004). However, value relevance research suffers from the limitation of how to reliably define the financial value of intangible assets. Hence, brand value relevance research aspires to test whether brand values calculated by independent parties are reliable since at the moment there does not exist an official brand

value methodology, which could be used for recognizing brands on the balance sheet (Barth et al., 1998).

Several researchers have demonstrated a positive correlation between brand value and firm performance. For instance Kerin et al. (1998) find a significant positive relationship between brand values and market-to-book ratios (cross-sectional correlation ratios of 0.51 and 0.54) of American consumer goods companies included in the Financial World magazine's "The World's Most Valuable Brands" ranking list during 1995 and 1996. The Financial World ranking list has been published since 1992 and it uses brand value data provided by Interbrand. In 1998, before the magazine went out of business, their list was the most comprehensive brand ranking list in the market comprising of 343 brands marketed by 180 companies (Badenhausen, 1997).

Barth et al. (1998a) study brand valuations for over 300 brands published by the Financial World magazine during 1992-1997. In general, they find that brand values increased during the sample period and that brand owner firms have a high mean market-to-book ratio of 4.75 compared to 3.18 of all American firms included in the Compustat database. This signals that brand owner firms have substantial amounts of unrecognized intangible assets, which is reasonable. The results imply that brand value is positively correlated with year-end share price, advertising expenses, operating margin and market share. They also find that a change in brand value correlates positively with the annual stock return. They conclude that brand value estimates conducted by an independent agency are relevant and reflected in share prices when controlling for book values of equity and net income. The results are statistically significant and hold also for the simultaneity bias, which refers to the bias of share prices affecting brand values.

Moreover, Kallapur et al. (2004) study the stock market reaction to brand capitalization announcements of 33 U.K. firms. They state that brand assets, which were valued internally in the case of the 33 firms, are value relevant. In this study, brand values were calculated as the goodwill recognized on the balance sheet after an acquisition.

Altogether, prior brand value relevance studies conclude that brand valuations conducted by independent brand agencies seem to be reliable and accurate enough to be used as a proxy for brand value, which accounting standards fail to recognize at the moment. However, some researchers (see e.g. Aaker, 1996 and Kapferer, 1997) have criticized the credibility of numeric brand values. Frequently cited criticisms include the methods used to estimate future

earnings and cash flow generated over those of a generic (non-brand) competitor and the choice of the discount rate based on subjective brand strength. Also brand extension potential and asset synergies are often overlooked in brand valuation. Despite of the weaknesses related to brand valuation, I conclude that the Interbrand brand ranking list is a relevant and credible source of information that can be used as a benchmark for strong brands also in this thesis.

2.3.2 Studies on intangible assets and stock prices

Whether the stock market values information related to intangible assets is controversial. There are a number of studies that prove that several firm characteristics correlate with excess returns. Lev et al. (1996) find a Fama-French risk-adjusted annual excess return of 4.57% for R&D-intensive American companies during 1975-1989. Also Chan et al. (2001) find a 7.83% annual abnormal return based on R&D relative to firm market value for American stocks listed in NYSE, AMEX and Nasdaq. They also find similar results when studying advertising expenditure. Also Conchar et al. (2005) find a positive link between advertising and promotion spending and the market value of a firm, further supporting the argument that brand building activities are beneficial and result in better financial performance. Deng et al. (1999) on the other hand study patent citations and Aboody et al. (1998) software developments and find that these cause excess returns as well. Moreover, abnormal returns are caused by good corporate governance (Gompers et al., 2003) while CEO's use of a corporate jet results in a 3.8% negative alpha (Yermack, 2006). Sin stocks have also been proved to generate excess returns (e.g. Hong et al., 2009).

Barth et al. (1998b) find that firms with significant amounts of unrecognized intangible assets such as brands experience positive stock market reaction to share repurchase announcements. Barth et al. (1998c) again find a positive relationship between analyst coverage and the amount of unrecognized intangibles assets. Interestingly it has been also proven that the amount of intangible assets correlates positively with analysts' forecast error and the result is strongest for firms possessing diverse and innovative technologies (Gu et al., 2005). Thus, the lack of explicit information about intangible assets and their impact on earnings causes analysts to make less accurate earnings forecasts and misvalue stocks.

Edmans (2011) conclude that firms with high level of employee satisfaction (i.e. firms included in the "America's Best Places to Work" ranking list) generate superior long-term

returns after controlling for industries, risk and a set of observable firm characteristics during the years 1984-2009. Hence, the market fails to incorporate intangible assets fully into stock valuations even though the existence of the asset is well known due to an objective recognition. Furthermore, he argues that an intangible asset affects the stock price only when it materializes into a tangible outcome valued by investors such as an earnings announcement. However, he states that intangibles per se are not appreciated by investors, but the overperformance of companies with high employee satisfaction (employee satisfaction acting as a proxy for an intangible asset) is a result of some other factor than high employee satisfaction in itself.

Several researchers have studied the relationship between admiration, or good reputation in other words, and stock market performance. Though admiration is not an intangible asset per se, it might be closely related to brands since many firms with strong brands are often thought of as "good companies" and hence are often admired in the society. Clayman (1987, 1994) study stocks of companies labeled excellent in Peters and Waterman's "In search of excellence", published in 1982, in two separate studies and finds opposite results. In the first study, excellent stocks have low returns, but in the second study they outperform the market. Anderson et al. (2006) and Antunovich et al. (2000) conclude that firms ranked high in the Fortune magazine's annual "America's Most Admirable Companies" ranking list generate higher returns than lower ranked firms. Shefrin et al. (2003) and Statman et al. (2008) on the other hand find that these higher ranked firms have weaker returns. Lastly, Anginer et al. (2010) find that firms with bad reputation generate higher returns than companies ranked high in the Fortune list during the years 1983-2007. Furthermore, they discover that an increase in admiration is followed by weaker stock market performance.

The results of admiration studies are various and it is difficult to clearly conclude that good companies would beat companies with worse reputations. These results may however be compared to the good historical performance of sin stocks, which namely are companies with shady reputations. It may be that low ranked firms of an admiration list outperform the higher ranked ones because these firms may operate in unethical industries such as alcohol, tobacco and firearms. Admiration and brand strength may appear to be closely related because both are in general seen as positive attributes and materialize in increased publicity and familiarity. However, a brand is an intangible asset, which may if managed successfully, result in tangible financial outcomes. On the contrary, admiration per se is not an asset in legal terms, and it is difficult to prove that admiration would lead to increased sales for instance. It is also crucial

to note that some of the most valuable brands are alcohol and tobacco labels such as Moet & Chandon, Hennessy, Marlboro, Smirnoff and Budweiser. Thus, owners of these brands are sin stocks. Furthermore, several prestigious "non-sin" brands are owned by companies that operate also in the sin industries beside other industries such as LVMH (operates in alcohol) and Richemont (operates in tobacco and firearms). Hence, all brands owned for example by LVMH are indirectly related to the sin industry. This causes difficulties in determining whether brand stocks' potential outperformance is caused by the brands or by the fact that they operate in the sin industries. Finally, many companies with strong brands have experienced negative publicity related to child labor (e.g. H&M and IKEA), massive layoffs (e.g. Nokia and Citigroup) or oil spillage (e.g. British Petroleum). To conclude, possession of a strong trademark does not mean necessarily having excellent firm reputation and hence the weak performance of admired companies should not be an indication that brand owners would also perform weakly.

Research on brands and the stock market has been so far limited possibly due to the low appreciation of marketing by finance researchers. However, a few interesting studies about the relationship between brand ranking lists and excess returns in addition to event studies about branding events have been conducted.

Madden et al. (2006) arrive at similar results as Edmans (2011) studying brands included in the Interbrand's "World's Most Valuable Brands" ranking list during years 1994-2001. All of the brands included in their study are North American brands. They find that strong brands generate monthly returns of 1.98% compared to 1.34% yielded by the benchmark portfolio consisting of all American listed companied excluding the brand stocks from Interbrand's ranking list. After accounting for risk using the Carhart (1997) four factor model, they find a monthly alpha of 0.57%, which is statistically different from the alphas generated by the benchmark portfolios. Furthermore, the brand portfolio embodies significantly less systematic risk (market beta = 0.85) than the market in general, which has a beta of 1.0. When brand values are used as portfolio weights in the brand portfolio, the portfolio yield increases to 2.49% per month and the alpha to 1.32% while the risk remains unchanged. The results hold also when market shares of the firms in the brand portfolio are taken into account. Hence, Madden et al. (2006) conclude that brand-focused firms generate greater risk-adjusted returns compared to the benchmark, which provides evidence for the validity of building brand equity and its positive effect on shareholder value.

Aaker et al. (1994) find that the stock market assimilates brand quality images by observing how the annual stock returns of 34 global brand owner firms during 1989-1992 evolve, as the EquiTrend brand quality rating used as a proxy for brand equity, changes. They find that firms with the largest gains in their brand equity measure experience average returns of 30% while firms with diminished brand equity experience 10% losses. Going deeper into specific brand strategies and their financial consequences, Roa et al. (2004) find that firms with a "branded house" strategy, where the corporate brand is used as an umbrella to all firm brands, generate higher stock market returns than the multiple brand "house of brands" strategy. The higher return is rationalized as a compensation for risk due to the lack of diversification. This result embodies the idea of brand risk because the "branded house" strategy suffers from the risk of losing the value and standing of the corporate brand. On contrary, in the "house of brands" strategy the brand risk is diminished because the company owns several independent brands that have their own separate positions in the market and in the minds of consumers.

Previous marketing research has also conducted event studies that test the stock price reaction to different brand related events namely new product, brand extension and celebrity endorsement announcements. For instance, Lane et al. (1995) discover a connection between brand extension announcements and stock price reactions. Their research shows that the stock market reacts most favorably to extensions of either highly familiar prestigious brands or those of low-end unfamiliar brands.

Next, I will discuss brands from a more practical point of view. Lately, also the financial markets have awoken to the existence of brands and have created new types of investment products related to brands. Thus, investing in brands as a current phenomenon is presented in the next subsection.

2.4 Investing in brands

Brands play a visible role in the everyday life of people and have caused also financial markets to innovate investment products based on brands. During the past few years, investing in well-known brands has become a trendy investment strategy. Several banks abroad and in Finland have introduced brand mutual funds and structured products that are linked to the performance of brand stocks. These mutual funds and investment products can be divided roughly into three different groups depending on their investment strategy and risk profile.

Some funds focus on global *luxury brands* that benefit from the growth of emerging markets and the general change in consumer habits throughout the world. Funds like these carry above average risk because the performance of luxury companies is cyclical and hence the volatility of these stocks is high. Some funds on the other hand invest only in the very top range of global *consumer goods brands* such as Coca-Cola and Mc Donald's because they are seen as safe and stable investments irrespective of the varying economic cycles. The Seligson & Co fund, Global Top 25 Brands, the FIM Brands fund and the Morgan Stanly Global Brands fund are examples of mutual funds following this strategy. The third option is to invest in consumer goods companies that are expected to benefit directly or indirectly from the growth of emerging markets. An example of a mutual fund utilizing this strategy is the Nordea Emerging Consumer Fund, which too has its largest stakes in global brands such as Toyota, Coca-Cola and Nestle (situation in 31.1.2011). Nordea expects the brands it invests in to gain market leader positions in emerging markets in the future.

The reasons behind the expected good performance of brand funds are diverse. Demand for premium brands has increased during the recent years, which has led premium brand companies to outperform the global equity markets. This development trend is expected to strengthen in the future as the global population rises and ages, the number of affluent consumers increases, the standard of living in emerging countries rises and as consumer habits evolve more towards preferring high-quality luxury products. (Fim, 2011 and Pictet Funds, 2011.) The global population is expected to grow by 30% over the next 15 years. Furthermore, the population between 30-65 years old is estimated to peak in China and India in 2025 and 2045, respectively. (World Wealth Report, 2008.) In western countries, the number of old people rises as people live ever longer and birth rates on the other hand are low.

Seniors today are wealthier and more active than before, which leads them to spend more money selectively in higher quality and premium priced goods. (Pictet Funds, 2011.)

The recent acceleration in economic growth and urbanization in emerging countries such as China, Russia and Eastern Europe has led to the emergence of a new upper-middle class. United Nations has predicted that the proportion of urban population will reach 60% of total population in 2030 and that 70-80 million people will climb to the middle class annually in emerging countries. Many of these people seek to pursue the "western life style", which means buying luxury goods that demonstrate their social and economic ascension. For instance, according to Pictet Funds (2011) the consumption of Moet & Chandon champagne in China doubled from 2003 to 2004. Also Tapiola Bank (2011) states that LVMH sales from Asian markets increased by 20% during the first three quarters of fiscal year 2010. The development of emerging countries affects also travel retail significantly. The total number of Chinese tourists increased from 10 million in the beginning of the millennium to 28 million in 2004. Their number grows with an annual rate of 12.8% and is expected to reach 100 million in 2020. This coupled with the facts that 38% of luxury purchases happen while travelling and that Asian tourists spend twice as much money when travelling as Europeans and Americans, the strong growth of premium brands should continue also outside emerging markets. (Pictet Funds, 2011.)

As the population grows, so does the number of wealthy people, who form the core customer segment of luxury brands. According to the World Wealth Report 2008, the global wealth of High Net Worth Individuals (HNWI), people with financial assets at least worth of US$1 million, is expected to grow by 7.7% annually through 2012. Other drivers of demand for prestigious branded goods include the improving stature of women. An increasing number of women work today all around the world, which guarantees them economic autonomy to purchase goods that act as status symbols and provide gratification in our modern-day society where beauty and youthfulness are requisites of success. (Pictet Funds, 2011.)

Mutual funds focusing on premium brand firms justify their investment strategy by the higher earnings growth of luxury companies compared to other consumer goods producers. In addition, luxury companies have solid financials coupled with superior sales growth, operating margins and cash flow generation. Like all strong brands, despite of the price range of the product mix, also luxury brand firms benefit from strong pricing power, which protects them against rising inflation and the current difficult economic environment. Since most

luxury firms are in the mid- and small-cap universe and are characterized by diverse risk/return profiles, a winning luxury investment strategy is based on successful stock picking. (Pictet Funds, 2011.) Thus, the fund manager has to recognize the strongest brands with the highest future potential from the mass of brands operating in the highly competitive luxury market. Therefore, luxury funds are actively managed mutual funds. The low industry diversification of luxury brand funds and risks related to emerging markets result in a high overall risk classification. Also Nordea Bank (2011) notifies in its Emerging Consumer fund advertising materials that the risk classification of their fund is six on a seven step scale. Furthermore, they remind that the legal and institutional infrastructure in emerging countries develops continuously and poses several risks relating to politics, legislation, finance, accounting, taxation, counterparties and shareholder protection. Naturally currency risks are also present in mutual funds that invest in securities worldwide.

