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Does it really matter?

A look at how branding strategies affects the return after an IPO

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Abstract

Title: Does it really matter? - A look at how branding strategies affects the IPO valuations of companies

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Keywords: Initial public offering, Underpricing, Brand architecture, Product and brand focus, Brand portfolio strategy

Purpose: The purpose of the study is to analyze the effects of branding on underpricing in initial public offerings and the value of the firm post IPO.

Theoretical perspective: The study is based on previous literature that discusses the main theories of the study; brand architecture, product/brand focus, brand portfolio strategy, underpricing and information asymmetry. Furthermore, it aims to combine the branding and finance theories to advance the understanding of the effects of different branding strategies in IPOs as it is not a common field of research today.

Methodology: A quantitative study with a deductive approach is combined to create a regression analysis of branding and finance values. The data is collected through secondary sources and with content analysis in an event study. A test-retest is conducted to ensure inter-observation consistency.

Empirical findings: The results show that a house-of-brands architecture and hybrid architecture have a strong negative effect on returns. The opposite goes for business-to-consumer brand portfolio segmentation and having 6-15 brands in a brand portfolio, which show positive effects on return.

Conclusion: We advise investors with a short investment time frame to acquire shares in IPOs of firms that have business-to-consumer brand portfolio segmentation and 5-16 brands in a brand portfolio. Furthermore, we advise investors to not invest in firms with either a house-of-brands architecture or a hybrid brand architecture.

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List of Definitions

BA - *Brand architecture*, The structure of brands within a firm

BH - *Branded house,* A type of brand architecture commonly used to communicate around a main brand.

BPS - *Brand portfolio strategy*, The strategy implemented around the selection of brands that exist within a firm.

B2B - *Business-to-Business,* Firms who mainly sell to other firms

B2C - *Business-to-Consumer,* Firms who mainly sell to consumers

B2G - *Business-to-Government,* Firms who mainly sell to governments, could be healthcare systems, military, security, administration, tax agencies or other such ventures.

CEO - *Chief Executive Officer,* The highest deciding manager in a firm

CFO - *Chief financial officer*, The highest deciding financial manager in a firm

CMO- *Chief Marketing Officer,* The highest deciding marketing manager in a firm

EViews - A program developed by IHS that is used for econometrics. It is used in this thesis to test the hypothesis.

Focus strategy- The type of external communication that is used by the firm as a whole. It is based on two thought-processes that are used when deciphering any type of communication (verbal or visual). A firm can either have a product, brand, or hybrid focus.

Form 10-K - A required annual report filed with the SEC by companies with $10 million or more in assets and with securities that is held by more than 500 owners.

HOB - *House-of-brands,* A type of brand architecture commonly used to communicate several brands separately with a decoupled marketing from the main brand.

Information asymmetry - As the market is not perfect, there is always people knowing more than others. This information asymmetry can create unfair differences between investors.

IPO - *Initial Public Offering*, When a company first is sold on the open market

NASDAQ - The second largest stock exchange in the world. Based in New York, USA.

OLS - *Ordinary Least Squares,* a statistical method for estimating unknown parameters in a linear regression model.

SEC - *Securities and Exchange Commission*, US government agency tasked with regulating securities and exchange markets, as well as enforcing the federal securities laws.

Signaling - Underpricing is used to signal the strength of the company to the market during an IPO. Companies with higher underpricing send the signal of being strong enough to regain the initial loss of the underpricing.

SPSS - Statistical analysis software widely used in the social sciences and developed by IBM

Tobin's Q - A method to measure the value of the company by calculating the stock of the firm to decide if it is overvalued or undervalued. An undervalued stock means that the cost of replacing the assets of a firm is greater than the value of the stocks themselves. Whereas an overvalued company has a higher value of the stocks compared to the cost of replacing the assets of the firm.

Underpricing - When firms undergo an IPO the price of the shares tend to be lower than what the market thinks is reasonable. The stock tends to increase in value until it has reached a value the market thinks is valid.

1. Introduction

In the introduction a background to the research problem will be presented explaining why it is seen as a challenge. In order to show why this study is important a table regarding previous research is displayed. The research question that the thesis aims to explain is introduced.

1.1 Background

Finance and marketing are two areas within business that rarely see eye-to-eye. Harshly speaking; the Chief Financial Officer, CFO, thinks that the Chief Marketing Officer, CMO, is just spending money that could create higher value elsewhere while the CMO does not understand why he/she could not get more resources for his/her brilliant marketing ideas. Imagine the CMO wanting to increase the brand awareness of the company's product, because of the soft values of branding the CFO will have difficulty knowing how much return such an investment would deliver. Since the CFO puts value on numbers, the measurement aspect can become difficult and time consuming (Ambler, 2003). "*Marketing rarely enjoys the same disciplines as other forms of investment, partly because financial returns are more difficult if not impossible to determine*" (Ambler, 2003, p.19). The same distance is seen when it comes to research. Even though marketing and financing are two areas that could complement each other, they are often not researched in combination. However, exploring the financial results of marketing and branding strategies is a way to quantify the often intangible and soft values of marketing. This can be beneficial for CFOs, CMOs and research in general. There is a wide variety of ways in which these areas could be combined.

Srivastava, Shervani and Fahey (1998, p.3) have discussed the difficulty of communicating "*the financial value of marketing activities*" to top management, meaning that it is nearly impossible to identify and measure the activities in the marketing community. Marketers are therefore not able to show the positive effects of marketing to the financial departments, because they do not speak the same language.

"*Traditionally, marketing activities focus on success in the marketplace. Increasingly, however, top management requires that marketing view its ultimate purpose as contributing to the enhancement of shareholder returns*" (Srivastava, Shervani and Fahey, 1998, p.2).

It is therefore necessary for the CFO and the CMO to work together to see how shareholders can receive highest possible returns and thereby create value for the owners of the firm.

An area within finance where shareholder return is of utmost importance, is the issuing of initial public offerings (IPO). An initial public offering is when a company first is sold on the open market. It is also common that these initial public offerings are underpriced when first traded. A question commonly asked is why investors and underwriters keep undervaluing the initial public offerings of firms? There are many perspectives that can be taken into consideration regarding the subject, however there are two that stand out in the purpose of this study. The first perspective is from the previous owners of the stock. If the initial public offering were to be underpriced, it means that they did not get the full value of their shares sold. The opposite is true for the new owners, those who buy the stock on the initial public offering day. In their case, they will receive a higher return on their stock as they bought it to an undervalued price. In this study the perspective of the new owners is applied. It means that high return and high underpricing is considered as something positive. Furthermore, since there rarely is any research conducted about initial public offerings in combination with marketing, it is possible that marketing could be the key to success and shed more light over the event of underpricing. Would the marketing activities prior to an initial public offering help the shareholders of a firm receive a high return on their stock and therefore solve the problems stated by Srivastava, Shervani and Fahey (1998)?

Just like initial public offerings are a part of a firm's financial activities, there are quite a few activities that are considered to be marketing within a firm. One such activity is branding. Srivastava, Shervani and Fahey (1998) mean that branding is used as a communication tool towards stakeholders. They show that branding creates relationships, which in turn create faster market penetration, increasing the cash flow and shareholder value. On the same note, Luo (2008) discusses the positive impact of marketing expenditure pre-IPO on investor relations and information asymmetry. Information asymmetry refers to the difference in information top management has compared to a firm's shareholders, which has also been discussed in terms of underpricing initial public offerings. These are among the starting points for the research conducted in this study. Let us take a more detailed look at the branding effects on initial public offerings and firm value. Could this be the next step needed to improve the relationship between the Chief Financial Officer and Chief Marketing Officer?

1.2 Problem Discussion

Earlier research conducted in the area of marketing- finance hybrid research is outlined in Table 1 below. The six studies cover different aspects of the marketing-finance relationship and have helped emphasize different areas within the hybrid. As can be seen in Table 1, there is a checklist whether the papers include the more detailed aspect of marketing, namely branding and ditto for finance, namely the initial public offering process. If the box is checked with either branding or IPO it means that that area is covered.

Table 1 Marketing-finance article summary

Title	Author	Synopsis	Branding	IPO
The Marketing Role of IPOs: Evidence From Internet Stocks	Dewers & Lewellen (2002)	The paper explores the marketing effects of going public and underpricing in an IPO process. The authors find that IPO underpricing has a positive effect on marketing post-IPO, the larger the underpricing of the IPO the more media coverage during the month of the IPO.		✔
When Marketing Strategy First Meets Wall Street: Marketing Spendings and Firms' Initial Public Offerings	Luo (2008)	Exploration of how marketing pre-IPO affects underpricing. The results from the study show that firms' pre-IPO marketing spending help reduce IPO underpricing and boost IPO trading in the stock market. It helps build the case for not cutting marketing before an IPO.		✔
Brand Architecture Strategy and Firm Value: How Leveraging, Separating and Distancing the Corporate Brand Affects Risk and Returns	Hsu, Fournier & Srinivasan (2015)	Comparison between different brand architectures (house-of-brands, branded-house etc.) and which one is thought to be associated with more idiosyncratic risk and high return. Results show that stronger brands have lower risk and sub-branding has highest idiosyncratic risk. Also, corporate branding is seen to have a higher rate of return than product branding.	✔	
Brand Portfolio Strategy and Firm Performance	Morgan & Rego (2009)	Exploring to which extent brand portfolio strategy, such as number of brands, intraportfolio competition and number of segments, is linked to firm performance. Results show that it explains 2-21% of variance in financial performance and 8-16% variance in marketing effectiveness.	✔	

Market Orientation and Alternative Strategic Orientations: a Longitudinal Assessment of Performance Implications	Noble, Sinha & Kumar (2002)	Explore the relative performance effects of various dimensions of market orientation using a longitudinal approach based on letters to shareholders in corporate annual reports. The conclusion is that firms possessing higher levels of competitor orientation, national brand focus and selling orientation exhibit superior performance.	✔	
Marketing an IPO Issuer in Early Stages of the IPO Process	Bahadir, DeKinder & Kohli (2014)	A look at how marketing to two important stakeholders, underwriters and institutional investors, affects the company's IPO. The results show that cues such as media coverage have a positive effect on price shortfalls, while research and development (R&D) have a negative effect.		✔

As can be seen, previous literature has highlighted the effects of marketing on firm value and underpricing in initial public offerings (Hsu, Fournier and Srinivasan, 2015; Luo, 2008; Morgan & Rego, 2009). While Hsu, Fournier and Srinivasan (2015) focus on the importance of having a brand architecture strategy that minimizes risk and maximizes return in a company's finances, Luo (2008) discusses how marketing pre-IPO affects shareholder-value in a company's IPO. Hsu, Fournier and Srinivasan (2015) come to the conclusion that certain types of brand architecture are prone to increase the risk in a firm's stock return, this is particularly seen in the sub-branding architecture. Furthermore, firms with a strong corporate brand focus and increased advertising expenditures are considered to have a positive effect on returns, in comparison to firms that focus on product branding. As mentioned above, Luo (2008, p. 99) states that

"*...pre-IPO marketing spending may help provide information about the true value of the firm and reduce the information asymmetry in IPOs, thus likely influencing investor responses to IPOs.*"

Which in turn could affect the underpricing of said IPOs. Both Hsu, Fournier and Srinivasan (2015) and Luo (2008) emphasize the importance of spending resources on marketing to improve future financial success. Once again, if the initial public offering is underpriced, it

will have a positive effect on the return of the new owners of the stock. This means that the old owners of the stock will receive less return than what potentially is possible.