On the contrary, mutual funds focusing in mass-market brands have a different risk profile and investment strategy than luxury and emerging consumer brand funds. These funds select their stocks based on the strength and value of the trademark and the position of the brand in the global markets. In the selection process fund managers use for example brand ranking lists published by independent brand consultancies. (Seligson & Co, 2011.) This for that matter provides further evidence that these ranking lists are relevant and credible. The fund management style is passive since the value of large strong brands rarely plunges. The success of these funds leans partly on the same matters discussed previously in the case of luxury brand and emerging consumer goods funds. The main difference is that the focus in these brand funds is in solid, stable, moderately growing large global companies such as Unilever, Google, Apple, Nokia, Procter & Gamble etc. Thus, the risk is lower than in the case of luxury funds.

The performance of brand funds has been strong on average. For instance the Morgan Stanley Global Brands fund beat its benchmark with 18.25% during the time period April 2006 - January 2011 (Morgan Stanley, 2011). The Nordea Emerging Consumer fund generated a return of 46% during November 2008 – March 2011. The Pictet Premium Brands fund has earned a cumulative return of 29% during the past five years compared to a -2.7% return earned by its benchmark the MSCI World Discretionary during the same time period. On the other hand FIM Brands yielded only 2.9% during the past five years compared to its benchmark’s -1.4%. Furthermore, The Seligson & Co fund, Global Top 25 Brands, was awarded a Morningstar prize in 2011 for one of best passively managed index funds in

Finland. The fund beat actively managed equity funds due to the fact that the brands in the fund maintained their profitability during the economic crisis. (Koskinen, 2011.)

3 Hypotheses

The benefit of strong brands to firm performance is undeniable and has been widely accepted in marketing and accounting literature. However, it is debatable how the stock market values and incorporates brand values and brand ranking list information produced by an independent organization. Prior finance literature finds evidence that intangible assets are not fully valued by the stock market and hence firms with significant amounts of intangible assets might be undervalued (e.g. Edmans, 2011 and Chan et al., 2001). Furthermore, Madden et al. (2006) discover that American owner firms of strong brands included in the Interbrand "World's Most Valuable Brands" ranking list during 1994-2001 generate excess returns compared to a relevant benchmark.

In this thesis I continue the research of Madden et al. (2006) and study global brands included in Interbrand's "Global Top 100 Brands" ranking list during the years 2001-2009, which has not been done before. I also extend the previous research to cover European and Asian companies besides North American firms included in the previous brand studies. Naturally following Madden et al. (2006), I assume that my thesis will generate similar results and hence my hypotheses stem from those presented in their paper.

Madden et al. (2006) on the other hand base their hypothesis on several prior study results (e.g. Aaker et al., 1994) proving than brand development strategies create shareholder value, which again is demonstrated as above average stock returns. In addition, the brand equity models presented earlier in subsection 2.1.3 provide reasonable evidence that branding creates tangible financial outcomes that should have a positive effect on the company share price. Finally, argumentation related to socioeconomic global trends used in marketing of brand mutual funds suggests that brand stocks could outperform the market index.

Edmans (2011) reasons that, if lack of information is the main reason causing excess returns in previous employee satisfaction studies, superior returns should not exist for companies ranked in the annual "America's Best Places to Work" study because the list reveals specific information on several companies at once. However, it may be that even though the information is widely available, the stock market disregards this information, which results in

underpricing of the stocks included in the list. Furthermore, he points out that under a mispricing channel, an intangible asset affects the stock price only when it subsequently manifests into a tangible outcome valued by the stock market. Thus, my thesis is a joint test of brand equity building, which at the same time benefits firm value and fails to be fully valued by the stock market.

Thus, I hypothesize:

> ***H1: Firms owning strong brands (i.e. brands included in the Interbrand Global Top 100 Brands ranking list) outperform the stock market in the long-run***

Following Madden et al. (2006), I assume that stock market returns increase when brand values are used as portfolio weights signaling the importance of nominal brand value determined by an independent agency, Interbrand in this case. Several brand value relevance studies (Kerin et al., 1998, Barth et al., 1998 and Kallapur et al., 2004) prove that the values assigned for brands by independent brand agencies are reliable and therefore using brand values as portfolio weights should have a positive effect on the brand portfolio's performance since firms with higher brand values should outperform firms with lower brand values. This argument entails the belief that the strongest most prestigious brands are better investments than less prestigious brands. Madden et al. (2006) continue that brand value estimates should provide incremental information about firm performance that might be useful in investment decision making. Hence, a brand portfolio incorporating detailed brand value information (brand values are used as portfolio weights) should outperform a brand portfolio that does not entail this information (ordinary portfolio weights used). Thus, the following hypothesis is presented:

> ***H2: Stock market performance is enhanced when brand values are used as portfolio weights***

Hypotheses H1 and H2 are tested for a global brand portfolio including all the stocks of brand owners represented on Interbrand's ranking list. In addition, separate regressions are run for North America, Europe and Asia portfolios to develop a deeper understanding of how brand stocks have behaved in different continents. The hypotheses H1 and H2 are equivalent for all regional portfolios because there is no prior evidence that brand stocks would behave differently in different regions. This argument is also backed up by the current global nature of the stock markets.

Following Edmans (2011), I test whether list inclusion results in superior stock market performance. Edmans (2011) argues that superior performance of firms included in the "America's Best Places to Work" list is not generated by higher employee satisfaction, but potentially by the list inclusion per se. He reasons that socially responsible mutual funds, which have become a clear phenomenon during the past decade, screen their investments by using various criteria, employee satisfaction being one of them. Hence, he argues that list inclusion results in increased demand for the stock generated by these socially responsible mutual funds. Even though Edmans (2011) admits in his conclusions that these kinds of mutual fund purchases explain only a subtle part of the excess returns, I follow his hypothesis setting in my thesis. Thus, I assume that once a brand owner is included in the Interbrand list, the market perceives this as positive information. Furthermore, I argue that the inclusion in a brand ranking list may result in increased demand from brand mutual funds, which as well have established a presence in the mutual fund universe during the past years. Thus, following Edmans (2011), I hypothesize:

H3: Newcomer brand owners included in the Interbrand "Global Top 100 Brands" outperform the stock market in the long-run

Finally, Edmans (2011) argues that companies with high employee satisfaction should not earn superior returns permanently. Firstly, the companies included in the list vary from year to year meaning that employee satisfaction is not permanent, but may decrease or increase over time. Secondly, the stock market should learn about the true value of employee satisfaction as it materializes into tangible outcomes. These standpoints should cause mispricing to fall over time. He finds the drift to list inclusion to decline over time becoming insignificant in year five. The results hold also for the "List remainers" portfolio consisting of stocks that stay on the list from the beginning to the end of the study period. Stocks in the "List remainers" portfolio in particular should not generate excess returns from year five onwards because the stock market should by this time be well aware of the true value of their intangible assets. Edmans (2011) finds that the "List remainers" portfolio generates smaller returns than the original portfolio supporting his argument of mispricing disappearing over time as the market learns about the relevance of intangible assets. Following these arguments presented in Edmans' (2011) research, the following two hypotheses are tested:

H4: The "List remainers" portfolio generates lower returns than the original global brand portfolio

and

H5: The excess returns for the "List remainers" portfolio disappear eventually becoming insignificant in year five

4 Data and methodology

In this section, I present the data and methods used in my thesis. I introduce Interbrand as an organization, their brand valuation method and the Global Top 100 Brands ranking list. I also explain the portfolio construction process and the statistical methods used to analyze brand portfolio performance.

4.1 Brand valuation rankings

During the past few years, the development of various brand valuation systems and rankings has become increasingly popular. There are several independent brand consultancies, which publish brand ranking lists for global brands and for brands operating in a specific country or industry. Interbrand, Brand Finance and Millward Brown are the three most recognized consultancies in the field of brand valuation and brand rankings. While all of these three have received international publicity, the ranking lists conducted by Interbrand and Brand Finance have been used most often as a source in academic research, the former to a higher degree than the latter. Interbrand is the oldest brand agency, founded in 1974 and its list has been publicly available online starting from 2001. Brand Finance on the other hand started conducting brand ranking lists in 2007 and Millward Brown a year earlier.

I chose to use the Interbrand Best Global Brands ranking list as the primary brand data source in my thesis because it has been published for several years, the list is readily publicly available and the list has been used previously in several academic studies. In addition, Interbrand as an organization has a good reputation and is widely known globally, which increases the credibility of my study. In the following subsections, I discuss Interbrand and its brand valuation methodology in more detail. After this, I present descriptive statistics concerning the brands included in the Interbrand Global Top 100 Brand ranking list.

4.1.1 Interbrand

Interbrand is the world's oldest and largest brand consultancy founded in 1974 and operates today 40 offices around the world. The consultancy is owned by New York based Omnicom

Group Inc. Interbrand is said to be the pioneer of brand valuation, which it began as early as 1984. Brand ranking lists covering global brands on the other hand have been published since 1999. Starting from 2001, Interbrand has partnered with Bloomberg BusinessWeek magazine, which publishes the Best Global Brands ranking list annually immediately after the issue of the list. Until 2007 the ranking list appeared in the first weekly issue of August, after which the publication was moved to the end of September. BusinessWeek is a leading global business media organization founded in 1929 and published by the McGraw-Hill Companies. The weekly published magazine reaches more than 4.8 million readers every week in 140 countries. (Interbrand, 2011.)

The Interbrand Best Global Brands ranking lists including the Top 100 Global Brands is publicly available starting from year 2001. The ranking list covers large companies from all around the world out of which roughly half are American. The basic requirement for a brand to be featured on the list is the true global nature of the brand meaning that at least 30 percent of the revenues must come from outside the home country and no more than 50 percent of revenues should come from any one continent. In addition, the brand must be present in at least three major continents and must have a broad geographic coverage also in growing and emerging markets.

Interbrand's phenomenal reputation in brand valuation is based on the facts that the firm has been publishing its ranking list for the longest time and the list receives more media attention than other brand ranking lists published by competing consultancies such as Brand Finance or Millward Brown. First of all, the Interbrand brand ranking list is published annually jointly with BusinessWeek magazine, which is a prestigious weekly magazine with a wide circulation. Hence, the Interbrand brand ranking list is released on a specific event date, which attracts widespread attention because it discloses information on several companies simultaneously. Moreover, the ranking list is referred to in various other international eminent newspapers such as The Wall Street Journal, which draws further attention to the publication. Furthermore, the 2010 ranking list was launched at the New York Stock Exchange in a special launch event on September 15, 2010. These public actions enhance the credibility of Interbrand as a brand ranking consultancy and prove that the stock market is aware of the existence of the ranking list.

To the contrary, other intangibles causing superior long-run returns such as R&D expenditure and measures of corporate governance are disclosed in a company's earnings announcements,

which take place during different days for different firms (e.g. Lev et al., 1996; Chan et al., 2001; Liu et al., 2007). Thus intangibles like these and the stock market behavior relating to them is much more difficult to measure accurately than information about intangibles, which is released in the form of a ranking list.

4.1.2 Interbrand brand valuation methodology

In this subsection, I present in detail the methodology used by Interbrand to arrive at the numeric brand values assigned for brands included in their ranking lists. Interbrand's methodology is probably the most acknowledged brand valuation method available today due to the consultancy's long history in the area of brand consulting and brand valuation. This argument is supported by the fact that Interbrand received as the first brand consultancy in the world an ISO certification for valuing brands in December 2010 (Interbrand, 2011). The main idea of the Interbrand method is to look at the ongoing investment and management of the brand as a business asset. This refers to taking into account all the ways in which a brand benefits its owner organization. For instance attracting and retaining talented workforce and delivering on customer expectation. The methodology is composed of three main elements that contribute to the assessment: the financial performance of the branded products or services, the role of the brand in a purchase decision process and the strength of the brand. The formula used to calculate brand value starting from economic profit is illustrated below in Figure 3:

Figure 3: The Interbrand method for calculating brand value

This Figure presents the method used by Interbrand to calculate brand value for a firm. The method begins by calculating the after tax operating profit and subtracting the weighted average cost of capital from the total. This generates the economic profit of the firm. Next, the economic profit is multiplied by the role of the brand to achieve branded earnings. Finally, brand value emerges from multiplying branded earnings by the brand strength discount factor. Brand strength is defined separately by another Interbrand method, which is presented later.

The financial performance measures an organization's raw financial return to the investors, which is analyzed as the economic profit. Economic profit again is determined by deducting taxes from the operating profit and then subtracting the industry weighted average cost of capital (WACC). Financial performance is forecasted for a five-year period and for the terminal value, which represents the brand's expected performance beyond the forecast period. After this the economic profit is multiplied by the role of the brand in order to arrive to the branded earnings. The role of the brand reflects the portion of demand for a branded product or service that exceeds what the demand would be for the same product or service if it was unbranded. The portion is determined by one of following three methods: primary research, a review of the historical roles of brands for companies in that industry or expert panel assessment. (Interbrand, 2011.)

Finally, the branded earnings are multiplied by brand strength, which measures the ability of the brand to ensure the delivery of expected future earnings. Brand strength is determined through the ten dimensions presented below in Table 1 and it is reported on a 0 to 100 scale, where 100 points signals a perfect brand. Performance in the ten brand strength dimensions is judged relative to other brands in the industry, and in the case of exceptional brands, relative to other world-class brands. (Interbrand, 2011.)

Table 1: Interbrand characteristics for determining brand strength

This Table below introduces ten characteristics that are used by Interbrand to define the strength of a brand. Brands are analyzed in relation to one and another. Each brand can receive a total amount of 100 points, which signals a perfect brand.

10 brand strength dimensions by Interbrand

1	Organization's internal commitment to or belief in its brand
2	Legal protection, design, scale and geographic spread
3	Clear articulation of brand's values, positioning and proposition
4	Brand's ability to adapt to market changes, challenges and opportunities
5	Soundness of brand authenticity, heritage and a well-grounded value set
6	Brand's fit with customer needs, desires and decision criteria across all appropriate demographics and geographies
7	Consumers' level of in-depth understanding of brand's distinctive qualities and characteristics
8	Degree to which a brand is experienced without fail across all touchpoints and formats
9	Degree to which a brand feels omnipresent and how positively consumers, customers and opinion formers discuss it in both traditional and social media
10	Degree to which customers perceive the brand to have a positioning that is distinct from the competition

4.1.3 Interbrand Global Top 100 Brands ranking list

In this subsection I discuss my main data source, the Global Top 100 Brands ranking list in detail and describe the list characteristics. I chose the Interbrand's Global Top 100 Brands ranking list as my primary data source because the list is readily available already starting from 2001 and hence it allows me to study historical stock prices for the past nine years. Another credible ranking list would have been Brand Finance's ranking list, but since they have been publishing their list only for the past four years, it was not meaningful to use their list.

Table 2 presents descriptive statistics for the firms included in the Interbrand Global Top 100 Brands ranking list. The number of brand owners ranges from 92 to 95 meaning that some firms own several brands. These firms are namely LVMH, Procter & Gamble, Diageo, Time Warner, News Corporation, HP, Yum! Brands, Nestlé, L'Oréal, and Volkswagen Group. Each year the list includes two to seven owner firms that are privately held companies, which are excluded from the study. Brands belonging to these non-listed companies are IKEA, Hilton, Absolut Vodka, Bacardi, Rolex, Chanel, Armani, Prada and Wrigley. The final sample includes 78-85 listed firms each year that have stock price information available. Table 2

shows also that each year less than ten brands are newcomers to the list. The mean and median estimated brand values center around 10 and 6 billion US dollars, respectively. Thus, not that many brands reach as high brand value as the global leader, Coca-Cola, with its $70 billion estimated brand value.

The top four brands, Coca-Cola, Microsoft, IBM and GE, stay unchanged for the whole nine year study period while the lower half of the list varies significantly while new brands enter the list and old brands change their respective order. 60 brands stay on the list for the entire nine year period while on average brands have been included in the list for seven years. However, some brands drop from the list every now and then and make a comeback later. Altogether 142 brands are featured on the list during 2001-2009. In 2001, 62% of the brands were American while the next popular countries were Germany, Japan and United Kingdom. In 2009, 52% of the brands represented the United States followed by German, French and Japanese brands. The most common industries in the 2001 list were Consumer Goods (33%), Electronics (18%), Consumer Services (13%) and Fast Moving Consumer Goods (FMCG) (13%). In 2009, the respective percentages were Consumer Goods (32%), Electronics (15%), FMCG (15%) and Finance (13%). An example of the Interbrand Global Top 100 Brands ranking list is presented in the Appendix.

Table 2: Interbrand Global Top 100 Brands ranking list statistics

This Table presents the total number of owner companies and the number of publicly listed owner companies of the brands included in the Interbrand Global Top 100 Brands ranking list during the years 2001-2009. Also the number of new brands on the list is mentioned. Mean and median brand value is presented for each year and also the percentage change of these values are included in the Table.

Year	Nb of owners	Nb of listed owners	New brands	Brand value mean ($ bn)	Brand value median ($ bn)	Change in brand value mean	Change in brand value median
2001	92	85		9.88	5.36		
2002	93	87	9	9.77	5.31	-3.06 %	-1.00 %
2003	93	88	4	9.74	5.73	0.97 %	2.00 %
2004	93	88	8	9.96	6.30	2.46 %	3.00 %
2005	94	89	7	10.45	6.59	0.52 %	4.00 %
2006	94	89	2	10.93	7.17	5.78 %	6.00 %
2007	94	90	5	11.56	7.56	6.92 %	8.00 %
2008	94	89	7	12.14	6.76	3.83 %	5.00 %
2009	95	89	7	11.58	7.06	-3.58 %	-3.00 %

4.2 Share price information

I study long-run stock returns instead of valuation ratios or profits for three main reasons. Firstly, a positive relationship between strong brands and valuation ratios or profits could be explained by good financial performance causing a brand to be strong. On the contrary, a well-performing firm should not generate superior future stock returns because profits should already be incorporated in the current stock price since they are tangible. Secondly, stock returns are a clearer demonstration of creating shareholder value through branding actions because they take into account all the tangible outcomes resulting from strong brand value. Finally, accrual accounting variables are not adjusted for risk factors and they might be distorted by violations of accounting laws. In this subsection, I discuss in detail how the brand portfolios are formed and how the stock price information is collected.

4.2.1 Creating the brand portfolios for analysis

I form altogether six brand portfolios to test my hypotheses. The main portfolio is the global brand portfolio consisting of all publicly listed brand owners included in the Interbrand Global Top 100 Brands ranking list during the years 2001-2009, which have stock price data available. The portfolio is annually updated according to the most current ranking list. Following Edmans' (2011) methodology, for each year, the portfolio is formed after a one-month delay from the publication of the ranking list. This gives the stock market the necessary time to react to the information and hence rules out the explanation of lacking information on intangible assets. During years 2001-2007, the ranking list was published in mid-July and therefore I form the portfolio starting from August 15 for these years. For years 2008-2009 on the other hand, I form the portfolio on October 15 because the ranking list was published in mid-September during these two years. Hence, the overall study period ranges from August 15, 2001 to October 15, 2010.

The dividend and split adjusted stock returns are retrieved from the Datastream database using the Return Index and by calculating the market value-, equal- and brand value-weighed monthly returns for the brand portfolios. Also monthly market values of the sample companies are gathered from Datastream. Following Edmans (2011), the brand portfolios are tested with both equal-weighting and market value-weighting. The use of market value-weighting is important because the Fama and French factors (explained later in section 4.3.2)

are calculated also with market weights. In addition, following Madden et al. (2006) I use brand values as portfolio weights. Brand value-weighting allows me to test hypothesis H2, namely to see whether brand values effect the return of the brand portfolios instead of treating all firms included in the ranking list equally. Whenever a sample company owns more than one brand included in the Interbrand ranking list, the brand value assigned to the owner is the sum of all brand values of the brands it possesses.

Besides the global brand portfolio, I form three country portfolios, the North America, Europe and Asia portfolios, to test whether results differ among different continents. Brands are placed in one of the three country portfolios based on their country of origin. Thus, hypotheses H1 and H2 are also tested with these three portfolios. I assume stock markets to behave similarly around the world; hence no hypotheses concerning the relative success of brand stocks in different markets are presented. To reassure that the results are robust, I form two additional portfolios. To test hypothesis H3, I form a ”Newcomers” portfolio consisting of stocks that are new additions to the Interbrand Global Top 100 Brands ranking list. The country portfolios and the ”Newcomers” portfolio are also updated annually. Finally H4 and H5 are tested on a “List remainers” portfolio, which is formed out of the stocks that remain on the Interbrand list during the entire time period 2001-2009. I form the portfolio in 2001 and every year I eliminate list droppers. On the other hand no new brands are added to the portfolio. Thus, this is a hypothetical portfolio that a real investor could not form because it is impossible to know beforehand in year 2001 which brands stay on the ranking list for the entire nine year study period.

4.2.2 Excess returns and benchmarks used

I calculate the monthly excess returns over three different benchmarks. The first is the risk-free return usually the US Treasury-bill rate or LIBOR rates. Hull (2006) argues that regulatory and tax issues cause the treasury rates to be artificially low, hence I use LIBOR rates. Also Huhtakangas (2009) uses LIBOR rates due to the same reason in his master’s thesis examining American and European “sin” stocks. I use the annualized 30 day LIBOR rates denominated in USD for the global, North America, ”Newcomers” and “List remainers” brand portfolios, the EUR rates for the Europe brand portfolio and JPY rates for the Asia portfolio.

The second benchmark is the market portfolio, which theoretically consists of the weighted sum of every asset in the market. In my study I use the MSCI World index for the global, ”Newcomers” and “List remainers” brand portfolios. The MSCI World index measures the stock returns of 24 developed countries, which cover the majority of the countries featured in the Interbrand Global Top 100 Brands study. The MSCI World index captures 95% of the stock universe in these countries. For the North America portfolio, following Huhtakangas (2009), I use the Wilshire 5000 index to depict the market index in USA. Similarly, for the Europe brand portfolio, I use the MSCI Europe index, which consists of 16 developed European countries. For the Asia brand portfolio, I chose the MSCI Far East index, which includes 10 Asian countries. Regressions for the North America and Europe portfolios are run also using S&P 500 and Dow Jones Stoxx TMI indices, because these are popular benchmark indices for American and European stock market studies. The results found were very similar to those found in the original regressions. Hence, I conclude that Wilshire 5000 and MSCI Europe are suitable indices for benchmarking purposes.

The third benchmark is an industry-matched portfolio formed by using the 30-industry classification of Fama and French (1997), which can be found from Ken French’s website. This is done to make sure that the abnormal returns are not due to the strong performance of some specific industry during the nine year study period. Even though the Fama and French industry portfolio is conducted of American stocks, assuming that stock markets around the world behave similarly, it acts as a benchmark also for the Europe and Asia portfolios. The industry portfolio is formed by first calculating how many brand owners fall into each industry group included in the 30-industry classification. The amounts of each industries presented are then used as portfolio weights when forming the industry portfolio from specific industry returns.

4.3 Regression models used

The Ordinary Least Square (OLS) regression driven Capital Asset Pricing Model (CAPM) is a frequently used method for portraying expected stock returns. However, the method has been criticized in finance literature due to its assumption for undiversifiable systematic risk (e.g. Black et al., 1972; Kon, 1978). In the CAPM, the beta, which measures the risk, is derived from the general equilibrium of portfolios that are formed on the mean-variance efficient frontier. This is contrary to the three and four factor models, which include factors that have been empirically found to be associated with stock returns. (Anginer et al., 2010.) In

my thesis I use both the CAPM and its extension, the Fama French three-factor model to test stock market efficiency and to ensure that abnormal returns are not caused by risk factors. In this subsection, I present these two models in more detail.

4.3.1 The capital asset pricing model (CAPM)

The CAPM determines the appropriate required rate of return $E(R_i)$ for an asset to be added in a well-diversified portfolio with the following equation:

$$E(R_i) = R_f + \beta_i[E(R_m) - R_f] \quad (1)$$

where:

R_f is the risk-free rate

$$\beta_i = \frac{Cov\ (Ri,Rm)}{\sigma_m 2} \quad (2)$$

where:

Cov(Ri, Rm) is the covariance between portfolio return and market return

σ_m^2 is the standard deviation of the market return

and

R_m is the expected return of the market portfolio

If the portfolio is able to create abnormal excess return, the equation gets an additional intercept term called the Jensen's alpha (Jensen, 1968), which is illustrated in the equation below:

$$E(R_i) - R_f = \alpha + \beta_i[E(R_m) - R_f] \quad (3)$$

where:

α is the Jensen's alpha

A positive alpha signals excess return whereas a negative alpha means that the return fails to beat the benchmark return.

After calculating expected returns for each individual stock, the stocks are included in the brand portfolios by using the following equation:

$$E(R_p) = \sum_{i=0}^{n} w_i \, E(R_i) \quad (4)$$

where:

R_p is the return on the portfolio

R_i is the return on stock *i* and

w_i is the weighting component of stock *i* (that is, the share of stock *i* in the portfolio)

4.3.2 The Fama-French three factor model

The following three factor model, which is an extension of the traditional CAPM, was created in 1992 in the research paper: "The Cross-Section of Expected Stock Returns" by Fama and French. The equation presented below determines the return for the risky asset controlled by the size and value anomalies.

$$R_{it} - R_{ft} = \alpha + \beta_{MKT} \, MKT_t + \beta_{SMB} SMB_t + \beta_{HML} HML_t + \varepsilon_{it} \quad (5)$$

where:

R_{it} is the return on stock *i* in month *t*

R_{ft} is the risk-free rate

α is the Jensen's alpha which captures the abnormal risk-adjusted return

MKT_t is the return on the market portfolio in month t in excess of R_{ft}

SMB_t is the return difference between small market cap and large market cap firms in month *t*

HML_t is the return difference between high book-to-market ratio firms and low book-to-market ratio firms in month *t*

Multifactor models of CAPM such as the three and four factor models (e.g. Carhart, 1997) increase the explanatory power of the regression model because they assume that several factors affect the return. The idea of the three factor model stems from the historical fact that small firms and firms with a high book-to-market ratio tend to generate higher returns than

what the CAPM security market line (SML) predicts. Moreover, the value premium has been said to rise because the market undervalues distressed (value) stocks and overvalues growth stocks. As these pricing errors disappear, distressed (value) stocks earn higher returns than growth stocks. (Lakonishok et al., 1994.) Hence, the HML and SMB factors are considered as proxies for systematic, undiversifiable risk and therefore they reduce the alpha in the regression. If the betas of these factors are significant in the regression model, it can be concluded that the excess returns are mainly caused by these factors. In other words, if the coefficient for HML for instance is significantly positive, the stocks behave as value stocks. On the other hand if the alpha remains unchanged after introducing these two risk factors into the regression model, we can reason that true excess returns are generated due to some other factor than having many small firms or value firms in the portfolio.

Fama-French factors are calculated as the difference between the average returns of the different firm types mentioned. For instance, publicly listed firms are divided into two groups based on whether their market capitalization is below the median market capitalization or exceeds it. The SMB factor is thus the average return of small firms minus that of large firms. The same procedure is performed for the HML factor except that firms are divided into three groups based on their B/M ratios. The return difference is hence the average return of the high B/M ratio group minus that of the low B/M ratio group.

Since the Fama-French factors are readily available for the entire study period on Kenneth French's website only for US data, I use them only for the North America portfolio. For the other portfolios, I form the HML and SMB factors manually from equity indices. This method has been used previously by Huhtakangas (2009) in his master's thesis. Also Faff (2003) studies how Fama-French factors can be constructed from indices. For the global, "Newcomers" and "List remainers" portfolios, I calculate the SMB factor as the difference between the monthly returns of the MSCI World Small Cap and MSCI World Large Cap indices. Respectively, I calculate the HML factor as the difference between the monthly returns of MSCI World Value and MSCI World Growth indices. Following this method, I form the factors for the Europe and Asia portfolios in the same way, but from MSCI Europe and MSCI Far East size and style indices. An alternative option would be to build the global and regional factors manually from Fama-French country specific factors, which do exist on the Kenneth French website. However, these country specific factors have not been updated since 2007. Thus, utilizing them would significantly shorten my study period.

It must be noted that Fama-French factors built with this method act only as proxies for the original factors and cannot thus be compared to them directly. The major difference to the original factors is that MSCI uses a different method to build its size and style indices than Fama and French. The MSCI large cap indices do not include the largest 50% of the stock universe and the small cap indices the smallest 50%. On the contrary, the large cap indices represent approximately the largest 70% of the whole stock universe included in the index while the small cap indices capture only the smallest 15% of the universe. (MSCI, 2011). When it comes to the HML factor, Fama and French divide the stocks into three groups, forming the value group from the highest third and the growth group from the smallest third. However, the MSCI value index includes 50% of the stocks and the corresponding growth index the other 50%. Hence, all stocks are placed in one of these two indices (MSCI, 2011).