Noble, Sinha and Kumar (2002) also discuss the impact of market orientation on firm performance, stating that firms with a national brand focus and selling orientation demonstrate higher performance. It is the focus on branding that has increased firm value and performance. However, this study does not focus on IPO but rather on already mature firms. The previous literature shows that there has been a combination between marketing and finance research during different stages of a company's life cycle. However, it is also clear that the term marketing is used in a general aspect in terms of its impact on initial public offerings. There are still areas within marketing and particularly branding, that can be studied of how big impact it has on the underpricing of initial public offerings.

There has been more research done within the marketing-finance hybrid. Bahadir, DeKinder and Kohli (2014) examine how cue utilization with for example marketing intensity affects stakeholders such as underwriters and institutional investors in their evaluation of IPOs. By cue utilization they mean that the more attention and focus that is put on, for example, marketing the less irrelevant environmental noise will disturb the underwriter's underwriting process. Concluding

"*...lower levels of R&D intensity and marketing intensity of an issuer may signal to underwriters that the issuer is more efficient than another issuer with higher levels of R&D and/or marketing intensity.*" (Bahadir, DeKinder & Kohli, 2014, p. 26).

This point of view is opposite that of many other studies, as it means that the less marketing a firm accomplishes before an IPO the more efficient the underwriting becomes.

Lastly, Demers and Lewellen (2002) research how IPO underwriting can have positive effects on the marketing of a company and its website traffic. As mentioned in the table above, they look at the effects of underwriting post IPO, showing that the hype and buzz created in media when a firm is underpriced positively impacts the marketing of said firm. Usually when a company has been underpriced, more media attention is drawn to that firm. What Demers and Lewellen (2002) mean is that the media coverage will positively affect the marketing of the firm giving it more attention, increasing the firm's brand awareness.

All above-mentioned articles and theories bring valid and interesting input into the marketing-finance hybrid of initial public offerings. A study based on these theories will bring new input to the role of branding and marketing in the shareholder value and firm value of companies in their initial public offering. To the best of our knowledge there is yet no research that combines branding and initial public offerings, as can be seen in Table 1. A branding focus would therefore give the research even more detailed results on the subject. With the help of our study, companies going through an initial public offering will have more information to base their marketing decisions upon. The marketing aspects will be brought forth through the theories of brand architecture, brand/product focus and brand portfolio strategy. The finance aspect will be added through theories such as information asymmetry, underpricing and the signaling an underpriced IPO demonstrate. Important to recognize is that initial public offerings have not been researched in combination with branding previously, meaning that the results introduced will provide a different aspect to already existing literature on the role of marketing on initial public offerings and firm value.

1.3 Purpose

To conclude the problem discussion and the different aspects presented, the purpose of this study is to analyze the effects of branding on underpricing in initial public offerings and the value of the firm's shares post IPO. The purpose of focusing on branding within the marketing area is to create a depth that does not exist in previous literature in the context of initial public offerings.

1.4 Research Question

How does a firm's branding strategy during a firm's IPO year affect the return of the firm, reflected in share price, at the time of the IPO?

1.5 Demarcations

There is a large number of initial public offerings issued in the past decades, making it necessary to reduce the amount used in this study. In order to create research that is applicable to today's firms and theories a time span is created between the years 2010-2013. A time span

later than this would be difficult, as the annual reports (also known as SEC Form 10-K) need to have been written and published for the year of the initial public offering. This also allows for a modern approach to the marketing-finance hybrid as many of the branding theories used are taken from the previous decade. Thus, giving the study a more realistic view of how marketing and brand architecture affect underpricing and firm value.

A second limitation made was a target on the American market as information about initial public offerings is taken from the NASDAQ database. NASDAQ is one of the world's largest marketplaces for the exchange of securities. It is also a marketplace that influences how other stock exchanges work, which makes it a reliable source of information. Using only NASDAQ will allow for consistency in the collection of companies studied as they all had their initial public offering on the same platform. It also provides the study with easy access to information about the companies if further research is to be made within the area discussed in this study, as opposed to using several different databases in the collection of IPOs.

A third and final limitation made in this study is the choice of sector. Seeing as there are time limits in the construction of this study, not all companies within the 2010-2013 year frame could be included. It was therefore decided that sectors with relatively easy access to branding information were to be chosen. These sectors include technology, healthcare, capital goods, consumer durables, consumer non-durables, consumer services and miscellaneous. Furthermore, a population sample was created to mirror the size of the sectors on NASDAQ. This in order to create realistic results that represent the reality of the marketplace.

2. Theory

In this chapter an introduction of the theories used within the financial and marketing aspect of the study will be made. This will provide a theoretical base that the hypotheses are constructed after and will later on be applied in the analysis to establish the relationship between the results and previous research. It will also show how we have positioned our study in terms of what theoretical problem is identified.

2.1 Finance Theory

2.1.1 Information asymmetry

Akerlof wrote an article in 1970 connecting uncertainty to quality. He illustrated the issue by using the car market. Imagine there were only four different types of cars in the market, new and old, both with the option of having good (cherry) or bad (lemon) quality. When buying a new car, the probability of it having good quality is *q* and for it to have bad quality (being a lemon) is *1-q*. After having owned the car for a while, the buyer will have come to a conclusion regarding the true quality of the car, he has gained more information about his purchase and the probability of the car being a lemon has therefore changed. This is when the information asymmetry arises, the future seller in this case knows more than what a future buyer will do at the time of purchase. Just like the car owner knew less about the quality when he bought the car when it was new (Akerlof, 1970).

In the security market, some traders might have information that has not yet reached the public, however it is accepted even though their knowledge concerns future events that could affect future security prices. As the information is made public there is observed patterns which shows that there is a degree of asymmetry that can be seen as normal. If the information is especially significant and firm-specific, the information asymmetry may be larger. At those times, the trading patterns and behavior of the informed and uninformed traders are likely to change, leading to the risk of suffering higher losses for the uninformed trader (Chiang & Venkatesh, 1986).

When the information asymmetry is high and the investors have a hard time finding the information they need in order to invest wisely, they should trade less if they find high information asymmetry to be possible as they are uninformed (Chae, 2005). One way to aim for lower information asymmetry is to use more analyst coverage and thereby more analysts

per firm. The job of the analysts is to post their findings in public media, hence reducing the information asymmetry. The more analysts, the more information is available and therefore the investors have an easier time to find the information they need (Chae, 2005).

Modigliani and Miller presented the ideal perfect capital market where they stated three assumptions that needed to be held (Ogden, Jen & O'Connor 2002):

- The market is frictionless which means that there are no costs related to changing ownership, even going bankrupt does not create any costs
- There is no information asymmetry because all market participants share homogeneous expectations
- All market participants are atomistic, none of them have the power alone to change the prices in the market.

If the investors are rational, these three assumptions should create a market where information flows freely between all the participants in the market. Through the marketing of the company, information flows out to the market and thereby increasing their knowledge. Hence the information asymmetry should decrease. However, the market that exists today is not perfect according to the assumptions of Modigliani and Miller and therefore it can be presumed that information asymmetry exists.

2.1.2 Market efficiency

Fama (1970) stated that the role of a capital market is to allocate resources to where it is needed the most, because of that definition the firm can make decisions regarding their next investment of an asset while investors can focus on their next investment in capital. The market works at its best when it is said to be efficient, that is when the prices reflects all the available information. Both to investors and to firms. Fama (1970) continues his article with explaining the three different levels of efficiency in the market, weak, semi-strong and strong. There is no such thing as a perfect capital market, it exists to some extent but measuring the effects of the market is difficult (Fama, 1970).

Weak market

The market bases the prices on information of historical values.

Semi-strong market

How well the prices adjust based on public announcements and whether the prices adjust accordingly when all public information is taken under consideration. The prices in the market are assumed to be based on the information that has been obviously published.

Strong market

The strong form of a market is assuming that all prices reflect the information available in the market. In the tests conducted regarding the strong form of the market, the monopolistic information of different kinds of groups (such as investors, or management) are looked at to see if they have any effect on the pricing of the market.

2.1.3 Underpricing of the IPO

When a company is going public there needs to be three parties involved in order to be able to have an initial public offering: an issuing firm, the underwriting bank and the new investors (Ljungqvist, 2007). Several empirical evidence have shown that IPOs tend to be underpriced, that is the price of the stock is lower than the price the market thinks is correct (Allen & Faulhaber, 1988).