The expanded version of the Fama-French three-factor model, the four-factor model, also known as the Carhart (1997) model, is an alternative model often used to study risk-adjusted stock returns. This model includes a momentum factor, which measures the overall sentiment of the stock market and may therefore explain potential excess returns. However, this factor is only available for the US stock market and therefore the factor is excluded from my study.

5 Analysis and results

Analysis and results section presents first descriptive statistics for the four core brand portfolios, the global, North-America, Europe and Asia portfolios. After which I discuss the univariate comparisons of the raw monthly brand portfolio returns and the monthly returns of the market index and the industry-matched benchmark portfolio. Then the regression results are analyzed in detail and finally robustness tests provide further support to the results.

5.1 Descriptive characteristics

In this section, I present descriptive summary characteristics for the four regional brand portfolios in Tables 3-6. Market value, brand value-to-market value ratio and market-to-book ratio are presented for each portfolio for financial years 2001 and 2009. Table 3 presents characteristics for the global brand portfolio. In general, the companies are large with a median market value of $34 billion in 2001 and $39 billion in 2009. On average, the brand value estimated by Interbrand represents a quarter of the market value of the company in both time periods. Market-to-book ratios are high, the medians being 3.9 and 2.9 in 2001 and 2009 respectively. This is in line with studies stating that firms with a significant amount of intangible assets have high M/B ratios (see e.g. Simon et al., 1993, Lane et al., 1995 and Capraro et al., 1997).

Table 3: Summary characteristics for the Global portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the Global brand portfolio. The summary characteristics are presented separately for year 2001 and 2009.

	# obs	Mean	Median	Std.Dev.	Min	Max
2001						
Market Value ($ bn)	78	62	34	79	0.75	407
Brand value / Mkt Value (%)	77	38	25	32	0.9	128
Market / Book	75	6.7	3.9	9.6	0.8	69.1
2009						
Market Value ($ bn)	82	60	39	55	2.3	246
Brand value / Mkt Value (%)	81	28	24	20	2.2	102
Market / Book	78	3.6	2.9	3.1	0.5	16.0

Table 4 presents summary characteristics for the North America portfolio. The American sample companies are slightly larger than global brand owners in general with a median market value of $39 billion in 2001. In nine years the largest company loses 40% of its market value, though the median decreases only by $1 billion. Similarly as in the global brand portfolio, brand value represents 25% of the median market value. The median market-to-book ratio is even higher for the North America portfolio, being 4.3 in 2001 and 3.4 in 2009.

Table 4: Summary characteristics for North America portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the North America brand portfolio. The summary characteristics are presented separately for year 2001 and 2009.

	# obs	Mean	Median	Std.Dev.	Min	Max
2001						
Market Value ($ bn)	51	72	39	90	2.5	407
Brand value/ Mkt Value (%)	51	45	25	34	1	128
Market / Book	49	8.2	4.3	11.4	0.9	69.1
2009						
Market Value ($ bn)	49	62	38	59	2.3	246
Brand value/ Mkt Value (%)	49	29	26	18	2.5	99
Market / Book	50	4.4	3.4	3.5	0.6	16.0

Table 5 shows the same summary characteristics for the Europe portfolio. In 2001, European companies are on average smaller than the global companies in the full sample with a median market value of $29 billion. However, in 2009 the same figure rises to $45 billion, which is interestingly $7 billion more than in the North America portfolio. The increase in the median market value results firstly from smaller brands such as Benetton, Carlsberg and Swatch dropping from the ranking list after 2001 and secondly from the introduction of brands with very large market value such as HSBC. Furthermore, there are some brands whose market value has more than doubled from 2001 to 2009, for instance LVMH and Nestlé. This increase in market value translates into a smaller proportion of brand value, which decreases from 29% to 21% of market value from 2001 to 2009. The market-to-book ratios of European brand owners are lower than American brand owners; however they are still well above 1.0.

Table 5: Summary characteristics for Europe portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the Europe brand portfolio. The summary characteristics are presented separately for year 2001 and 2009.

	# obs	Mean	Median	Std.Dev.	Min	Max
2001						
Market Value ($ bn)	20	45	29	54	2.4	192
Brand value/Mkt Value (%)	20	35	29	29	1.8	103
Market / Book	20	4.3	3.2	3.5	0.8	14.9
2009						
Market Value ($ bn)	26	55	45	52	3.8	191
Brand value/Mkt Value (%)	26	27	21	26	2.6	202
Market / Book	24	2.7	1.9	2.1	0.5	8.4

Finally, Table 6 presents summary characteristics for the Asia portfolio. Asian brand owner companies are smaller than American and European companies measured by median market value ($29 billion in 2001 and $36 billion in 2009). The brand value/market value ratio is also lower for Asian brands totaling 21% and 17% in 2001 and 2009, respectively. Also market-to-book ratios for Asian brand owners are lower than those of European and American companies. The ratio is only 1.2 in 2009, which is rather low for companies with large amounts of intangible assets.

Table 6: Summary characteristics for Asia portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the Asia brand portfolio. The summary characteristics are presented separately for year 2001 and 2009.

	# obs	Mean	Median	Std.Dev.	Min	Max
2001						
Market Value ($ bn)	6	43	29	34	22	111
Brand value/ Mkt Value (%)	6	27	21	15	13	53
Market / Book	6	2.6	2.5	0.9	1.9	3.5
2009						
Market Value ($ bn)	7	57	36	42	19	140
Brand value/ Mkt Value (%)	7	22	17	9	13	39
Market / Book	7	1.4	1.2	0.8	0.7	2.9

5.2 Univariate analysis

In this subsection I discuss the historical stock market performance of the four brand portfolios. Table 7 shows the plain annualized average monthly returns from the time period August 2001 – October 2010 for the four brand portfolios. In addition, returns excess of the three different benchmarks used are presented. Furthermore, returns are shown separately for the three different weighting methods for each portfolio. These results provide an initial overview of how brand stocks have performed historically and whether the hypotheses tested can be accepted. Afterwards, the results are tested statistically with regression analysis to find out whether they are significant.

Table 7 below shows that the four portfolios yield a positive average return during the nine year study period ranging from 6.07% to 10.21% annually depending on the portfolio and the weighting method. All four portfolios yield positive returns also excess of the risk-free rate. The Global and North America portfolios succeed in beating also the market index and the industry benchmark by at least 0.42 percentage points. On the contrary, Europe and Asia portfolios lose to the market portfolio regardless of the portfolio weighting method by as much as 4.06 percentage points. However, these two portfolios beat the industry portfolio by as much as 1.50 percentage points, which is most likely due to the fact that the industry portfolio is formed solely out of American stocks and hence is not totally comparable to the performance of European and Asian stocks.

The Global and the three regional portfolios perform rather equally if we ignore the excess returns over the market portfolio. Moreover, the returns measured by market value- and equal-weighting methods are very similar. On the other hand when brand values are as used as portfolio weights, the returns are clearly smaller in the case of all four portfolios compared to the market value- and equal-weighted returns. Thus, it seems like the owners of the most valuable brands (companies with highest brand values) do not outperform owners of less valuable brands. In addition, this may be a sign that the stock market does not value brand owners based on the numeric brand values defined by brand consultancies.

Table 7: Annualized returns of the brand portfolios: 2001-2010

This table presents average annualized monthly returns for the Global, North America, Europe and Asia portfolios. Returns are presented separately for the market value-weighted, equal-weighted and brand value-weighted portfolios. Excess returns are calculated over the risk-free rate, the market index and an industry-matched benchmark index. The risk-free rate used is the annualized monthly LIBOR rate in either USD, EUR or JPY. The market index is either MSCI World Index, Wilshire 5000 Index, MSCI Europe Index or MSCI Far-East Index. T-statistics are in parentheses for the comparisons between the brand portfolios and the benchmarks.

Brand portfolio	Portfolio return (%)	Excess return over risk-free rate (%)	Excess return over mkt portfolio (%)	Excess return over industry benchmark (%)
Global				
Mkt value weight	9.55	6.97 (1.2492)*	2.41 (0.3056)	4.85 (0.5691)
Equal weight	10.10	7.49 (1.1432)	2.91 (0.3389)	5.36 (0.5834)
Brand value weight	7.44	4.90 (0.7728)	0.42 (0.0506)	2.82 (0.3139)
North America				
Mkt value weight	9.05	6.47 (1.0834)	5.85 (0.7205)	4.36 (0.4975)
Equal weight	10.21	7.61 (1.1208)	6.98 (0.7976)	5.48 (0.5855)
Brand value weight	7.52	4.98 (0.7690)	4.36 (0.5152)	2.89 (0.3187)
Europe				
Mkt value weight	9.19	6.53 (1.1234)	-1.34 (-0.1548)	4.49 (0.5184)
Equal weight	9.09	6.43 (0.8882)	-1.44 (-0.1491)	4.40 (0.4549)
Brand value weight	7.17	4.56 (0.5878)	-3.18 (-0.3188)	2.56 (0.2555)
Asia				
Mkt value weight	9.03	6.38 (0.8944)	-1.35 (-0.1504)	4.35 (0.4536)
Equal value weight	8.89	6.25 (0.8316)	-1.48 (-0.1598)	4.21 (0.4272)
Brand value weight	6.07	3.48 (0.4813)	-4.06 (-0.4503)	1.50 (0.1560)

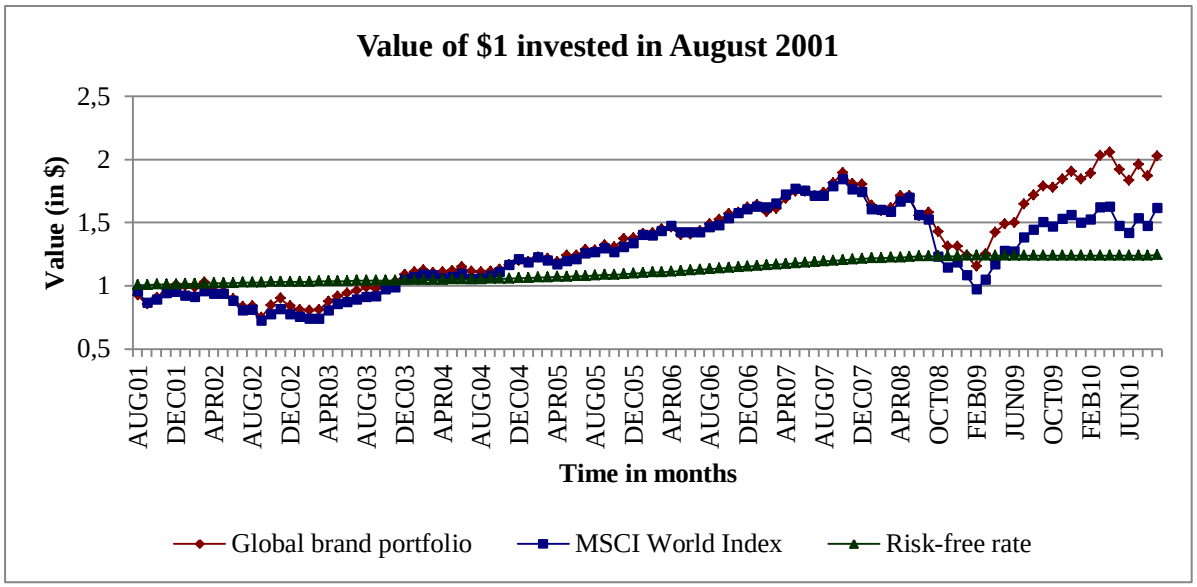
*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Below, Figure 4 illustrates the development of one US dollar invested either in the Global brand portfolio, the MSCI World index or the risk-free rate during the time period August 2001-October 2010. The return for the Global brand portfolio is calculated with the market value-weighting method because that is the most common portfolio weighting method used. Figure 4 shows that the Global brand portfolio and the MSCI World index perform nearly

hand-in-hand until the economic crisis, which started in the fall of 2008. After this, the Global brand portfolio stretches to a clear lead. All in all, the one dollar investment in the Global brand portfolio materializes into 2.0 dollars during nine years. On the contrary, one dollar invested in the MSCI World index grows into 1.6 dollars during the same time period. This translates into a 25% difference to the advantage of the Global brand portfolio.

Figure 4: Monthly market value-weighted returns comparison for the Global brand portfolio

This Figure demonstrates the development during August 2001 and October 2010 of a $1 investment made to the Global brand portfolio, the MSCI World Index and the risk-free rate. The risk-free rate is the USD denominated 30 day LIBOR rate.



5.3 Regression analysis results

Tables 8-10 present the results for the core regressions. I test all four brand portfolios with three separate regressions, each using one of the three weighting methods. I calculate the excess returns over the risk-free rate, which is in this case the monthly LIBOR rate denominated in USD for the Global and North America portfolios, EUR for the Europe portfolio and JPY for the Asia portfolio. I run the regressions for each brand portfolio first with the simple CAPM model, after which I introduce the Fama-French factors to the regressions. The time period is August 2001-October 2010, which results in altogether 108 monthly portfolio returns. In the following three subsections, I discuss the regression results separately for the three different portfolio weighting methods.

5.3.1 Regression analysis results for market value-weighted portfolios

In this subsection, I evaluate the regression results for the market value-weighted portfolios. Table 8 presents the simple CAPM and Fama-French three factor regression results for the Global, North America, Europe and Asia portfolios. I also compare the risk-adjusted results of the North America portfolio to earlier studies, since previous literature about American brands exists.

In the simple CAPM regression, the market value-weighted Global portfolio yields a 0.24% excess monthly (2.92% annualized) return over the risk-free rate, but the alpha is not significant. The highly significant market beta is 0.89, which is close to 1.0, signaling a rather high correlation with the market index. The adjusted R square equals approximately 87%, which indicates that the regression has high explanatory power.

In the risk-adjusted regressions, the alpha increases to 0.40% (4.89% annualized) and becomes significant at the 95% confidence level. The highly significant market beta increases as well to 0.93 and is hence even closer to 1.0 than in the simple CAPM regressions. The SMB factor is negative and highly significant. This indicates that global brand owners tend to behave as large companies' stocks. Moreover, the HML factor is negative and significant at the 95% level. Thus, we can conclude that global brand stocks tend to behave also as growth stocks. Since the betas for the SMB and HML factors are significant, we can argue that the excess returns are not caused by intangible brand value per se. Furthermore, the adjusted R square is approximately 87%. Hence, the market index and SMB and HML factors seem to explain the excess returns created by brand stocks relatively well. Thus, at this stage, H1 is accepted for the Global brand portfolio when using the market value-weighting method, since the risk-adjusted alpha is significantly positive.

The alpha for the North America portfolio is 0.47% (5.84% annualized) in the simple CAPM regression and 0.54% (6.73% annualized) in the three factor model. Both coefficients are statistically significant at the 99% confidence level. The alphas are well in line with Madden et al.'s (2006) result of 0.57%. The market betas in both models are highly significant on a 99% level and very close to 1.0. Hence, they are slightly higher than the 0.85 beta found in the Madden et al. (2006) study.

Table 8: Regression results for the market value-weighted Global, North America, Europe and Asia portfolios

Monthly CAPM and Fama-French three factor regressions of the market value-weighted Global, North America, Europe and Asia portfolio returns on the MKT, SMB and HML factors during August 2001 - October 2010. The dependent variable is the brand portfolio return less the risk-free rate. The alpha is the excess return, MKT is the market premium, SMB is the monthly return difference between small and big companies as percentage points and HML is the monthly return difference between companies with high book-to-market value and low book-to-market value as percentage points. The risk-free rate is either the USD, EUR or JPY denominated LIBOR rate and the market index is either MSCI World Index, Wilshire 5000 Index, MSCI Europe Index or MSCI Far-East Index. T-statistics are in parentheses. Adjusted R^2 describes the explanatory power of the model. The two last rows of the table present the annualized alpha and the number of observations.

Market value-weighted								
	Global		North America		Europe		Asia	
	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor
α	0.0024	0.0040	0.0047	0.0054	0.0012	0.0013	0.0003	0.0009
	(1.3424)	(2.3448)**	(3.0684)***	(3.5559)***	(0.3717)	(0.4220)	(0.0677)	(0.1884)
βMKT	0.8851	0.9297	1.0228	1.0424	0.6445	0.6661	0.7721	0.7855
	(24.0302)***	(25.8164)***	(30.7663)***	(27.0502)***	(12.0667)***	(10.5115)***	(8.7460)***	(8.8915)***
βSMB		-0.2871		-0.1648		-0.0604		-0.3743
		(-3.6940)***		(-2.8396)***		(-0.4984)		(-1.6749)*
βHML		-0.2361		0.0592		-0.0710		0.1312
		(-2.5224)**		(1.2500)		(-0.4147)		(0.4916)
Adj R^2	0.8434	0.8663	0.8983	0.9046	0.5747	0.5684	0.4136	0.4186
Annualized alpha	2.92%	4.89%	5.84%	6.73%	1.39%	1.62%	0.36%	1.05%
# obs	108	108	108	108	108	108	108	108

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

The SMB factor is -0.16 and statistically significant, which indicates that North American brand owners, like global brand owners, are large firms. This result is in line with previous results, though Madden et al. (2006) show a more negative SMB factor of -0.36. The HML factor on the other hand is slightly positive 0.059. However, the coefficient lacks significance. On the contrary, Madden et al. (2006) find a negative -0.36 HML coefficient for the market value-weighted portfolio. They conclude that American brand stocks have low book-to-market ratios because due to accounting conventions, the brand values are only reflected in the market value, but not in the book value. My results are contradicting with theirs because the positive HML factor signals that American brand stocks have high B/M ratios, which again implies that American brand owners are value companies. The explanatory power of both models is even higher for the North America portfolio than in the case of the Global portfolio.

Thus, H1 is accepted for the North America portfolio, since the alphas are positive and highly significant. All in all, the results for the North America portfolio are rather similar to the results of the Global portfolio, except that the HML factors have opposite signs. However, we should keep in mind that the Fama-French factors used for these two portfolios are not the same, hence we cannot compare the results directly.

For the Europe portfolio, the simple CAPM alpha is 0.12% (1.39% annualized) while it increases to 0.13% (1.62% annualized) when the risk factors are added. However, both of the alphas are statistically insignificant. The market betas are 0.64 (CAPM) and 0.67 (three factor) and they are again highly significant in both models. However, the coefficients are clearly lower than in the case of the Global and North America portfolios indicating that the Europe portfolio correlates less with the market index than global and North American brand owners.

The SMB factor is slightly negative, which indicates that unlike global and North American brands, European brand owners are not necessarily large companies, since the factor is not strongly negative. However, the SMB factor is insignificant, which means that it is not meaningful to draw strong conclusions on whether European brand owners behave like large or small stocks. The HML factor is also negative and insignificant. Thus, it is difficult to state definitely whether European brand stocks are value or growth companies. The negative factor suggests that European brand owners tend to behave as growth companies. The adjusted R squares in both models are significantly lower for the Europe portfolio than for the Global and North America portfolios. This weaker explanatory power of the regressions may be due to

the smaller sample size of the Europe portfolio. In the case of the Europe portfolio, H1 cannot be accepted because the alphas lack significance and they are only slightly positive.

For the Asia portfolio the alphas are even smaller than in the case of the Europe portfolio, receiving values of 0.03% (0.36% annualized) and 0.09 (1.05% annualized) in the simple CAPM and three factor model respectively. Furthermore, the alphas are statistically insignificant. The Asia portfolio correlates moderately with the Asian market index, the market betas being highly significant and 0.78 in both models.

The SMB factor is strongly negative and statistically significant at the 90% level. Thus, it appears that Asian brand stocks are clearly large companies. This makes sense, since Toyota, Samsung, Canon and Sony to mention a few are all large companies even on global standards. The HML factor on the other hand is clearly positive, though it lacks significance. However, this indicates that Asian brand owners are value companies with high B/M ratios. On the other hand as already mentioned previously in Section 5.1, Asian brand owners have lower market-to-book ratios than American and European brand owners, though the ratios are above 1.0 on average. Hence, the positive HML factor is somewhat contradicting. The explanatory power is even weaker for the Asia portfolio than for the Europe portfolio, reaching only 41% in both models. This is probably due to the significantly smaller sample size of the Asia portfolio compared to the size of the global and other regional portfolios. Thus, similar to the Europe portfolio we cannot accept H1 due to the insignificance and minor alphas received in both regressions.

To conclude, after analyzing the regression results for the market value-weighted portfolios, H1 is accepted for the Global and North America portfolios and rejected for the Europe and Asia portfolios. Thus, it seems at this stage that brand stocks behave differently in Europe and Asia than what has been previously discovered for American stocks. To gain a deeper understanding of the performance of the brand portfolios, I next calculate the portfolio returns with the equal-weighting method. In the following subsection I discuss the regression results for these portfolios.

5.3.2 Regression analysis results for equal-weighted portfolios

Table 9 presents regression results for the equal-weighted portfolios. The equal-weighted Global portfolio generates lower alphas than the market value-weighted portfolio. The simple CAPM alpha equals 0.21% (2.66% annualized) and the three factor model generates a slightly higher alpha of 0.23% (2.76% annualized). Both coefficients are however statistically insignificant while the three factor alpha of the market value-weighted portfolio was significant. The highly significant market betas in both models are 1.05, which is higher and closer to 1.0 than in the market value-weighted regressions. The SMB factor is very close to zero and insignificant, thus it is not meaningful to draw conclusions about the size of the companies. The HML factor is barely significant at the 90% level and the factor is similar to that generated by the market value-weighted portfolio. Thus, it seems again that global brand owners behave as growth stocks. The explanatory power of both models is again rather high at 87%. By the analysis of the equal-weighted regression results, I conclude that H1 cannot be accepted any more for the Global portfolio because the positive alphas lack significance in both models.

The results for the North America portfolio are rather similar to those of the market value-weighted portfolio. Alphas in both models are significant at the 99% level and receive values of 0.56% (6.88% annualized) and 0.47% (5.80% annualized) for the CAPM and three factor model respectively. The market beta is slightly higher at 1.16 in the CAPM regression compared to the beta of the three factor model, which is 1.07. Both betas are in line with the betas of the market value-weighted regressions. The SMB factor is slightly positive and insignificant while in the market value-weighted regression it was negative and statistically significant. Hence, there is no further proof that American brand stocks would be particularly large companies. On contrary, the HML factor is clearly positive and statistically significant at the 99% level. This result is again somewhat differing from the coefficient received in the market value-weighted regression, where the factor was only slightly positive and insignificant. However, it seems that American brand stocks tend to behave like value companies. This result continues to contradict with Madden et al.'s (2006) findings stating that American brand stocks would behave as growth stocks. However, Madden et al. (2006) did not use equal-weighting in their methodology, therefore the coefficients are not entirely comparable. The R squares are similar to those of the market value-weighted regressions,

namely, very high at approximately 90%. To conclude, H1 is still accepted for the North America portfolio because the alphas remain strongly positive and statistically significant.

When portfolio returns are calculated by using the equal-weighting method for the Europe portfolio, the alphas decrease and turn negative. The simple CAPM alpha equals -0.02% (-0.33% annualized) and the three factor alpha is a little bit more negative at -0.03% (-0.39% annualized). However, both coefficients lack significance. The market betas are both highly significant and approximately 0.85, which is clearly higher than in the market value-weighted regressions (0.65). Hence, the equal-weighted Europe portfolio correlates more with the market index than the market value-weighted. The SMB and HML factors are both close to zero and insignificant, thus they do not explain the returns in the case of the Europe portfolio. The explanatory power increases a little bit in relation to the market value-weighted regressions. However, it is still moderate at 65%. H1 remains naturally rejected due to the negative and insignificant alphas.

The alphas for the Asia portfolio are again insignificant and rather close to zero, hence it is not reasonable to make any statements about their historical over or underperformance. The highly significant market betas increase to approximately 0.83 compared to 0.78 received in the market value-weighted regressions. The SMB factor is again strongly negative and significant at the 90% level, which further proves that Asian brand stocks' returns correlate with those of large companies. The HML factor on the other hand lacks again significance and this time it is close to zero. This decreases the credibility of my previous conclusion concerning Asian brand stocks behaving like value companies. Thus, I conclude that it is not meaningful to draw any conclusions about whether Asian brand stocks are value or growth companies. In addition, the explanatory power of both models remains weak at only 43%.

Table 9: Regression results for the equal-weighted Global, North America, Europe and Asia portfolios

Monthly CAPM and Fama-French three factor regressions of the equal-weighted Global, North America, Europe and Asia portfolio returns on the MKT, SMB and HML factors during August 2001 - October 2010. The dependent variable is the brand portfolio return less the risk-free rate. The alpha is the excess return, MKT is the market premium, SMB is the monthly return difference between small and big companies as percentage points and HML is the monthly return difference between companies with high book-to-market value and low book-to-market value as percentage points. The risk-free rate is either the USD, EUR or JPY denominated LIBOR rate and the market index is either MSCI World Index, Wilshire 5000 Index, MSCI Europe Index or MSCI Far-East Index. T-statistics are in parentheses. Adjusted R^2 describes the explanatory power of the model. The two last rows of the table present the annualized alpha and the number of observations.

Equal-weighted								
	Global		North America		Europe		Asia	
	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor
α	0.0021	0.0023	0.0056	0.0047	-0.0002	-0.0003	-0.0001	0.0010
	(1.1565)	(1.1688)	(3.2039)***	(2.8619)***	(-0.0781)	(-0.0888)	(-0.0322)	(0.2122)
βMKT	1.0542	1.0538	1.1582	1.0679	0.8547	0.8553	0.8267	0.8388
	(27.0293)***	(25.6102)***	(31.0014)***	(25.7808)***	(14.2250)***	(11.9728)***	(9.0061)***	(9.1435)***
βSMB		0.0083		0.0501		0.0071		-0.4117
		(0.0929)		(0.8027)		(0.0518)		(-1.7745)*
βHML		-0.1732		0.2146		-0.0113		0.0096
		(-1.6187)*		(4.2175)***		(-0.0587)		(0.0347)
Adj R^2	0.8720	0.8728	0.8997	0.9139	0.6530	0.6463	0.4281	0.4344
Annualized alpha	2.66%	2.76%	6.88%	5.80%	-0.33%	-0.39%	-0.18%	1.23%
# obs	108	108	108	108	108	108	108	108

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

To conclude, the regression results for the equal-weighted portfolios do not differ largely from the market value-weighted results. The major difference is that the alphas for the Global portfolio lose their significance when returns are equal-weighted. Thus, I am obliged to reject H1, which was already initially accepted when the market value-weighted results were analyzed. Moreover, H1 is still accepted for North America portfolio and rejected for Europe and Asia portfolios. The value anomaly seems to explain at least part of the excess returns generated by the North America brand portfolio, though this was not evident in the case of the market value-weighted portfolio. Contrary to Edmans (2011), I find that alphas do not increase when equal weights are used as portfolio weights. Instead, the market value-weighted portfolios yield higher alphas nearly every time. In the following subsection I will analyze the regression results for the brand value-weighted portfolios.

5.3.3 Regression analysis results for brand value-weighted portfolios

Finally, to explore whether brand values affect monthly stock returns, I use brand values assigned by Interbrand as portfolio weights. This methodology has been employed previously by Madden et al. (2006), hence it is reasonable to follow their path. From these regression results I am able to state whether hypothesis number two can be accepted or rejected. To remind, H2 states that brand value-weighting should increase excess returns because stocks with the highest brand values are expected to outperform stocks with lower brand values. The expected higher returns of the stocks with the highest brand values are overweighed in the brand portfolios due to the brand value weighting method. Hence, the overall monthly returns of the portfolios are driven up by this procedure. However, as seen already in section 5.1, in the univariate analysis, I concluded that brand value-weighting does not enhance the excess returns, but quite the opposite, it decreases them. In Table 10, the regression results are presented for the brand value-weighted portfolios.

Table 10: Regression results for the brand value-weighted Global, North America, Europe and Asia portfolios

Monthly CAPM and Fama-French three factor regressions of the brand value-weighted Global, North America, Europe and Asia portfolio returns on the MKT, SMB and HML factors during August 2001 - October 2010. The dependent variable is the brand portfolio return less the risk-free rate. The alpha is the excess return, MKT is the market premium, SMB is the monthly return difference between small and big companies as percentage points and HML is the monthly return difference between companies with high book-to-market value and low book-to-market value as percentage points. The risk-free rate is either the USD, EUR or JPY denominated LIBOR rate and the market index is either MSCI World Index, Wilshire 5000 Index, MSCI Europe Index or MSCI Far-East Index. T-statistics are in parentheses. Adjusted R^2 describes the explanatory power of the model. The two last rows of the table present the annualized alpha and the number of observations.