If the IPO is underpriced, it will be an initial loss for the original owners of the firm, then why would a company perform one? The reason why companies perform an IPO is because they need to raise capital, which is easier and cheaper on the market compared to raising the capital among the initial owners . By conducting an IPO, the company will increase their ability to raise equity and the investors have the possibility to diversify their portfolio with other stocks. If the company is in need of more capital after the IPO they can always raise new stocks and thereby more equity. The downside with an IPO is that it is very expensive both the one time cost associated with the IPO and also the costs of continuously submit information to the shareholders of the company (Ibbotson & Ritter, 1995). Bahadir, DeKinder and Kohli (2014) also conclude that especially the costs for marketing and R&D are high before an initial public offering and that investors can see those costs as an inefficiency of the firm. Resulting in a higher probability of underpricing.

There are three anomalies that are connected with IPOs, this thesis will focus on the anomaly of new issue underpricing (Ibbotson & Ritter, 1995).

The winner's curse

In 1986, Rock developed the winner's curse hypothesis from the hypothesis of Akerlof (1970) and the lemon problem. In his hypothesis, Rock (1986) assumes that some investors are better informed about the true value of the share compared to any of the three parties needed to create an IPO.

When Rock (1986) conducted the winner's curse test he divided the uninformed investors and informed investors into two different groups. The uninformed investors do not know when an IPO is underpriced or reasonably priced. If an uninformed investor manages to buy all the stocks he/she would like to buy, it is because an informed investor does not think that the stock is worth buying. This in turn means that uninformed investors demand that the IPOs to be underpriced as it will raise the incentives of the uninformed investors to try and take part of IPOs even though they are uninformed (Rock, 1986)

Principal and agent theory

In 1982 Baron concluded that the reason why companies are underpriced when they are undergoing an IPO is due to the principal – agent conflict, where the investor bankers, that are responsible for the initial pricing, have superior information about the capital market and their demands. The situation arises when the compensation is decided in a contract where the firm is the principal and the banker is the agent. The optimal contract is a function of the IPO price and the proceeds of the IPO (Baron, 1982).

As a criticism towards Baron, Muscarella and Vetsuypens found in 1989 that underpricing exists even in a sample where investment banks go public. As they were considered informed investors and participated in the distribution of the IPO. Since there was no information asymmetry between the underpricing banker and the IPO issuer, it also means that the hypothesis of Baron was not supported (Muscarella & Vetsuypens, 1989)

Signaling and behavioral aspects

An underpricing is a loss to the initial owners and a gain for the new owners. It signals at the same time that the company is so strong that it can be expected to recoup the loss that the IPO caused. By using the power of signaling, the market reacts accordingly and think of the company as a strong company, just like the investment bankers intended. The owners of the firms that are not as strong, know that their companies are not good enough to regain the first loss. Since they have to issue their IPO at a higher price they cannot afford the cost of signaling (Allen & Faulhaber, 1988).

The behavioral aspects of the IPO have a focus on how the market reacts to the IPO. People tend to be loss averse, it is easier to accept a gain of $5 than a loss of $2, they are also exposed to representativeness which means that they underestimate long term averages. When combining representativeness with conservatism, it means that people are slow to pick up the changes and when things change they will adjust to the change and possibly overreact to the changes and underestimate the long term average. This might affect the market in the sense that they will forget about the times with lower averages and thereby get choked if the market goes bad (Ritter, 2003).

2.2 Branding

2.2.1 Product/Brand focus

In the same way that information asymmetry and underpricing in initial public offerings affects the investor's' actions, the way in which a firm decides to communicate itself can affect how much underpricing and information asymmetry exists. Since a firm's external brand communication is included in the IPO decision process of stakeholders such as underwriters and investors, its theoretical background is introduced in this study.

In brand management, how customers and other stakeholders perceive the firm has been shown to be important and affects the communication of the company. This type of communication can be conducted in different ways and stakeholders have different thought processes which they use to perceive a brand. Bhat and Reddy (1998) discuss two schools of thought: the rational school and the hedonistic school. It is important to know how stakeholders think when observing a brand, as it affects what their image of the brand will be and how likely it is that they will establish a relationship with it.

Product Focus

The first school of thought that Bhat and Reddy (1998) introduce is the rational school of thought. They define it as:

"...consumers generally go through a variety of cognitive operations that include deciding the importance of each attribute in a product category, gathering information about competing brands' attributes, judging the levels of each attribute in competing brands and finally using a judgment rule to decide on the optimal brand" (Bhat & Reddy, 1998, p.33)

This school of thought targets the cognitive and functional aspects of stakeholders' thought processes. In reality, this would mean that a logical step-by-step approach is used to decide which product/ service to buy. Kahneman (2011) means that there are two types of cognitive thought processes that exist, cognitive ease and cognitive strain. Cognitive ease refers to when things are going well in the multiple computations going on in the mind. The opposite goes for cognitive strain, which indicates that a problem exists (Kahneman, 2011). By constructing the rational thought process into a functional focus that firms can use when wanting to appeal to the rational part of their stakeholders' mind, cognitive ease helps stakeholders solve the problems they have (Bhat & Reddy, 1998; Kahneman, 2011). Park, Jaworski and MacInnis (1986) emphasizes the use of this focus by saying that the functional focus exists to solve consumer-related problems and that brands use this concept to solve externally related problems. Another word that can be used for functional is cognitive, which Alawi and Kitchen (2014) use when describing the logical part of a stakeholder's thought process. In essence, a cognitive focus is the same as a functional focus as the two describe the same phenomena. In the context of this study, cognitive and functional will be used without distinction.

Alawi and Kitchen (2014) further develop this focus by applying it to the brand levels of a company. They mean that a brand only having a product and service focus in their communication will lead to a functional brand concept. It means that if a firm communicates more than the products and services themselves, it is not a functional/ cognitive focus anymore. Because of the aspect that Alawi and Kitchen (2014) bring forth, the term product focus will be used to describe the functional and cognitive ways that firms use to communicate their products and services. Applying this to an underwriter or investor in the IPO activity would mean that a process-oriented approach is chosen when deciding on the

price of the IPO.

In financial terms, since information asymmetry is significant depending on how much firm-specific information exists (Chiang & Venkatesh, 1986), a product focus could possibly decrease the amount of information asymmetry in the event of an IPO since the knowledge about the products communicated is very descriptive and functional. It goes into detail about what consumer-related problems it solves. Therefore, it decreases the absence of firm-specific information that external stakeholders take part of. Combining financial values and product focus then leads to the first hypothesis of the study:

H1. A product focus will have a negative effect on return

If a product focus is used to communicate the firm, less information asymmetry might exist, which in turn leads to less underpricing and lower returns for the new owners of the shares. Hence product focus will have a negative effect on underpricing and return. To concretize the exact meaning of product focus, the definition created below is used throughout the study.

"A firm's functional and cognitive communication of products and services that appeals to the rational part of stakeholders' mind."

Brand Focus

The second school of thought that Bhat and Reddy (1998) refer to is the hedonistic school of thought. It is believed in the hedonistic school of thought that "*individuals use personal or subjective criteria such as taste, pride, desire for adventure and desire for expressing themselves, in their consumption decisions*" (Bhat & Reddy, 1998, p.33). The functional side of the rational school of thought is therefore substituted with the emotions and feelings of the individual making the decision. The hedonistic school of thought emphasizes that people are emotional in nature, which makes it an aspect difficult to ignore in the human thought process (Bhat & Reddy, 1998). Kahneman (2011) means that some part of irrationality exists when humans make decisions, they do not always use the most logical process, but rather what feels relatively best.

Converting the school of thought into a focus that firms can use when communicating what they are to stakeholders is explained as symbolic and affective (Alawi & Kitchen, 2014; Bhat & Reddy, 1998; Park, Jaworski and Maclnnis, 1986). Bhat and Reddy (1998, p. 34) further develop the symbolic nature of stakeholders as "*related to self-image and social identification.*". This goes beyond the functional and logical nature of product focus. The affective focus is therefore an internal focus, solving self-fulfillment needs that consumers have (Park, Jaworski and Maclnnis, 1986). Alawi and Kitchen (2014) mean that this type of communication exists on an institutional level and is generally excluded from the technologies and functional aspects behind the products or services. The term used to describe the hedonistic, symbolic and affective ways a firm can communicate will be brand focus. The reason for this is because the focus uses institution wide communication to appeal to the emotions and needs of its stakeholders.

Taking the concept to the context of information asymmetry and initial public offerings, it is the opposite of product focus. This means that there can exist more firm-specific information asymmetry since a brand focus communicates the symbolic values of a firm and not the actual details of the products and services. In terms of an initial public offering it could possibly mean that there is more underpricing and therefore higher return on shares sold by firms using this strategy. The second hypothesis of the study is therefore:

H2. A brand focus will have a positive effect on return

Furthermore, to concretize the exact meaning of brand focus the following definition that we have created will be used throughout the study:

"A firm's symbolic and affective communication of the brand that appeals to the hedonistic part of stakeholders' minds."

Connecting these ideas to the difficulty in quantifying the often intangible and soft values of marketing, dividing a brand's external communication into brand focus and product focus can provide the study with a more tangible view on the relationship between branding and firm performance in the IPO process.

Hybrid Focus

To the extent of our knowledge there is no study yet that has resulted in firms having to use either product focus or brand focus. It is not always 100 percent product focus or 100 percent brand focus. Therefore, another view of product and brand focus important to emphasize is the results from Bhat and Reddy's (1998) study. They mean that a firm does not have to choose to be either functional or symbolic; rather the two can be interchanged at any level, known as a hybrid focus. Therefore, there can exists both parts of product and brand focus in a firm's communication (Bhat & Reddy, 1998). Grinstein (2008) comes to the same conclusion when researching the relationship between different strategic orientations. He mentions that a positive relationship exists between market orientation and innovation orientation, where innovation orientation is equal to product orientation (Grinstein, 2008). The results of his study are interesting in the context of this study as it further stresses the fact that a hybrid focus can exist within a firm.

The ways in which a hybrid can exist is presented in Kevin Lane Keller's Customer-Based Brand Equity Pyramid (2001) as shown below.

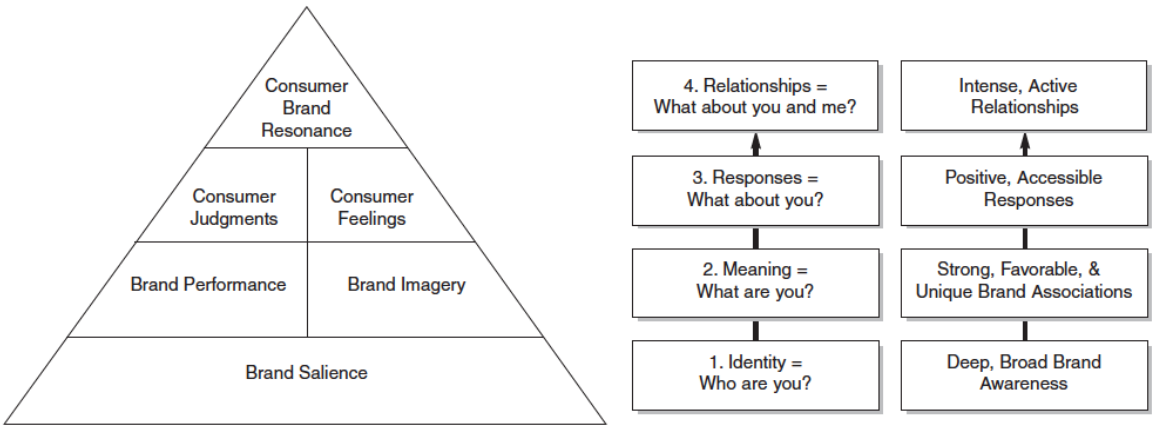

Figure 1 The customer-based brand equity pyramid (Keller, 2001, p.7)

The pyramid represents a brand and a stakeholder's relationship with the brand at different stages. The different stages of the pyramid are building blocks, meaning that consumer brand resonance, the top of the pyramid, can only occur when the steps below exist (Keller, 2001). Since the pyramid is quite detailed and covers many different aspects of branding and brand equity, the whole model will not be introduced here. Instead, what makes the pyramid relevant to this study and the product/ brand focus is the fact that consumer judgments and

consumers feelings must exist at the same time within a brand to complete a loyal relationship with stakeholders (Keller, 2001). In the context of this study it means that a firm can have both a product and a brand focus and that both are necessary in the communication of what the firm stands for. This is in line with Bhat and Reddy (1998) concludes. They state that an individual does not choose one school of thought when making a decision, rather both rational and hedonistic values are used when deciding on which product or service to consume. The important aspect is not which focus a firm chooses, rather it:

"...advises managers to select a specific concept for a brand at the time of its introduction and then use the marketing mix to support and reinforce it over the brand's life. This helps consumers understand with clarity what a brand can do for them." (Bhat & Reddy, 1998, p.33).

Exploring this concept in terms of the financial values of market efficiency, it has been stated that the market works best when it is efficient (Fama, 1970). It means that the price of a share reflects all the available information (Fama, 1970). In the context of this study it could explain that in a product/brand focus hybrid a firm communicates both its functional and symbolic aspects and therefore covers all available information that is needed to decrease information asymmetry and increase market efficiency. However, since less emphasis is put on the functional aspects of the use of the products and services, there can possibly still exist information asymmetry in the event of an initial public offering. It is probably difficult for a firm to cover all important areas in its communication, which leads to the third hypothesis of the study:

H3. A hybrid focus will have a positive effect on return

Taking this to the IPO context and through an underwriter perspective, depending on which brand concept a firm chooses could affect what price will be put on the initial public offering. A hybrid focus might increase the underpricing of a firm's shares and therefore result in higher returns for the new owners. Lastly, in the context of this study the definition of a hybrid focus is:

"*A firm's functional cognitive, symbolic and affective communication of products, services and the brand that appeals to the rational and hedonistic part of stakeholders' mind.*"

2.2.2 Brand Architecture

In the construction and analysis of a firm's brand portfolio, studies have indicated the importance of brands. This as they have been seen to have financial value for the firms and generate future cash flow (Aaker & Jacobson, 1994). In studies by Ambler et al. (2002) and Bhat and Reddy (1998) both functional aspects of branding such as higher margins and customer loyalty has been discussed, as well as views of stakeholders and customers on the brand. As such the value of the brand has been cemented as part of a firm's financial outcome. Where there has been less studies done is in the field of brand architecture and the outcome of strategy choices (Rao, Agarwal & Dahlhoff, 2004).

The research done by Rao, Agarwal and Dahlhoff (2004) has indicated that there is a clear link between the implicit and explicit strategy choices a firm makes in its branding strategy and the financial outcomes in terms of valuation.

To understand the different types of brand architectures Rao, Agarwal and Dahlhoff (2004) describes the likely origin of a firm's brand as a result of corporate branding strategy. This is seen as a natural progression of a firm's offering as they begin with a single product and develop to a multiproduct firm as it grows and matures. In cases such as this, the product's brand offered in the initial stages most likely relates to the name of the corporation, this is identified as a corporate brand strategy (Laforet & Saunders, 1994). The natural progression following the move from single- to multi product offerings introduces a choice for managers as they have to decide, when moving forward. If they are going to keep the firm identification as part of the new brands and continue the corporate brand strategy. The other option given to managers is to introduce new products under a new name without the firm identification. This strategy is known as a "house-of-brands" strategy and is visible in cases like Unilever (Rao, Agarwal & Dahlhoff, 2004). When new products are added to a firm's product mix as a result of a merger or acquisition of another firm, a situation arises where existing brands are already in place. As such, the resulting entity will now employ a mixed branding strategy. This mixed branding strategy can also occur within a firm without outside interference. This is visible in an environment when a firm chooses to market a selection of its products with a corporate branding strategy as well as a selection of products under individual names (Rao, Agarwal & Dahlhoff, 2004).

Rao, Agarwal and Dahlhoff (2004) note that it is worth knowing that the structure of the branding might not be a deliberate choice, but something that has come from other decisions made by the company. Both Rao, Agarwal and Dahlhoff (2004) and Hsu, Fournier and Srinivasan (2015) have found that the choices of brand architecture affects the intangible value of a firm. As such the research suggest that with the launch of a new product or acquisition a contentious and strategic decision should be made to which type of branding strategy will be implemented going forward as to maximize the intangible value of the brands. Rao, Agarwal and Dahlhoff (2004, p. 127) writes:

"*For example, corporate branding may be viewed as having higher equity because the firm can build and leverage its overall reputation, whereas a house-of-brands strategy, by definition, requires a firm to build the reputation of each of its individual brands.*".

Petromilli, Morrison and Million (2002) discusses how firms in a more challenging economic climate have to allocate resources amongst its brands to best grow shareholder value. They found that discussions amongst firms in regards to brand architecture has been on the rise as a result of well-managed and strong brands substantial impact on the bottom line. Cited is a respected study called EquiTrend, which quantified the gains and losses in return of investment directly correlating to brand equity. They also point to the importance of re-evaluation within firms of their brand portfolio as to look at the structure and the interplay between brands. As such Petromilli, Morrison and Million (2002) refers to the categories of branding structure laid out by Rao, Agarwal and Dahlhoff (2004) as cornerstones to analyzing and getting a broader picture of a firm's branding structure. Petromilli, Morrison and Million (2002, p. 23) states:

"The key to success is to have an overriding brand architecture strategy that is well defined and is grounded in and informed by a clear understanding of market dynamics, the brand strategies being employed by key competitors and alignment with internal business goals and objectives."

To which it becomes important to study if these findings also apply to company returns in case of an IPO and whether specific brand architecture choices have different implications.

Further findings by Petromilli, Morrison and Million (2002) has indicated that the current trend amongst firms is to try to maximize the gains from an existing brand portfolio by focusing on the management and inter-relationships between the brands. This as a contrast to the boom years of the 1990s where the growth of firms and brands came from new products, new market entries, or acquisitions.

An argument put forward to analyzing the brand architecture of firms is to look at the strategic approach made by firms in relation to affect customers' experience. This is shown as a three screen representation of the different array of factors that affect the formation and strategy of a brand. These three factors are connected to the brands fit with the overall business, the other brands in the firm's portfolio and the customer's views and expectations as to be able to create a viable strategy (Petromilli, Morrison & Million, 2002).

Hsu, Fournier and Srinivasan (2015) have built upon the work done by Rao, Agarwal and Dahlhoff (2004) to look closer at the different strategies and their impact on the valuation on financial markets. Hsu, Fournier and Srinivasan (2015) notes that although evidence of other permutations of brand architecture other than the previously common strategies are beginning to show. There is still a need to look at the implications of the different architecture choices, as it has been unclear whether it makes a significant impact on the firm valuation. By extending their study beyond the three architecture choices presented by Rao, Agarwal and Dahlhoff (2004) to cover five different permutations with an addition of sub-branding and endorsed branding. Sub-branding is described as a branding architecture whereas the corporate brand and separate brand operate at the same level in terms of perceived importance and affection in consumer's minds. An example given of this is Intel Pentium and Apple iPod. Endorsed branding on the other hand is where the corporate brand takes a less visual and affective space in the branding and has a practical function as an authenticating endorsement role. The example given by the authors is the case of Post-It Notes by 3M where the moniker "by" functions to subordinate the corporate brand under the Post-It brand. With these insights the authors are able to find and quantify the implications of the choices beyond what common wisdom had previously suggested.

The tool that Hsu, Fournier and Srinivasan (2015) uses to quantify the impact of the strategy choices on the firm's valuation on financial markets is constructed by comparing firms in the five different strategy categories with their calculated Tobin's Q value. This value lets the

authors look at whether a firm is over-/undervalued on the financial markets in regards to their overall branding strategy. With this tool the authors are able to show with their research that what could be perceived as subtle differences in brand architecture strategy have vastly different risk/return profiles. This was shown to be a factor that best explains the variation in returns better than any other variable in their study and as such becomes of great relevance not least for investors.