Brand value-weighted								
	Global		North America		Europe		Asia	
	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor	CAPM	3 factor
α	0.0002	0.0011	0.0035	0.0035	-0.0019	-0.0026	-0.0022	-0.0017
	(0.1305)	(0.6051)	(2.1564)**	(2.2001)***	(-0.4524)	(-0.6127)	(-0.4786)	(-0.3520)
βMKT	1.0291	1.0519	1.1187	1.0888	0.8726	0.8741	0.7998	0.8108
	(26.4651)***	(26.5100)***	(31.9627)***	(26.8024)***	(12.2517)***	(10.3670)***	(8.8771)***	(8.9517)***
βSMB		-0.1409		-0.0805		0.1210		-0.3137
		(-1.6460)		(-1.3165)		0.7494		(-1.3691)
βHML		-0.2772		0.1379		-0.1403		0.0986
		(-2.6876)***		(2.7633)***		(-0.6162)		(0.3605)
Adj R^2	0.8673	0.8766	0.9051	0.9107	0.5822	0.5778	0.4210	0.4205
Annualized alpha	0.30%	1.37%	4.29%	4.34%	-0.22%	-3.10%	-2.59%	-1.98%
# obs	108	108	108	108	108	108	108	108

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

For the Global portfolio, the alpha in both models is positive, but clearly lower than when using other portfolio weighting methods. Both alphas also lack significance. The rest of the factors are rather similar to the ones received from previous regressions. Thus, there is no need to analyze them further. To conclude, I reject H2 for the Global portfolio, because the brand value-weighted portfolio performs worse than the market value- and equal-weighted portfolios and moreover the positive annualized alphas ranging 0.81% - 1.37% are insignificant.

In the case of the North America portfolio, the monthly alpha of 0.35% (same in both models) falls clearly short of the equivalent 1.32% monthly alpha obtained by Madden et al. (2006). The highly significant market betas are somewhat higher than in the previous regressions indicating that the brand value-weighting causes the portfolio to be more volatile than the stock market in general. The SMB factor is insignificant and slightly negative, which is in line with the coefficient received in the market value-weighted regression. The HML factor on the other hand is 0.21 and significant at the 99% level. This provides further evidence that American brand stocks tend to be classified as value stocks. Interestingly Madden et al. (2006) find a -0.09 HML factor in their study, which is completely opposite to my finding. On the other hand, the time period in my study is different from theirs. Hence, it is possible that the difference in the sign has changed over time. H2 is rejected also in this case, because the brand value-weighting does not enhance the outperformance, but on the contrary, weakens excess returns.

The alphas of the Europe portfolio become even more negative when the portfolio is weighted with brand values. The three factor alpha is as low as -0.26% (-3.10% annualized). However, the alphas remain insignificant like before. The rest of the factors are in line with previous regression results, hence no new information is emerged from the brand value-weighted regression. Following the results obtained for the Global and North America portfolios, I reject H2 because using brand values as portfolio weights deteriorates the portfolio returns instead of enhancing them.

Finally, also for the Asia portfolio alphas decrease compared to the alphas measured for the market value- and equal-weighted portfolios. Similar to the other regional portfolios, the rest of the coefficients do not differ largely from the other regressions. All in all, I reject H2 also for the Asia portfolio. Unfortunately only the North America portfolio's brand value-weighted regression results are fully comparable to the Madden et al. (2006) research results because

they study only American stocks. Furthermore, similar studies for global, European or Asian stocks do not exist.

Altogether, I reject H2 for all four brand portfolios because in every case the brand value-weighted regressions generate weaker alphas compared to the market value- and equal-weighted regressions. This result is contrary to the findings of Madden et al. (2006) concerning their American brand portfolio. It seems that brand stocks with the largest brand values do not outperform stocks with lower brand values. However, I do not compare directly returns of stocks with high brand values to returns of stocks with low brand values. Hence, it is not certain that this is the true case. Furthermore, if brand value credibly measures the financial value of intangible assets (brands in this case), and if brand equity models by Aaker (1995) and Srivastava et al. (1998) hold, meaning that brands create tangible financial benefits to the firm, companies with more valuable brand assets should be seen as better investment cases than companies with less valuable assets. Thus, it seems that the stock market does not distinguish the specific numeric brand value estimates assigned by an independent brand consultancy. On the contrary, the stock market treats publicly listed brand owners included in a brand ranking list as equal or values them based on some other factors. This argument is also against previous brand relevance research results, which state that the stock market does incorporate brand values and hence numeric brand values assigned by consultancies are relevant and accurate (see e.g. Kerin et al., 1998 and Barth et al., 1998a).

Finally, to further analyze the data sample, I conduct some robustness tests. I form two additional brand portfolios and a winsorized portfolio. I present the results for the robustness tests in the following subsection.

6 Robustness tests

The preceding subsection showed that only the North America brand portfolio is able to beat its benchmark and create genuine excess returns. In this subsection, I conduct robustness tests to further analyze the sample. I form two new portfolios, the "List remainers" portfolio and the "Newcomers" portfolio. The former is a hypothetical portfolio demonstrating an investment case where the portfolio is formed based on the 2001 list and each year only brand owners that remain on next year's list are left in the portfolio. In other words, drop-outs are eliminated from the portfolio each year. The "Newcomers" on the other hand are brand owners that are making a début on the list each year. Therefore, each year the portfolio consists of different stocks. The analysis of these two portfolios will elaborate on hypotheses H3, H4 and H5. Furthermore, I form a winsorized portfolio of the North America portfolio where I eliminate the three best and worst performing stocks during the nine year time period from the portfolio. This is done primarily because there is a strong suspicion, that a few well-performing stocks might influence the overall performance of the portfolio too much. Secondly, also Edmans (2011) uses winsorization in his study to certify that excess returns truly exist. In the following subsection, I present the descriptive statistics, univariate and regression analysis results for the "Newcomers" and the "List remainers" portfolios.

6.1 Analysis of additional portfolios

This subsection presents the summary descriptive statistics for the two additional portfolios, the univariate analysis results and finally I discuss the regression results.

6.1.1 Descriptive statistics for additional portfolios

Table 11 presents summary characteristics for the "Newcomers" portfolio. This portfolio consists of companies that each year are new on Interbrand's Global Top 100 Brands ranking list. The starting year for the summary characteristics is year 2002 instead of 2001 because newcomers are calculated from the second ranking list, not from the first one where all list members can be considered as newcomers. The figures for 2002 and 2009 differ significantly

from each other. In 2002, newcomers are large companies with a median market value of $48 billion, where as in 2009 the respective figure is only $4.2 billion. This can be explained by the fact that 2002 newcomers include large companies such as Johnson & Johnson, JP Morgan, Morgan Stanley and L'Oréal. On the other hand 2009 newcomers are smaller companies, for example Burberry and Campbell Soup Company. The brand value/market value ratio is also significantly smaller in 2002 (only 14%) than in 2009 (44%) for the same reason. The median market-to-book ratio is very high (5.2) in 2002, while in 2009 it is only 2.6, which is in line with the ratio of the Global brand portfolio. The high ratio of 2002 is driven up by Accenture, which has an M/B ratio of 29.4.

Table 11: Summary characteristics for "Newcomers" portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the "Newcomers" brand portfolio. The summary characteristics are presented separately for year 2002 and 2009. Characteristics are presented for year 2002 instead of year 2001 because newcomers are defined starting from year 2002.

	# obs	Mean	Median	Std.Dev.	Min	Max
2002						
Market Value ($ bn)	8	50	48	49	7.1	161
Brand value/ Mkt Value (%)	8	18	14	19	1.6	62
Market / Book	8	7.8	5.2	9.2	1.2	29.4
2009						
Market Value ($ bn)	5	7.7	4.2	6.3	2.3	17
Brand value/ Mkt Value (%)	5	49	44	31	23	99
Market / Book	5	4.7	2.6	4.3	2.3	12.3

The "List remainers" portfolio consists of 53 companies that stay on the Interbrand Global Top 100 Brands ranking list for the entire study period of nine years. Table 12 shows that the median market value increases by 20% in nine years from $34 billion in 2001 to $41 billion in 2009. The median proportion of brand value out of market value is higher in this portfolio than in the other portfolios, centering around 35% in 2001 and 27% in 2009. This is natural because brands that stay on the list for several years can be seen as the most powerful and strongest brands and hence have a larger brand value. The market-to-book ratio is also high for the "List remainers" portfolio decreasing from 4.1 in 2001 to 2.9 in 2009. Next, I will present the univariate analysis of these two additional portfolios.

Table 12: Summary characteristics for "List remainers" portfolio

This Table presents the number of observations, mean, median, standard deviation, minimum and maximum values for market value in US dollars, brand value-to-market value ratio and the market-to-book ratio for the "List remainers" brand portfolio. The summary characteristics are presented separately for year 2001 and 2009.

	# obs	Mean	Median	Std.Dev.	Min	Max
2001						
Market Value ($ bn)	53	61	34	80	3	407
Brand value/ Mkt Value (%)	53	45	35	34	1.8	133
Market / Book	50	7.9	4.1	11.4	0.8	69.1
2009						
Market Value ($ bn)	53	61	41	54	4.9	246
Brand value/ Mkt Value (%)	53	30	27	18	2.6	99
Market / Book	49	3.9	2.9	3.3	0.6	16.0

6.1.2 Univariate analysis for additional portfolios

Table 13 presents the univariate return comparisons for the two additional portfolios. The "Newcomers" and "List remainers" portfolios generate positive returns measured excess of the risk-free rate, the market index and the industry-matched portfolio. They also outperform the other four brand portfolios despite of the portfolio weighting method used. Just like in the case of the Global, North America, Europe and Asia portfolios, the brand value-weighting seems to deteriorate the outperformance for the "List remainers" portfolio. However, for the "Newcomers" portfolio the effect is exactly the opposite, which suggests that H2 could finally be accepted. The univariate analysis implies that also H3 and H4 could be accepted. However, monthly portfolio returns have to be analyzed also statistically to be able to draw such conclusions.

Figure 5 on the other hand illustrates the historical performance of these two portfolios in relation to the Global brand portfolio during the time period August 2002 – October 2010. All three portfolios develop hand in hand until year 2005, after which "Newcomers" portfolio seems to become more volatile. A person who had invested one US dollar into the "List remainers" portfolio in August 2002 would have $2.6 in October 2010 while the one dollar investment transforms into $2.4 in the Global brand portfolio and into $2.2 in the "Newcomers" portfolio. However, the "List remainers" portfolio is a hypothetical portfolio, which cannot be replicated in real life because it is impossible to know beforehand which

brands stay on the ranking list for the whole nine year period. Therefore this comparison is not realistic, but only a hypothetical portrayal of the performance of different kinds of brand portfolios. Next, I will move on to the actual regression analysis of these two additional portfolios.

Table 13: Annualized returns of the additional portfolios: 2001-2010

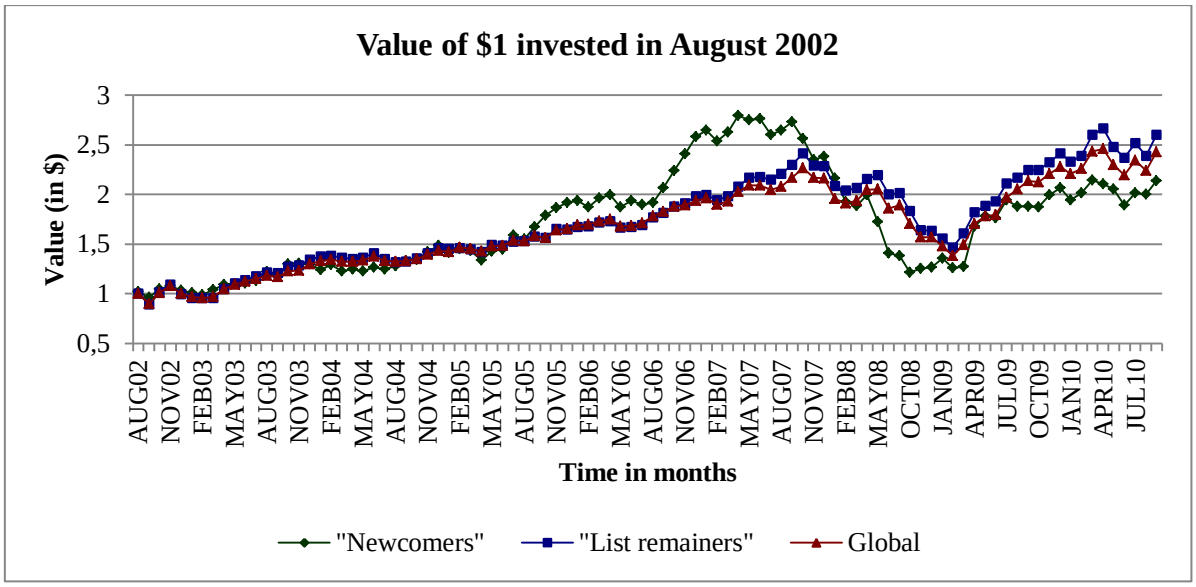
This table presents average annualized monthly returns for the ”Newcomers” and the “List remainers” portfolios. Returns are presented separately for the market value-weighted, equal-weighted and brand value-weighted portfolios. Excess returns are calculated over the risk-free rate, the market index and an industry-matched benchmark index. The risk-free rate used is the annualized monthly LIBOR rate in USD and the market index is the Wilshire 5000 Index. T-statistics are in parentheses for the comparisons between the brand portfolios and the benchmarks.

Brand portfolio	**Portfolio return (%)**	**Excess return over risk-free rate (%)**	**Excess return over mkt portfolio (%)**	**Excess return over industry benchmark (%)**
“Newcomers”				
Mkt Value Weight	12.55	9.89 (1.2163)	1.74 (0.1770)	5.20 (0.5008)
Equal Value Weight	12.82	10.14 (1.2749)*	1.98 (0.2038)	5.44 (0.5308)
Brand Value Weight	13.41	10.72 (1.3946)*	2.52 (0.2651)	6.00 (0.5962)
”List remainers”				
Mkt Value Weight	10.70	8.09 (1.3553)*	3.49 (0.4267)	5.95 (0.6761)
Equal Value Weight	10.59	7.98 (1.2024)	3.38 (0.3908)	5.84 (0.6312)
Brand Value Weight	7.52	4.98 (0.7739)	0.50 (0.0590)	2.90 (0.3200)

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Figure 5: Monthly market value-weighted returns comparison for the "Newcomers", "List remainers" and Global brand portfolios

This Figure demonstrates the development during August 2002 and October 2010 of a $1 investment made to the Global brand portfolio, the "Newcomers" portfolio and the "List remainers" portfolio.



6.1.3 Regression analysis for additional portfolios

Table 14 presents the regression results for the "Newcomers" and "List remainers" portfolios. Results for the three different portfolio weighting methods are all presented in the same table. For the "Newcomers" portfolio alphas are positive in the case of all three weighting methods, ranging from 2.22% to 3.88% on annualized basis. However, they lack statistical significance. The "Newcomers" portfolio generates similar returns compared to the Global portfolio, except in the case of the brand value-weighted portfolio, where alphas exceed those of the Global portfolio clearly. An interesting aspect is that this is the only portfolio so far where the alphas are largest for the brand value-weighted portfolio compared to the other portfolios. Using brand values as portfolio weights increases the risk-adjusted annualized excess return by 0.34-1.57 percentage points depending whether compared to the market value- or equal-weighted portfolio return. The reason explaining this might be that some of the newcomers have been assigned remarkably high brand values by Interbrand than newcomers on average and in addition have performed particularly well, driving up the portfolio return. Furthermore, the small sample size of the "Newcomers" portfolio causes the portfolio weight of each stock to differ greatly depending on which weighting method is used. The difference is clearest when comparing equal weights to brand value weights.