What Hsu, Fournier and Srinivasan (2015) found with their research was that corporate branding strategies differ substantially in their implementation and effectiveness on a firm's risks and returns. This finding sheds more light on Rao, Agarwal and Dahlhoff (2004) study as it can more clearly show which elements interact to drive performance in the corporate branding strategy. In turn this makes future research into financial impact of strategies easier to qualify in effective categories. Further findings show that previous held notions in branding literature around sub-branding has been misrepresented, as the strategy carries an increased risk/reward profile that has previously been understated in both aspects. Also noted by the authors are that managers often tend to underestimate the cost involved in brand building, which makes BH-HOB hybrids and endorsed branding further unattractive as their overall performance is seen as mediocre before accounting for costs. As such the hypothesis in this thesis corresponds to the brand architecture as such:

Hypothesis 4 is based on the research done by Hsu, Fournier and Srinivasan (2015) which suggests higher than usual returns and risk in connection with a branded-house architecture compared to house-of-brands architecture. Rao, Agarwal and Dahlhoff (2004) shows that a branded-house is most preferred by investors if given a choice between BH, HOB, or hybrid-architecture.

H4. A branded-house brand architecture will have a positive effect on returns

Hypothesis 5 is also based on the research done by Hsu, Fournier and Srinivasan (2015) which found substantially higher than usual returns and risk in connection with the architecture choice.

H5. A sub-branding brand architecture will have the strongest positive effect on returns

For hypothesis 6, this is also influenced by the study conducted by Hsu, Fournier and Srinivasan (2015) in which they found that there is a preference for this type of architecture on the market, as it is seen as a way to reduce risk and exposure.

H6. A house-of-brands brand architecture will have a negative effect on returns

Hypothesis 7 build on the notion presented by Rao, Agarwal and Dahlhoff (2004) that investors prefer a branded-house or house-of-brands before a hybrid-brand architecture. This finding was further substantiated by Hsu, Fournier and Srinivasan (2015).

H7. A hybrid-brand architecture will have the strongest negative effect on returns

As follows is a summary of the different brand architectures and their implications on managerial and financial aspects.

Table 2 Advantages & Disadvantages of different Brand Architectures

Brand Architecture	**Advantages**	**Disadvantages**
Branded-House	Economies of scale, overall cost/administration efficiencies	Risk of "stretching" brand, increased exposure to overall risk
Sub-Branding	(Limited) Economies of scale and ability to specialize	Increased risk for brand reputation and dilution
Hybrid	Ability to adopt and assimilate other structures	Costly administration and no cohesive structure
Endorsed Branding	Some ability to specialize whilst keeping main brand benefits	Costs and risk involving main brand, including risk of transfer
House-of-Brands	Increased ability to customize and specialize brands	Costly administration and development, risk of brand cannibalization

2.2.3 Brand Portfolio Strategy

Morgan and Rego (2009) show that there is a growing field of studies that show to the connection between the development of marketing assets such as brands and financial performance. It's also noted that it has become a widely accepted notion that brands are becoming a significant intangible asset that directly affects a firm's performance (Gromark & Melin, 2011).

Morgan and Rego (2009) has researched the specific dimensions of brand portfolio strategy that influence firm performance. They found three key aspects that they use as qualifiers for measuring performance and segmenting firms for future research. These three key aspects are scope, competition and positioning. In terms of scope it's referred to as the number of brands and market segments in which a firm chooses to operate in. When referring to competition the research looks at the internal/intrabrand competition that occurs within a firm's brand portfolio. This is qualified as brands that are competing with each other by being positioned to target the same customer segments. The study found that investors view firms that market towards a greater number of segments as less attractive due to concerns about lower future financial performance. Rao, Agarwal and Dahlhoff (2004) used a similar approach looking at industry focus as a control variable for their study but found the variable to be insignificant. Seeing these mixed results looking at specific focus segments, a look at broader segmentation implication becomes interesting. Hsu, Fournier and Srinivasan (2015) solved this broader segmentation issue by dividing companies into B2B, B2C or mixed segmentation, finding that segmentation had no significant effect on choice of branding architecture strategy. As such, the choice of broader segmentation choice becomes interesting to see if it in and of itself affects returns in an IPO setting.

H8. The choice of a specific customer segment has a positive effect on returns

The last of the three key aspects addressed by the authors is the notion of positioning in the context of price and quality perceptions of brands in the firm's portfolio.

Morgan and Rego (2009) address brand portfolio scope, which has shown that the number of brands used by a firm has implications beyond commonly held notions. As such it becomes of interest to see how these findings apply on returns in an IPO setting.

H9. Having more than one brand in the brand portfolio will have a positive effect on returns

Morgan and Rego (2009) notes that literature indicate that there are several benefits in having larger brand portfolios with more brands. This is described as having a relevance in the ability of firms to hire and retain top-talent brand managers. It is also described as giving firms the ability to enjoy synergy benefits as a result of scale advantages in media buying activities and market tracking. Conversely Morgan and Rego (2009) also show that in literature it has been identified as an inefficiency to manage larger brand portfolios as it can create brand proliferation and dilute firm resources.

In their research Morgan and Rego (2009) found that in regards to brand portfolio strategy there was an impact on financial performance related to the size of the firm portfolio. From a financial performance perspective, they found that the most pronounced differentiator in results were related to the firm's marketing external effectiveness and internal efficiency. In terms of the firm's valuation the research showed that a higher customer loyalty was positively connected to a higher Tobin's Q value.

Morgan and Rego (2009) also notes that the brand strategy portfolio implications are significant and explaining between 2 percent-21 percent in variances in regards to financial performance. Where larger brand portfolios are associated with higher Tobin's Q values, whilst marketing across a greater number of customer segments was connected to lower Tobin's Q values.

2.3 Summary of Hypotheses

The hypotheses are summarized in Table 3 below:

Table 3 Hypotheses summary

Branding strategy	**Hypothesis**	**Supporting articles**
Product/brand focus	H1. A product focus will have a negative effect on return	Bhat and Reddy (1998), Alawi and Kitchen (2014), Park et al. (1986), Chiang and Venkatesh (1986)
Product/brand focus	H2. A brand focus will have a positive effect on return	Bhat and Reddy (1998), Alawi and Kitchen (2014), Park et al. (1986)
Product/brand focus	H3. A hybrid product and brand focus will have a positive effect on return	Bhat and Reddy (1998), Grinstein (2008), Keller (2001), Fama (1970)
Brand architecture	H4. A branded-house brand architecture will have a positive effect on returns	Hsu, Fournier and Srinivasan (2015), Rao et al. (2004)
Brand architecture	H5. A sub-branding brand architecture will have the strongest positive effect on returns	Hsu, Fournier and Srinivasan (2015)
Brand architecture	H6. A house-of-brands brand architecture will have a negative effect on returns	Hsu, Fournier and Srinivasan (2015)
Brand architecture	H7. A hybrid-brand architecture will have the strongest negative effect on returns	Hsu, Fournier and Srinivasan (2015), Rao et al. (2004)
Brand portfolio strategy	H8. The choice of a specific customer segment has positive effect on returns	Developed by authors
Brand portfolio strategy	H9. Having more than one brand in the brand portfolio will have a positive effect on returns	Morgan and Rego (2009)

3. Methodology

The approach of this research is to look at six key branding aspects that were identified in previous brand marketing research (Rao, Agarwal & Dahlhoff, 2004; Hsu, Fournier & Srinivasan, 2015; Petromilli, Morrison & Million, 2002) and to combine the branding data with financial data to attempt to show how branding strategies affect a firm's first day return of an IPO.

3.1 Course of Action

To receive a general understanding, the course of action section will give a brief introduction to how the methodology chapter is structured. First and foremost, the general design and approach to the study is introduced in order to give the reader an understanding of why chosen methods are relevant for this study. Next, the use of an event study is motivated for the time aspect of an initial public offering. This leads to the collection of data, which includes the type of data collected and the method used for collecting it (content analysis). After the data collection is introduced it is applied to the theoretical background to give the study substance. The population criteria is then added to the criteria for data collected to motivate the use of NASDAQ and the sample collected. Following the population criteria, the financial models and regression analysis is motivated to show the combination of branding and financial values in the results. It is important to understand what financial models and assumptions are used to correctly read the results of the study. The dummy variables will also give the reader an understanding of how the soft values of branding were quantified and translated into financial values. Lastly, the validity, reliability and replicability of the study is analyzed. This is done to show the reader the strengths and weaknesses of the construction of the study.

3.2 Research Design

Aspects of quantitative research

This research paper will have a quantitative research design. The main distinction between quantitative research and qualitative research is that quantitative research uses measurement in its design (Bryman & Bell, 2011). This means that quantitative research is meant to quantify social phenomena in a measurable way. Bryman and Bell (2011) give four aspects of quantitative research that describes what it is, these aspects are: measurement, as mentioned,

causality, generalization and replication. Causality means that *"quantitative researchers are rarely concerned merely to describe how things are, but are keen to say why things are the way they are."* (Bryman & Bell, 2011, p. 163). This means that there is a relationship between two, where one causes the other. For this study, it is interesting to see how branding affects return in an IPO and if there is any causality between them. By generalization they mean that the research made is to be applicable outside of the research sample. Otherwise, the results do not have as large of an impact on worldwide phenomena. For this study, the population sampling is of importance as its relevance depends on if it reflects reality or not. If the population sample reflects reality, then there is a bigger chance that it will be generalizable. The last aspect, replication, means that there is to be as little subjective bias and values from researchers in the data gathering process. Replication is also part of the reliability of the study and will be developed further under pertaining section.

Why choose quantitative research design?

Bryman and Bell (2011) continue to explain the quantitative research design by giving the reasons why it is should be chosen. The first reason is that a quantitative approach illustrates the fine differences between variables, observing their details. The second reason is that it is a consistent device, which is used in the same way for the gathering of all data. This is seen particularly in content analysis, which is the data gathering method that will be used in this thesis (Bryman & Bell, 2011). Hence, quantitative research design is appropriate for this study. A more detailed look into content analysis is presented below. Lastly, a quantitative approach provides more precise estimates of the degree of relationship between concepts (Bryman & Bell, 2011).

Structure of quantitative research design

Quantitative research design is structured in a way that theory is first and foremost elaborated, then presented in the form of hypotheses and studied on chosen research subjects (Bryman & Bell, 2011). They way in which quantitative research differs from qualitative research in this aspect is that quantitative research turns theoretical building blocks into dependent and independent variables and measures them (Bryman & Bell, 2011). Qualitative research design, on the other hand, does not use measurement as a tool (Bryman & Bell, 2011). A qualitative approach is used by researchers to see how individuals react and perceive a certain

social situation (Bryman & Bell, 2011). The main method used is not quantification, but rather an emphasis on words used. Qualitative research often uses an inductive approach while quantitative research uses a deductive approach (Bryman & Bell, 2011).

Motivating the chosen research design, the main aspect that makes a quantitative approach most relevant is the measuring and quantifying aspect of the gathering of data. Since the study aims to draw general conclusions about which branding strategy that affects underwriting in the IPO process, a large firm sample will be drawn from relevant sources and not individual interviews. The study also intends to see the correlation between different variables, such as brand architecture, product/brand focus and brand portfolio strategy and how it affects underpricing in a firm's initial public offering, which makes a quantitative research design relevant and applicable.

Critique

There exists critique against the quantitative approach, which is important to understand before delving further into the methodology of the thesis. Bryman and Bell (2011) mean that the researchers may perceive the measurement and data gathering process to be more real than it actually is. They mean that the researchers only assume that the quantification process is precise and accurate, but is in reality the subject of researchers' subjective views. Furthermore, the high reliance on research instruments can give a misleading picture of everyday life (Bryman & Bell, 2011). However, since this study does not aim to reflect everyday life, rather single events, this critique is not as applicable. Lastly, a static view of real life events can be the outcome of only analyzing the relationship between certain variables (Bryman & Bell, 2011). Real life events have many different variables in its nature and can therefore not be secluded to a few. All in all, even though there is critique to the quantitative approach it is still deemed most appropriate because of the nature of the study.

3.3 Research Approach

Because of the nature of the study, a deductive theory will be applied to its methodology. According to Bryman and Bell (2011) a deductive approach is used with theory at its base. This means that on the basis of what is known in different theories, hypotheses will be deduced and applied to the research at hand. Bryman and Bell (2011) explain that the

deductive theory is the most commonly used approach when studying the relationship between theory and research.

Opposite of deductive theory is inductive theory. Inductive theory draws observations and findings into general conclusions and constructs theory as a result of it (Bryman & Bell, 2011). In this approach, theory is not at the base, rather the observations and findings included in the research. Important to recognize is that induction involves an element of deduction and the opposite goes for deduction, meaning that the two are not completely separated (Bryman & Bell, 2011)

Following are the motivations why a deductive method was used. First and foremost, the quantitative research method used in this study results in hypotheses constructed, which according to Bryman and Bell (2011) will result in a deductive approach. Secondly, using already existing theory the study aims to further explore the relationship between branding and underpricing in the IPO process, which means that theory is at the base of the construction of variables used and areas researched when collecting data.

3.4 Event Study

Event studies are used "*to measure the effects of an economic event on the value of firms.*" (MacKinlay, 1997, p.13). The event study approach uses financial data and reflects the direct results of an event in security pricings (MacKinlay, 1997). Important to understand is that in the analysis of an event study the event studied is to be in a rational, unbiased market place setting (Brown & Warner, 1980). This allows for a clear result in the changes of firm value before and after the event. In the context of this study the event will be the initial public offering of a firm. The firm value will be the effects of the branding strategy on the price of the IPO. The event study approach is deemed appropriate as it has previously been used in multiple studies within finance and economics. An event study is also relevant for this study as the trading of an initial public offering takes place during a 24-hour time period. The return of the shares will therefore be measured within this time frame, creating an event study.

3.5 Gathering of data

3.5.1 Secondary Data

In order to answer the research question, all data has been collected through secondary sources, such as annual reports from the companies. Bryman and Bell (2011) refer to secondary data collection as having been obtained from other researchers and other organizations. The advantages of secondary analysis include a time aspect that is relevant to our study as it maximizes the information collected in an as small time period as possible, emphasizing that the data is predominantly of high quality when found in the relevant data bases (Bryman & Bell, 2011). It also allows for more time to analyze data, since collecting primary data often is time-consuming. Secondary data is relevant for this study as it excludes the tendency of bias that can occur in the collection of preliminary data (Bryman & Bell, 2015). It also reduces the likelihood of errors made by the researchers when entering data (Bryman & Bell, 2015). However, there are several ways in which the usage of solely secondary data is limiting. These areas include, in the words of Bryman and Bell (2011, p. 320), "*lack of familiarity with data*" and "*complexity of data"*. These limitations have been taken into consideration when applied to this study. With that said, the secondary data collection is still deemed most appropriate for this study as the quantitative nature of it is dominant. It also allows for a bigger sample as "*the speed of the mode of administration*" is relatively fast, resulting in a larger sample used (Bryman & Bell, 2015, p. 682). The secondary data will be collected from company websites and annual reports, also called SEC Form 10-Ks in accordance with Noble, Sinha and Kumar (2002). A more detailed outline of the data collection sources is described below.

3.5.2 Content Analysis

The data gathering research technique that will be used for the branding aspect in this thesis is content analysis. Krippendorff (2012, p.24) defines content analysis as "*a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use.*" This means that data is quantified and coded through the analysis of text. What differentiates content analysis from other research techniques is the focus on text as a starting point. Looking at the secondary data source of this thesis further highlights the relevance of content analysis as a method of choice. Since the secondary analysis has already been conducted and presented in the form of text, our study aims to quantify said text. The way in which this will be done is by taking inspiration from the method of Noble, Sinha and

Kumar (2002). They use sentence-by-sentence coding of manager's letter to shareholders to extract data and apply it to the research question at hand. Since the research question in this study is similar to that of Noble, Sinha and Kumar (2002) it becomes a relevant research technique. However, Noble, Sinha and Kumar (2002) use basic definitions and general guidelines to pinpoint which strategic orientation a firm use. For this study, a focus will not be put on basic definitions, but rather on types of words chosen to describe the brand architecture and brand/ product focus of the firm. This will simplify the data gathering process and make the study replicable if other researchers were to conduct the same study.

Proceeding into more depth regarding content analysis, Krippendorff (2012) shows at different types of the technique that can be used. The types are divided into three categories. These categories are:

1. Pragmatic content analysis- "*procedures which classify signs according to their probable causes or effects*" (p. 49) i.e. how many times something appears in a text and to which extent it will have an effect on the subject in question.
2. Semantical content analysis- "*procedures which classify signs according to their meanings*" (p. 50) i.e. how many times something is referred to without taking the words surrounding it into consideration.
3. Sign-vehicle analysis- "*procedures which classify content according to the psychophysical properties of the sign*" (p. 50) i.e. how many times a word appears.

There are three further categories within the semantical content analysis: designations analysis, attribution analysis and assertion analysis (Krippendorff, 2012). These adhere to the frequency of certain objects, characterizations and the frequency of objects characterized. The category appropriate for this study is pragmatic content analysis as it is the sentences used to communicate and influence the reader in management's letter to shareholders that will determine which brand architecture and product/ brand focus a firm uses. The data-gathering tool used will therefore be constructed in a way that takes pragmatic content analysis at its base and eases the process of counting the sentences used within the different branding strategies. The data received from the tool constructed will then be applied to the financial values retrieved from annual reports.

Furthermore, there are certain designs within content analysis that are important to take into consideration when understanding its research technology. These designs include datum and logic. Krippendorff (2012, p. 82) refers to datum as "*a unit of information that is recorded in a durable medium, distinguishable from and comparable with other data, analysable through the use of clearly delineated techniques and relevant to a particular problem.*" In the terms of this study, datum can be described as branding information recorded through the use of words in management's letter to shareholders, distinguished from other and irrelevant data within the letters, comparable with financial data from annual reports and related to the purpose and research question of the thesis. The second aspect of content analysis design is logic. Logic is a broad term, however in the context and purpose of this study and the content analysis technique, logic is referred to in two "qualities", i.e. steps. The first step includes the assurance of preventing noise from integrating into the analysis through the avoidance of structural redundancies. In short, the stages made within content analysis are to be efficient and not repetitive. The second step entails the prevention of favouritism in results. This means that there is to be objectivity and fairness when analyzing the different variables in the text of management's letter to shareholders, so that neither outcome is favoured. These aspects of the content analysis design relate to the reliability and validity of the thesis and will be discussed in further detail under respective section.

Continuing to the process of content analysis, it can be into different sections and components (Krippendorff, 2012). The six components are: unitizing, sampling, recording/ coding, reducing, inferring and narrating (Krippendorff, 2012). Below is Table 4 describing the components in more detail (the first four constitute data making):

Table 4 Components of content analysis

Component	**Description**
Unitizing	Keeping together what is meaningful within a text and omitting irrelevant material. Defining relevant units.
Sampling	Limiting observations to a sample that is practicable for the research at hand, without losing statistical or conceptual representation. Creating plans to sample.
Recording/coding	Create and rely on coding directions. Used to record momentary phenomena and text and therefore making it durable and analyzable.

Reducing	Reducing data to efficient representations so that the data becomes simplified and easier to work with.
Inferring	Minimizing the gap between texts and what they mean. Using the models chosen as warrants for the results of the study.
Narrating	Making the results of the study comprehensible to others. Explaining what the study provides in practical and theoretical relevance.

Applying the components to this study will give it structure and organize the data collection process. Therefore, Table 5 demonstrates how each section in the content analysis process is applied in this thesis:

Table 5 Components of content analysis applied to the study

Component	**Application**
Unitizing	Extracting the correct words in management's letter to shareholders and omitting irrelevant text not pertaining to brand architecture or product/ brand focus.
Sampling	Limit the sample of companies used in the study. Is seen in the demarcations section in the introduction of the thesis.
Recording/ Coding	Creating a tool to extract brand architecture and product/ brand focus data from the management's letter to stakeholders.
Reducing	After the data is collected, extract the outliers to see the connection between branding strategies and IPO underpricing.
Inferring	Use the approaches introduced in the methodology, such as coefficient and regression analysis as a warrant for the results of the study.
Narrating	Explaining the results of the research question in the analysis section of the thesis, as well as the results and discussion section. Allowing clarity when seeing the relationship between branding strategies and IPO underpricing.