Table 14: Regression results for the "Newcomers" and "List remainers" portfolios

Monthly regressions of the market value-, equal- and brand value-weighted "List remainers" and "Newcomers" portfolio returns on the MKT, SMB and HML factors. The time period is August 2001 - October 2010 for the "List remainers" portfolio and August 2002 – October 2010 for the "Newcomers" portfolio. The dependent variable is the brand portfolio return less the risk-free rate. The alpha is the excess return, MKT is the market premium, SMB is the monthly return difference between small and big companies as percentage points and HML is the monthly return difference between companies with high book-to-market value and low book-to-market value as percentage points. The risk-free rate is the USD denominated LIBOR rate and the market index is the MSCI World Index. T-statistics are in parentheses. Adjusted R^2 describes the explanatory power of the model. The two last rows of the table present the annualized alpha and the number of observations.

		"Newcomers"		"List remainers"	
		CAPM	**3 factor**	**CAPM**	**3 factor**
Market value-weighted	α	0.0025	0.0028	0.0032	0.0045
		(0.4941)	(0.5427)	(1.4345)	(2.1832)**
	βMKT	0.8306	0.7966	0.9106	0.9434
		(7.8329)***	(6.9807)***	(19.9373)***	(21.5039)***
	βSMB		0.0523		-0.1995
			(0.2068)		(-2.1077)**
	βHML		0.4878		-0.5108
			(1.4578)		(-4.4787)***
	Adj R2	0.3885	0.3893	0.7875	0.8249
	Annualized alpha	3.08%	3.45%	3.89%	5.56%
Equal-weighted	α	0.0021	0.0018	0.0026	0.0025
		(0.4673)	(0.3996)	(1.2368)	(1.2233)
	βMKT	0.9277	0.8907	1.0501	1.0415
		(9.9759)***	(8.8592)***	(24.3703)***	(23.9390)***
	βSMB		0.1488		0.0696
			(0.6680)		(0.7413)
	βHML		0.2841		-0.3902
			(0.9637)		(-3.4497)***
	Adj R2	0.5091	0.5052	0.8471	0.8608
	Annualized alpha	2.55%	2.22%	3.15%	3.06%
Brand value-weighted	α	0.0032	0.0031	0.0003	0.0009
		(0.6849)	(0.6498)	(0.1384)	(0.4868)
	βMKT	0.8273	0.8062	1.0392	1.0542
		(8.5780)***	(7.6973)***	(25.7122)***	(25.7414)***
	βSMB		0.0747		-0.0876
			(0.3218)		(-0.9909)
	βHML		0.1911		-0.3461
			(0.6221)		(-3.2505)***
	Adj R2	0.4332	0.4237	0.8605	0.8721
	Annualized alpha	3.88%	3.79%	0.33%	1.14%
	# obs	96	96	108	108

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

Hence, I accept H2 for the first time because in the case of newcomers, using brand values as portfolio weights enhances the excess returns generated. Thus, when it comes to newcomers, the brand value determined by Interbrand seems to have a positive impact on the stock market performance of the brand owner. This result is consistent with the results of Madden et al. (2006), who find that brand value-weighting increases excess returns for American brands. However, the brand owners with particularly high brand values might outperform stocks with lower brand values due to some other reasons than brand or intangible asset related reasons.

The SMB factor is positive in all three regressions, which is different from the other brand portfolios, which had a negative factor in almost every case. However, the coefficients are not significant and some of them are as small as 0.05. Thus, companies that are new on the list seem to behave as small companies. This is comprehensible because newcomers are more likely to be small growth companies that are still building their brand equity and global presence. Madden et al. (2006) did not study newcomers separately in their study, thus it is impossible to compare the result with previous results.

The HML factor is strongly positive in all three regressions, however these factors too lack statistical significance. By looking at the HML factors it seems that newcomers would behave as value companies. On the other hand, the market-to-book ratios presented earlier in Table 11 are very high especially in the beginning of the study period. This again indicates that investors believe these companies to have good growth expectations. It may be possible that both anomalies, the small company anomaly and the value company anomaly, would explain the excess returns generated by the ”Newcomers” portfolio. It is important to note however, that the sample size of the ”Newcomers” portfolio is small, less than ten firms per year, which decreases the credibility of the regression model. This weakness is also seen in the average adjusted R square values received for the regressions, which range from 39% to 51%.

Thus, it is not reasonable to accept H3, because despite alphas are positive they lack significance. Thus, it is not certain that list inclusion automatically leads to superior stock performance. This conclusion is contrary to Edmans (2011), who finds that newcomers outperform the market. Moreover, he finds that socially responsible mutual funds do indeed increase their overweight of companies listed on the “America’s Best Places to Work” ranking list over time. However, their stock purchases of newcomers explain only 0.02% of the annual outperformance. He adds that the main reason why SRI funds’ purchase behavior fails to explain a larger portion of the outperformance is that there does not exist that many

SRI funds. Thus, their purchases have too little price impact. Furthermore, Edmans (2011) finds that institutional investors underweight companies on the ranking list. Thus, institutional ownership does not explain outperformance either. Finally, Edmans (2011) notes, that due to the small number of newcomers, it is unlikely to have statistically significant results, and thereby draw inferences.

However, the reasons causing the indicated excess returns of newcomers in my study are uncertain. The positive alpha is not necessarily caused by the list inclusion per se or the increased demand for the stock following the inclusion. It may be caused by the "small firm" or "value firm" anomalies or by an additional variable that is omitted from the regression model. Whether brand mutual funds' increased willingness to buy brand stocks new to the list is causing the excess returns of the "Newcomers" portfolio is also uncertain. Furthermore, studying the purchases of these brand mutual funds or purchases of institutional investors is out of the scope of my thesis, but would be an interesting area for future research.

Now, I will move on to the analysis of the "List remainers" portfolio. The "List remainers" portfolio on the other hand represents a portfolio of global brand stocks that possess the strongest brands that remain on the Interbrand's Global Top 100 Brands ranking list trough out the years 2001-2009. The alphas in the regressions are positive in both models and for all three weighting methods, but unfortunately they mostly lack significance. When compared to the alphas of the Global brand portfolio, it seems as the "List remainers" portfolio beats the Global portfolio with at least 0.5 percentage points in the cases of the market value- and equal-weighted portfolios. On the other hand, the excess returns are somewhat equal for the brand value-weighted portfolios for the Global and "List remainers" portfolios.

The SMB factors change clearly when the weighting method is changed ranging from -0.20 in the market value-weighted regression to 0.07 in the equal-weighted regression. However, only the former reaches statistical significance. Thus, we can conclude with a caution that extremely strong brand stocks remaining on the brand ranking list for a decade behave as large companies. This is easy to accept since the "List remainers" portfolio includes very large companies like General Electric, The Coca-Cola Company, IBM, Intel, Royal Dutch Shell, Microsoft and Citigroup for example. The HML factors are similar in all weighting method cases, ranging from -35% to -51%, and they are all statistically significant at the 99% confidence level. Therefore, I conclude that "List remainers" tend to correlate with growth

stocks. In addition, the adjusted R squares are rather high in all regressions, which indicates, that the models tend to explain the returns of the "List remainers" well.

Even though the alphas are positive, H1 cannot be fully accepted for the "List remainers" because they lack statistical significance in most cases. Furthermore, H2 is rejected because the utilization of brand values as portfolio weights decreases the outperformance of the portfolio. H4 is as well rejected because the alpha of the "List remainers" portfolio exceeds the alpha of the Global brand portfolio when returns are calculated with market value- and equal-weighting. When portfolios are brand value-weighted, the alphas are somewhat equal. On the other hand, the t-test of sample means conducted between the monthly portfolio returns of the "List remainers" and the Global portfolio (shown in Appendix 2), reveals that average returns do not differ significantly. In any case, H4 is rejected because there is no evidence that the Global portfolio would outperform the "List remainers" either. This result contradicts with Edmans (2011) result who concludes that stocks remaining on the "America's Best Places to Work" ranking list for the entire study period generate weaker returns than the annually updated portfolio because the stock market learns about the true value of intangible assets that the sample companies possess. In my study it seems like the stock market does not incorporate the intangible brand values even in the case of the world's most powerful brands that have remained successful throughout decades. However, the superior performance of the "List remainers" portfolio may be resulting from American brands that represent 57% of the portfolio.

6.2 Longevity analysis

To explore the longevity of excess returns, I run additional separate regressions for the years 2001-2005 for the "List remainers" portfolio to test whether the drift disappears eventually. Even though I already rejected H1 earlier stating that due to lack of statistical significance the positive alphas are not a self-evident sign of outperformance, it is interesting to see how the alphas evolve during time. Also Edmans (2011) used this method in his study. The longevity analysis is conducted for the "List remainers" portfolio because this portfolio includes the strongest brands that have remained on the list for nearly a decade. Therefore, the stock market is expected to be well aware of their existence and brand strength.

Table 15 below shows that annualized alphas are very high and statistically significant during the first year, after which they begin to decrease. The diminution seems to continue for two to three years depending on which portfolio weighting method is used. In year 2004 the alpha exceeds the previous year's alpha in the case of the market value-weighted portfolio. For the equal- and brand value-weighted portfolios the surpassing takes place in year 2005. Thus, there is no clear sign of excess returns disappearing eventually and becoming insignificant in year five. H5 is therefore rejected. This result is contradicting with Edmans' (2011) findings. It seems that the stock market does not learn about the relevance of brands as intangible assets even though their quantified value is publicly communicated annually in numerous media. Hence, lack of information is not causing the excess returns.

Table 15: Longevity analysis of "List remainers"

Monthly three factor risk-adjusted regressions of the market value-, equal- and brand value-weighted "List remainers" portfolio returns run separately for the years 2001-2005. Alphas are presented in the annualized percentage format and t-statistics are in parentheses. The last row shows the number of observations. The MKT, SMB, HML and R^2 variables are left out due to their similarity with previous regressions.

	Weighting method		
Year	Market value	Equal	Brand value
2001	24.08	27.38	19.86
	(2.8230)**	(2.2774)**	(2.7512)**
2002	6.31	4.69	-1.86
	(1.3007)	(0.9810)	(-0.3494)
2003	0.89	3.43	-0.14
	(0.1707)	(0.3962)	(-0.0281)
2004	3.60	-0.40	-0.09
	(0.8114)	(-0.0921)	(-0.0202)
2005	3.15	1.81	-1.01
	(0.5295)	(0.3023)	(-0.1487)
# obs	12	12	12

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

6.3 Winsorization

As I concluded in section 5.3, the North America portfolio is the only brand portfolio for which H1 is accepted. To ascertain that the excess returns are not driven by outliers, I run the regressions again for winsorized portfolios. Winsorization means that a certain percentage of the sample, usually 5% or 10%, is eliminated from the portfolio. In practice, the x% highest

and x% lowest returns exhibited over the time period, are left out of the sample. This ensures that the best and worst performing stocks do not drive the results to one way or the other. I winsorize the North America portfolio with 5%, which translates into 3 stocks out of the 51 stocks included in the portfolio on average. Due to the small sample size, it is not meaningful to winsorize with 10%, since it would decrease the portfolio size too much. The three best performing stocks during the time period August 2001 – October 2010 are Apple (+2,920%), Amazon.com (+1,157%) and Research In Motion (+1,142%). The three worst performers are American International Group (-98%), Citigroup (-89%) and Eastman Kodak Company (-88%). Hence these six firms are removed from the North America portfolio.

Table 16 below presents the risk-adjusted returns for the winsorized portfolios for the three different weighting methods. Only the alpha, t-statistics, annualized alpha and number of observations are showed because the other variables do not differ from previous regressions. Despite of eliminating outliers, the alphas remain positive and statistically significant at least at the 95% confidence level for all specifications. The annualized excess returns range from 4.0% to 6.3%, which are similar to the results generated by the original North America three factor regression. Thus, I confirm that H1 holds for the North America portfolio after controlling for outliers.

Table 16: Risk-adjusted returns of winsorized North America portfolio

Monthly three factor risk-adjusted regressions of the market value-, equal- and brand value-weighted winsorized North America portfolio returns for the time period August 2001 - October 2010. Alphas are presented in the annualized percentage format and t-statistics are in parentheses. The last row shows the number of observations. The MKT, SMB, HML and R^2 variables are left out due to their similarity with the non-winsorized original North America portfolio regressions.

	Weighting method		
	Market value	Equal	Brand value
α	0.0051	0.0034	0.0033
	(3.3772)***	(2.5945)***	(2.0872)**
annualized alpha	6.26%	4.14%	4.00%
# obs	108	108	108

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level

7 Conclusions

This thesis examines the historical stock performance of global stocks included in the Global Top 100 Brands ranking list published by Interbrand consultancy during years 2001-2009. The study was inspired by the findings of Madden et al. (2006) in particular, who find that American brand stocks included in the Interbrand brand ranking list outperform the market index during 1994-2001. Furthermore, studies examining employee satisfaction and company admiration ranking list participants (Edmans, 2011 and Anginer et al., 2010) and their historical stock performance gave the idea to use a ranking list issued by an independent organization as the primary data source. In addition, prior research has focused only on American brands, which created the need to study also brands based in other regions. Furthermore, research on the relationship between marketing actions and financial consequences is limited. Thus, this thesis aims to test whether companies that have built strong brands are better investments than companies on average.

In my thesis, I form six different brand portfolios out of the sample, which totals 78-85 brand owner stocks each year. The portfolios are updated annually according to the most recent Interbrand Global Top 100 Brands ranking list. I use three different portfolio weighting methods, market value-, equal- and brand value-weighting, to increase the robustness of the results. Brand value-weighting provides also the opportunity to test the relevance of the numeric brand values assigned by Interbrand. I gather the stock price, market value, corporate characteristic and interest rate data from Datastream database. The index data is retrieved from the MSCI website. The monthly portfolio returns for the time period August 2001-October 2010 are analyzed using the CAPM and Fama-French three factor regression models. I summarize the core results and propose suggestions for future research in the following two subsections.