To summarize, the method and research technique used to gather branding data in this thesis will be a combination between Noble, Sinha and Kumar (2002) sentence-by-sentence coding and pragmatic content analysis by Krippendorff (2012). Datum and logic are used to avoid redundancy and increase efficiency. To organize the research technique, the data gathering will be structured in six (6) components: utilizing, sampling, recording/coding, reducing, inferring and narrating. Important to note is that content analysis is used for the branding

aspect, to gather financial data numbers from annual reports will be extracted and regression analysis will be conducted, as described below.

3.6 Criteria for data collection

As mentioned in the data-collecting section, content analysis will be used for the collection of branding data. In this section, a description of how the data is extracted is introduced. Furthermore, what types of words and sentences extracted will also be presented to give an understanding of where the data comes from. The section is divided into the different branding aspects, brand architecture, brand/ product focus and brand portfolio strategy. Important to remember is that the texts used for all branding aspects come from the same sources. This creates structure, continuity and efficiency for the study.

3.6.1 Product/brand focus

As introduced in the theory section, there are two types of focus a firm can have: brand focus (symbolic and affective) and product focus (cognitive and functional). In order to extract the most relevant data from the 10-K and business introduction texts, following words and sentences will be looked for in respective focus category:

A first general conclusion regarding the choice of brand and product focus will be extracted through analyzing how much of the text is chosen to describe the product versus the brand. This will allow for first understanding before proceeding into the details of the text.

Product focus

- The amount of times the brand's products are mentioned. If it is the majority of the text, then the firm uses product focus strategy
- The products are introduced before the brand is
- The amount of detail the firm uses to describe its products. This will be conducted on a sentence-to-sentence basis.
- The amount of times references is made to the technology behind the product

In accordance with Alawi and Kitchen (2014), Bhat and Reddy (1998) and Park, Jaworski and Maclnnis (1986) the choices made for product focus reflect the functional, problem-solving

and cognitive aspects that exist. Focusing on the ways in which the products and technology behind the firm will help users and stakeholders solve functional problems that they have given a firm uses a product focus strategy.

Brand focus

- The use of words to describe how the brand will create self-fulfillment for stakeholders
- Referring to the lives of people and how the brand helps it become better
- More brand related words than product related words
- Referring to how the brand enhances the world with its vision and mission
- No references to the technology behind the products

Again, the relevant brand focus words and sentences will be extracted from the 10-K text sources as the criteria are in accordance with Alawi and Kitchen (2014), Bhat and Reddy (1998) and Park, Jaworski and Maclnnis (1986).

Important to understand is that quantifying and deciding on which type of focus a firm uses through soft values such as texts is crucial to do in a structured way. The process of actually reading the text is the deciding factor and knowledge about the focus strategies is crucial to correctly extract which branding strategy a firm use. To make it more clear for the reader one example of product focus and brand focus each is introduced, to obtain a stronger practical relevance.

Looking at Google Inc. 2015 10-K, the first section of the annual report is its business overview (Annual report, Google Inc., 2015). Here Google uses a large part of the text to explain what the brand is and how it improves the lives of the people in this world. Using sentences like "*Creating platforms for other people's success is a huge part of who we are. We want the world to join us online and to be greeted with the best possible experience once they get there"* shows that Google has a brand focus as part of its branding strategy. This is what the majority of the text looks like in Google's 10-K introduction of the company.

The opposite goes for Tesla Inc. In their 10-K report, many parts of the text are regarding the technological aspects of their different products; the cars Model S and Model X. Their very

first sentence is "*We design, develop, manufacture and sell high-performance fully electric vehicles and energy storage products.*" (Annual report, Tesla Motors Inc., 2015) Showing that a very developed product focus is used when describing their company and branding strategy.

3.6.2 Brand architecture

To be able to study the different branding strategies Rao, Agarwal and Dahlhoff (2004) divided firms into three types. These are corporate branding strategy, house-of-brands and mixed branding. (Rao, Agarwal & Dahlhoff, 2004; Laforet & Saunders, 1994). These have later been extended and modified by Hsu, Fournier and Srinivasan (2015) to five types, branded-house, sub-branding, hybrid, endorsed brands and house-of-brands. The process of identifying different branding strategies can be inferred from an examination of the brand names and structure of the products and services that the company offers. This is done either through annual report filings, known as Form 10-K with the U.S. Securities and Exchange Commission (SEC) or through external corporate communications such as press releases or corporate websites.

In order to be able to make a correct estimation of the type of architecture used by a firm, data was extracted from the SEC Form 10-K presented for the year of the IPO. This was done as to get as much historical accuracy to the brand architecture classification as possible. The primary focus was on analyzing the company overview section of the Form 10-K, the same process used to quantify product/brand focus. Furthermore, press releases and company communication in form of website and annual reports was used to validate findings. The categorization of the different architectures was done by a process of matching the architecture closest to the firm's communication with the closest having most criteria met.

Branded-house

- The corporate name is the main focus in the communication
- The corporate name is mentioned more than the product/product name of lesser importance
- There is no specific brand name or trademark associated with a product

In accordance with the theory presented by Hsu, Fournier and Srinivasan (2015) the main focus for branded-house is one "*in which a unifying corporate brand extends across all*

entities in the portfolio". Examples given for such an architecture is IBM and Boeing. (Hsu, Fournier & Srinivasan, 2015, p. 261)

Sub-branding

- Equal visual and/or verbal weight and focus is given to the corporate brand and the product brand name
- The sub-brand functions both as an identifier on its own and together with the corporate name
- Communication of the product includes both corporate name and product brand name

Sub-branding is described as a branding architecture whereas the corporate brand and separate brand operate at the same level in terms of perceived importance and affection in consumers' minds. An example given of this is Intel Pentium and Apple iPod. (Hsu, Fournier & Srinivasan, 2015)

Endorsed branding

- The corporate brand takes less visual and affective space
- Corporate brand is used as an authenticator of the product brand
- The monikers "by"/ "from" / "part of" is used to communicate the connection to the corporate brand

The endorsed branding classification is to be used in cases where the corporate brand takes a less visual and affective space in the branding and has a practical function as an authenticating endorsement role (Hsu, Fournier & Srinivasan, 2015). This is to be used if this branding architecture is solely used in the communication. In cases where other permutations arise the hybrid classification is to be used. For example, Post-It Notes by 3M where the moniker "by" functions to subordinate the corporate brand under the Post-It brand. This is an example of an endorsed branding, but when looking at 3M as a whole the categorization of hybrid would be better suited for this study. After running the tool and quantifying the data no endorsed branding strategies were found. No hypothesis was conducted either, which results in no analysis made further on the subject.

House-of-Brands

- Product brand is either not linked or loosely connected to the corporate brand

- Corporate name is absent or visually not presented in association with the product
- Communication to customers is done under product brand name not the corporate brand

This classification is based on the information presented by Hsu, Fournier and Srinivasan (2015, p. 261) which states that a house-of-brands is to be considered "*wherein distinct brands not linked to the corporate brand are cultivated for specific market segments*". House-of-brands is where (new) products are marketed under a (new/different) name without the firm identification. A good example given for this categorization is Procter & Gamble, where brands owned by the firm are seen as separate in communications. For example, Tide can be perceived as a separate entity without the firm's identifier/brand.

Hybrid

- A combination of branding architectures can be found within the communication
- Where a mixture of both corporate name and brand name is used with varying degrees
- Two or more of other architectures can be found in the brand architecture.

The hybrid categorization is used when the branding of the firm has more than two of the branding architectures present in their marketed products. This categorization is similar to the one presented by Hsu, Fournier and Srinivasan (2015) which categorized these companies as having both branded-house and house-of-brands traits. For this study it is extended to cover other permutations where more than two architecture traits are found.

3.6.3 Brand portfolio strategy

This section relates to the statements made by firms in the SEC Form 10-K business overview. The data collected is used to quantify external communication with stakeholders and to identify strategy choices made by the firm. This classification is made based on three dimensions presented in the theory segment that are influenced by a paper written by Morgan and Rego (2009) in which they found that scope, competition and positioning were the three key aspects that they use as qualifiers for measuring performance and segmenting firms. In this thesis scope and positioning is represented by number of brands and which segments a firm operates in. Further data collected relates to the number of mentions of the corporate brand name in the communication to shareholders as a way to visualize the importance of the corporate name in the communication.

Corporate brand name statements

- Counted are the number of times the corporate name is mentioned directly

For this data collection point a numeric value from 0 and up corresponds to the number of times the corporate name of the firm is mentioned in the 10-K business overview.

Brand and product name statements

- The number of brands and/or product names that can be found at the time of the IPO

This data point is a numeric value from 0 and up that corresponds to the number of times one or more the brand names of the firm is mentioned in the 10-K. Further validation of this is done by looking at the external communication from the firm. This data point draws from research done by Morgan and Rego (2009) which used similar methods on which this thesis builds upon. When identifying statements, brands can often be seen visualized by a capitalization of the first letter, a trademark sign, but also as a composite with a corporate name such as Apple Watch™. In a case such as this, Apple Watch™, counts as one brand name and as one corporate brand name statement.

Statements of corporate market segments

- The unique type of market segments that the firm operates in
- Consumer segments are identified as all sales/operations directly aimed at consumers (B2C).
- Business segments are sales/operations that are mainly focused towards corporate sales (B2B).
- Governmental segments in which sales/operations are done with military, law enforcement, schools or other governmental agencies (B2G).

The data point is used to visualize the number and type of segments that a firm is engaged in by looking at both the Form 10-K overview and also the firm website for information as to whom are the firm's customers. This draws inspiration from Morgan and Rego (2009) and Hsu, Fournier and Srinivasan (2015), but chooses to look at the wider segments in which the firm operates. Although B2C, B2B and B2G are the main segments that a brand portfolio can be divided into, a combination of multiple segments can also exist. Therefore, combinations such as B2BC etcetera can be quantified from the SEC Form 10-Ks.