7.1 Discussion of core findings

I conclude that H1, stating that strong brand owner stocks outperform the market, is only accepted for the North America brand portfolio. The market value-weighted portfolio earns a monthly risk-adjusted excess return of 0.54% (6.73% on annualized basis) during the time period August 2001–October 2010. The alpha is statistically significant at the 99% level. The

result holds also for the equal- and brand value-weighting methods and when controlling for outliers. However, H1 is rejected for all the other five brand portfolios. In the case of the Europe and Asia portfolios, alphas are mostly negative or close to zero and insignificant, whereas the positive alphas of the Global, "Newcomers" and "List remainers" lack statistical significance. Thus, my thesis confirms the finding of Madden et al. (2006), who find that North American brand stocks outperform the market during years 1994-2001. On the contrary, I find opposite results for European and Asian brand stocks.

To remind, H2 states that using brand values as portfolio weights enhances the excess return because superior stock performance of the most valuable brands is expected to drive up the brand portfolio return. This hypothesis is also rejected for all brand portfolios, except for the "Newcomers" portfolio, for which the alpha is largest when using brand value-weighting. The rejection of H2 in the case of the other portfolios is contradicting with Madden et al.'s (2006) result stating that brand value-weighting increases the alpha. This raises the question whether brand values assigned by Interbrand and other equivalent independent agencies are accurate and credible enough. Even though a number of prior studies confirm that brand values are relevant, it seems that the numeric brand value does not play a large role in investors' minds. A brand owner firm is most likely seen as a brand stock no matter what its actual ranking or brand value is. Brands with exceptionally high brand value such as Coca-Cola (earns a cumulative return of +65% during August 2001-October 2010) are not necessarily better investments than brands with smaller brand values such as KFC and Pizza Hut (owner Yum! Brands earns a respective return of +346%). However, it is not surprising that the stock market overlooks the numeric brand values because the brand valuation methods used by independent agencies are not currently recognized by the International Accounting Standards and have been criticized by several researchers (see e.g. Aaker, 1995).

H3 regarding the performance of the "Newcomers" brand portfolio is also rejected due to the insignificance of the positive alphas. Madden et al. (2006) did not study newcomers separately, hence I cannot compare my result with prior research. Edmans (2011) on the other hand does study newcomers and finds that they outperform the market index, though the result lacks significance due to small sample size. My "Newcomers" portfolio suffers from the same limitation regarding sample size and therefore the insignificant alphas do not come as a surprise.

The “List remainers” portfolio specific hypotheses, H4 and H5 test whether the brands that remain on the Interbrand Global Top 100 Brands ranking list throughout the entire nine year study period beat the Global brand portfolio and whether the excess returns the portfolio generates disappear eventually. I find that the “List remainers” portfolio earns larger alphas than the Global portfolio, but the return difference between these two portfolios is not significant. Thus, H4 is rejected because the results indicate that “List remainers” outperforms the Global portfolio, not the other way around. The longevity analysis reveals that the drift does not disappear eventually, but on the contrary excess returns remain positive during the first five years. Hence, H5 is rejected as well, which conflicts with Edmans (2011) findings. Though excess returns are often statically insignificant, there is an indication that the stock market does not seem to assimilate publicly available brand related information very well.

The reasons causing American brand stocks to perform better than European and Asian stocks are unclear. First of all, the sample sizes of the Europe and Asia portfolios are smaller compared to the North America portfolio, which can be seen as lower explanatory power of the regression models. It should be noted that brand stocks are not a homogeneous group, but operate in different industries and have differing business logics, which may cause them to be analyzed and valued differently by the market. The results also suggest that the market assimilates brands and the potential they hold better in Europe and Asia than in North America. Hence, in this case the Efficient Markets Hypothesis seems to hold better in Europe and Asia than in North America.

My thesis does not provide indication that building brand equity would destroy shareholder value because brand stocks on average do not underperform the market index. However, unsuccessful brand management may have detrimental consequences. The worst performing brands stocks, such as Nokia, Kodak and AIG have failed at least partly because of unsuccessful brand management. They have failed in keeping their brands up-to-date in the turbulent business environment that companies have to face nowadays. The secret of a long-lasting strong brand is the firm’s ability to renew and revitalize the brand according to current lifestyle trends in order to keep the brand fresh in the eyes of consumers and investors. Especially external brand communication embodies several risks because it is one of the most central ways to build and manage a brand. Thus managers should pay more attention to consumer behavior and socio-economic trends in general to better understand their constantly changing business environment. This notion is closely related to the concept of business

ecosystem, which states that organizations and individuals form a community together where they function alongside (Moore, 1996).

7.2 Suggestions for further research

This thesis suffers from a few limitations. First of all there is a possibility that excess returns generated are not related to brands, but instead are related to a variable not captured by the Fama-French three factor model. There is also an endogeneity problem. It is difficult to tell, which comes first, superior stock performance or strong brand image. Finally, the small sample size makes it challenging to achieve statistically credible results. One of the core outcomes of this thesis is the fact that brand stocks around the world behave differently. Thus, to get a better insight of the performance differences between geographical regions, it would be interesting to study what causes the excess returns of American brand stocks. Outperformance may be due to initial undervaluation of American brand stocks compared to benchmarks or it may be compensation for higher risk-bearing. The Fama-French three factor model suggests also that the value anomaly might be related to the outperformance of American brand stocks. Furthermore, brand stocks could be subject to substantial stock purchases made by brand mutual funds, individual investors or even institutions.

In consequence, perhaps the most promising avenue for future research is the relationship between marketing actions and financial outcomes. For instance, does brand equity generate additional cash flows or does it directly influence investor behavior? In particular, it would be meaningful to examine investor behavior in detail. Some researchers (see e.g. Frieder et al., 2005 and Aspara et al., 2010) have predicted that individual investors tend to use heuristics when making investment decisions meaning that they are willing to invest in a company's stock beyond its expected financial returns and risk for example because the company produces products that they are familiar with. Thus, it would be interesting to study individual and institutional investors' stock purchases separately to see whether one investor group overweighs brand stocks in their portfolio.

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Appendix 1

Interbrand Global Top 100 Brands 2009 (example of the ranking list used)

Rank	Previous Rank	Brand	Owner	Country of Origin	Sector	Brand Value ($m)	Change in Brand Value
1	1	Coca-Cola	The Coca-Cola Company	United States	Beverages	68,734	3 %
2	2	Ibm	Ibm	United States	Business Services	60,211	2 %
3	3	Microsoft	Microsoft	United States	Computer Software	56,647	-4 %
4	4	Ge	Ge	United States	Diversified	47,777	-10 %
5	5	Nokia	Nokia	Finland	Electronics	34,864	-3 %
6	8	Mc Donald's	Mc Donald's	United States	Restaurants	32,275	4 %
7	10	Google	Google	United States	Internet Services	31,98	25 %
8	6	Toyota	Toyota	Japan	Automotive	31,33	-8 %
9	7	Intel	Intel	United States	Electronics	30,636	-2 %
10	9	Disney	Disney	United States	Media	28,447	-3 %
11	12	Hp	Hp	United States	Electronics	24,096	2 %
12	11	Mercedes-Benz	Daimler	Germany	Automotive	23,867	-7 %
13	14	Gillette	Procter & Gamble	United States	FMCG	22,841	4 %
14	17	Cisco	Cisco	United States	Business Services	22,03	3 %
15	13	Bmw	Bmw Group	Germany	Automotive	21,671	-7 %
16	16	Louis Vuitton	Lvmh	France	Luxury	21,12	-2 %
17	18	Marlboro	Altria Group	United States	Tobacco	19,01	-11 %
18	20	Honda	Honda	Japan	Automotive	17,803	-7 %
19	21	Samsung	Samsung	South Korea	Electronics	17,518	-1 %
20	24	Apple	Apple	United States	Electronics	15,433	12 %
21	22	H&M	H&M	Sweden	Apparel	15,375	11 %

22	15	American Express	American Express	United States	Financial Services	14,971	-32 %
23	26	Pepsi	Pepsico	United States	Beverages	13,706	3 %
24	23	Oracle	Oracle	United States	Business Services	13,699	-1 %
25	28	Nescafé	Nestle	Switzerland	Beverages	13,317	2 %
26	29	Nike	Nike	United States	Sporting Goods	13,179	4 %
27	31	Sap	Sap	Germany	Business Services	12,106	-1 %
28	35	Ikea	Ikea	Sweden	Home Furnishings	12,004	10 %
29	25	Sony	Sony	Japan	Electronics	11,953	-12 %
30	33	Budweiser	Anheuser-Busch Inbev	United States	Alcohol	11,833	3 %
31	30	Ups	Ups	United States	Transportation	11,594	-8 %
32	27	Hsbc	Hsbc	United Kingdom	Financial Services	10,51	-20 %
33	36	Canon	Canon	Japan	Electronics	10,441	-4 %
34	39	Kellogg’S	Kellogg Company	United States	FMCG	10,428	7 %
35	32	Dell	Dell	United States	Electronics	10,291	-12 %
36	19	Citi	Citigroup	United States	Financial Services	10,254	-49 %
37	37	Jp Morgan	Jp Morgan Chase & Co	United States	Financial Services	9,55	-11 %
38	38	Goldman Sachs	Goldman Sachs	United States	Financial Services	9,248	-10 %
39	40	Nintendo	Nintendo	Japan	Electronics	9,21	5 %
40	44	Thomson Reuters Media	Thomson Reuters Media	Canada	Media	8,434	1 %
41	45	Gucci	Ppr	Italy	Luxury	8,182	-1 %
42	43	Philips	Philips	Netherlands	Electronics	8,121	-2 %
43	58	Amazon.Com	Amazon.Com	United States	Internet Services	7,858	22 %
44	51	L’Oréal	L’Oréal	France	FMCG	7,748	3 %
45	47	Accenture	Accenture	United States	Business Services	7,71	-3 %
46	46	Ebay	Ebay	United States	Internet Services	7,35	-8 %

47	48	Siemens	Siemens	Germany	Diversified	7,308	-8 %
48	56	Heinz	Heinz Company	United States	FMCG	7,244	9 %
49	49	Ford	Ford Motor Company	United States	Automotive	7,005	-11 %
50	62	Zara	Inditex Group	Spain	Apparel	6,789	14 %
51	61	Wrigley	Mars Inc (Family)	United States	FMCG	6,731	10 %
52	57	Colgate	Colgate	United States	FMCG	6,55	2 %
53	55	Axa	Axa	France	Financial Services	6,525	-7 %
54	52	Mtv	Viacom	United States	Media	6,523	-9 %
55	53	Volkswagen	Volkswagen Group	Germany	Automotive	6,484	-8 %
56	59	Xerox	Xerox	United States	Electronics	6,431	1 %
57	42	Morgan Stanley	Morgan Stanley	United States	Financial Services	6,399	-26 %
58	63	Nestlé	Nestle	Switzerland	FMCG	6,319	13 %
59	60	Chanel	Family Owned	France	Luxury	6,04	-5 %
60	66	Danone	Danone	France	FMCG	5,96	10 %
61	64	Kfc	Yum! Brands	United States	Restaurants	5,722	3 %
62	70	Adidas	Adidas Group	Germany	Sporting Goods	5,397	6 %
63	73	Blackberry	Rim	Canada	Electronics	5,138	7 %
64	65	Yahoo!	Yahoo!	United States	Internet Services	5,111	-7 %
65	67	Audi	Volkswagen Group	Germany	Automotive	5,01	-7 %
66	68	Caterpillar	Caterpillar	United States	Industrial	5,004	-5 %
67	69	Avon	Avon	United States	FMCG	4,917	-7 %
68	71	Rolex	Family Owned	Switzerland	Luxury	4,609	-7 %
69	72	Hyundai	Hyundai	South Korea	Automotive	4,604	-5 %
70	76	Hermes	Hermes	France	Luxury	4,598	1 %
71	74	Kleenex	Kimberly-Clark	United States	FMCG	4,404	-5 %

72	41	Ubs	Ubs	Switzerland	Financial Services	4,37	-50 %
73	50	Harley-Davidson	Harley-Davidson	United States	Automotive	4,337	-43 %
74	75	Porsche	Porsche	Germany	Automotive	4,234	-8 %
75	78	Panasonic	Panasonic	Japan	Electronics	4,225	-1 %
76	80	Tiffany & Co	Tiffany & Co	United States	Luxury	4	-5 %
77	79	Cartier	Richemont	France	Luxury	3,968	-6 %
78	77	Gap	Gap	United States	Apparel	3,922	-10 %
79	81	Pizza Hut	Yum! Brands	United States	Restaurants	3,876	-5 %
80	92	Johnson & Johnson	Johnson & Johnson	United States	FMCG	3,847	7 %
81	82	Allianz	Allianz	Germany	Financial Services	3,831	-5 %
82	83	Moët & Chandon	Lvmh	France	Alcohol	3,754	-5 %
83	84	Bp	Bp	United Kingdom	Energy	3,716	-5 %
84	89	Smirnoff	Diageo	United Kingdom	Alcohol	3,698	3 %
85	88	Duracell	Procter & Gamble	United States	Electronics	3,563	-3 %
86	98	Nivea	Beiersdorf	Germany	FMCG	3,557	5 %
87	91	Prada	Prada	Italy	Luxury	3,53	-2 %
88	93	Ferrari	Scuderia Ferrari	Italy	Automotive	3,527	0 %
89	94	Armani	Armani	Italy	Luxury	3,303	-6 %
90	85	Starbucks	Starbucks	United States	Restaurants	3,263	-16 %
91	NEW	Lancôme	L’Oréal	France	FMCG	3,235	N/A
92	97	Shell	Shell	Netherlands	Energy	3,228	-7 %
93	NEW	Burger King	Burger King	United States	Restaurants	3,223	N/A
94	100	Visa	Visa	United States	Financial Services	3,17	-5 %
95	NEW	Adobe	Adobe	United States	Computer Software	3,161	N/A
96	90	Lexus	Toyota	Japan	Automotive	3,158	-12 %
97	NEW	Puma	Ppr	Germany	Sporting Goods	3,154	N/A

98	NEW	Burberry	Burberry Group	United Kingdom	Luxury	3,095	N/A
99	NEW	Polo Ralph Lauren	Polo Ralph Lauren	United States	Luxury	3,094	N/A
100	NEW	Campbell'S	Campbell Soup Company	United States	FMCG	3,081	N/A

Appendix 2

Table 17: T-test difference in means of monthly returns of "List remainers" and the Global brand portfolio

The Table presents the raw annualized monthly return for the market value-, equal- and brand value-weighted "List remainers" and Global portfolios and the t-statistic for the difference in means of these two portfolios.

T-test difference in means of monthly portfolio returns			
	"List remainers"	Global	T-stat (difference in means)
Market value-weighted	10.70	9.55	0.1326
Equal-weighted	10.59	10.10	0.0510
Brand value-weighted	7.52	7.44	0.0084

*: Significant at the 10% level; **: Significant at the 5% level; ***: Significant at the 1% level