3.7 Population Criteria

In order to reach a relevant database of companies and industries for this thesis, certain criteria for the population was conducted. The population criteria were as follows:

- Companies with an initial public offering on the NASDAQ stock exchange, hence on the American market
- Companies that had their initial public offering at some point between 2007-2013
- Different types of industries, to receive a broad data collection of companies with different products and services
- Companies with a complete annual report, 10-K, within the first year of their initial public offering
- Companies that had undergone a foreign acquisition within a year of their initial public offering were not included, this as data such as 10-Ks is not available.
- Companies with lacking information in their annual report were not included

Since the research question relates to companies that have made an IPO on the NASDAQ stock exchange, initial data was gathered by accessing NASDAQ's database and gathering their full listings. To filter the data down to a more manageable size, a limit was set that only firms introduced on NASDAQ between 2010 and 2013 were eligible. Next stage of the filtering involved excluding companies within certain sectors, these sectors were finance, public utilities, transportation, energy and health care as these markets are not operating in the same type of competitive branding landscape, possibly skewing our results. Lastly filtering was done to exclude companies that were lacking in external accessible information or that were non-active, part of mergers or acquisitions that could largely affect their financial data. The final number of companies that met the above criteria was 110.

3.8 Regression analysis

The usage of regression analysis is applied in many research areas to explain how a dependent variable is affected by an independent variable and what their relationship looks like. The analysis tries to explain the movements in the dependent variable and how it is caused by the explanatory variable (Brooks, 2014).

A regression analysis can either be simple or multiple. A simple regression analysis has one explanatory (independent) variable while a multiple has several independent variables.

The equation [1] shows the model used when performing a multiple regression, which is going to be used in this paper.

$$y_t = \sum_k \beta_k x_{kt} + u_t \quad [1]$$

The *y* is the dependent variable, in this case return, it depends on *k* different variables of *x*. *x* is the explanatory variable, seeking to explain the movements in *y*, they are explained in part *3.9.1 Dummy variables*. *u* is the error term, it is thrown in order to leave some room for deviation from the straight line (Brooks, 2014).

The multiple regression will be used when testing the value of the company that is conducting the IPO. The explanatory variables explained below will be used in order to try to explain the valuation of the company and how it is received by the market. The dependent variable is therefore the return of the stocks during the first day of trading.

3.8.1 Assumptions

In order for the regression analysis of Ordinary Least Squares (OLS) to be performed properly there are five assumptions that need to hold.

- Assumption 1, $E(u_t) = 0$

The assumption requires that the average value of the errors is zero. If there is a constant term in the equation, this assumption will never be violated and does not need to be tested for.

- Assumption 2, $var(u_t) = q^2 < \infty$

The second assumption is stating that the error term should be constant into infinity, which is also known as homoscedasticity (Brooks, 2014).

Homoscedasticity is desirable when performing a regression analysis as it shows that the dependent variable has the same variance across the entire range of independent variables. If the variance changes then the model shows heteroscedasticity, which causes the model to be

better with some of the independent variables than others (Hair, Black, Babin and Andersson, 2010).

There are a few tests that can be conducted in order to make sure heteroscedasticity is not a problem, for example White's test and Breusch-Pagan-Godfrey (BPG). Both can be conducted in Eviews, a computer program for econometrics that is used for the tests and in this thesis White's test will be used. If an OLS regression would be used and heteroscedasticity would not be accounted for, it would lead to a misleading conclusion as the standard errors would be too large for the intercept. Another way to reduce heteroscedasticity is to use ratios or logarithms of the variables (Brooks, 2014).

- Assumption 3, $cov(u_i, u_j) = 0$

Assumption three is also known as the autocorrelation assumption and holds when there is no correlation between the error terms. The error terms should be linear and independent from each other. When autocorrelation is present, it can be due to cyclical patterns in the time series or due to a bubble in the market.

In order to detect autocorrelation a scatter plot of the residuals will be conducted. If there are signs of autocorrelation the Durbin-Watson test in Eviews will be used to test for autocorrelation. The test ranges from $\rho = 0$ to $\rho = 4$, where a result of $\rho = 2$ indicates no autocorrelation. When $\rho = 0$ it shows negative autocorrelation and $\rho = 4$ presents a positive autocorrelation.

If autocorrelation is ignored the outcome is much like the outcome of heteroscedasticity, which means that the coefficient estimates will be inefficient so the standard errors would be wrong. That in turn will lead to an increased risk of Type I error, i.e. rejecting a true hypothesis. For positive autocorrelation the R^2 will be increased, compared to its true value, R^2 without autocorrelation (Brooks, 2014).

- Assumption 4, $cov(u_i, x_i) = 0$

If assumption 4 is violated, it means that the regressors are endogenous. An endogenous variable is an (explanatory) variable whose value is decided within the equation. The opposite

is an exogenous variable, where the value of the variable is decided outside the equation (Brooks, 2014).

- Assumption 5, $u_t \sim N(0, q^2)$

The last assumption is that the regression should be normally distributed and not skewed in any way. In order to test for the skewness, a Jacques- Bera test can be conducted. By using logarithms, the risk of the regression being skewed is lowered. Another remedy is to increase the sample size, which will not be possible in this study (Brooks, 2014).

3.8.2 Beta, β

As none of the companies in this study have been traded publicly before, they have no Beta. Beta is a variable that explains how the stock is reacting to the market. It takes on the value between –1 and 1 where the index has the value of 1. If the beta value is –1, it means that when the market goes up, the stock goes down. They move opposite of each other. For this study, all of the companies are assumed to have the beta value of 1.

3.8.3 Alpha

Alpha is used as the excess return variable when talking about stocks. It is, like Beta, calculated with the help of historic number which makes it difficult to calculate in this case. That is why Alpha will have the value of 0 in this study, like many other financial papers that face the same issue.

3.8.4 Coefficient of determination, R^2

R^2 is also known as the coefficient of determination and is presented in the outcome of the regression. It is a number between 0 and 1 and explains how much of the variation in the dependent variable that is explained by the independent variables. If the R^2 would be 0,3 it means that 30 percent of the change can be explained by the independent variable in the model, the other 70 percent are explained by something outside of the model. The higher the number, the better the model (Körner & Wahlgren, 2013).

All variables will be tested at the same time, hence the multiple regression. If the variables were to show any sign of statistical errors, they will either be corrected or eliminated so the results presented will be statistically correct. The reason why some of the explanatory

variables might need to be eliminated is because even though it would be nice to have as many explanatory variables as possible, it is also of importance to keep the number of independent variables as few as possible. By having many independent variables in a smaller sample there is a risk of presenting a result that is gives a good description of the population, but it might be due to luck rather than presenting the true picture (Körner & Wahlgren, 2006).

3.8.5 Multicollinearity

When conducting a regression analysis, it is important to make sure that the independent variables are not correlated with each other. If one variable is correlated to more than one independent variable the model presents multicollinearity. The easiest way to find out if the model presents multicollinearity is to conduct a correlation analysis between the independent variables. If the correlation is 0,9 or higher, there is multicollinearity in the model. However, as one variable could be correlated to more than one variable it is not certain that the correlation analysis presents all multicollinearity available (Hair et al., 2010).
In this particular regression analysis, it is not possible to have multicollinearity as the analysis consists of dummy variables. They cannot be correlated to each other.

3.9 Dependent variable

In this model, return will be used as the independent variable. Which is calculated by

$$Return = \frac{(Opening\ stock\ price\ day\ 1 - Opening\ stock\ price\ day\ 0)}{Opening\ stock\ price\ day\ 1}$$

By using the return of the stock during its first day of trading the level of underpricing can be measured. The short time span is used due to the wish of decreasing the level of macroeconomic factors that might affect the stock market. As stated above, the stocks are assumed to move according to the market, this is how it can be shown if different marketing strategies affect the underpricing of the company.

As prices might change between closing and opening, it is only the opening prices that have been used when collecting the data.

3.9.1 Dummy variables

In order to be able to use the independent variables, they need to be transformed. The variables are not going to be usable in their original version as they are stated in words and the program EViews will not be able to recognize them as dummy variables. A dummy variable is an independent variable which is originally a nonmetric variable, one example is gender, which can be transformed as follows:

Female → 0
Male → 1

In this thesis there will be dummy variables in the case of the different branding strategies. These dummy variables are:

Product/Brand Focus

Product focus will be used as the control variable. The return of hybrid focus and brand focus will consequently be compared to it.

- 0 Product focus
- 1 Brand focus
- 2 Hybrid focus

Brand architecture

Branded house will be used as the control variable and the other three architectures will be compared to branded house. As no companies in the sample had endorsed branding it will not be used when running the regression. This could possibly be explained by the fact that companies entering into the IPO-phase do not yet have the brand-awareness or capital to pursue such strategies.

- 0 Branded-house
- 1 Sub-Branding
- 2 Hybrid
- 3 House-of-Brands

Brand portfolio strategy- segmentation

In order to see which segmentation had the better return the following were tested to see their effect on return. Business to business was used as the constant in the test. As business to consumers and government, business to government and business to business, consumers and government were too few to give a result that could be reliable they were made into one variable.

- B2B (Business-to-business)
- B2BC (Business-to-business-and-consumers)
- B2BCG, B2CG, B2G (Business-to-business-and-consumers-and-government, Business-to-consumers-and-government, Business-to-government)
- B2BG (Business-to-business-and-government)
- B2C (Business-to-consumers)

Year of IPO

Macroeconomic factors affect the share prices and can also be a deciding factor for companies to undergo an IPO, for example companies tend to find hot markets were more companies than usual go public. Years are represented as a dummy variable in order to show their effect on return. Num2010 is used as the constant.

- If the company performed an IPO in 2010, they are named Num2010
- If the company performed an IPO in 2011, they are named Num2011
- If the company performed an IPO in 2012, they are named Num2012
- If the company performed an IPO in 2013, they are named Num2013

Number of brands

Number of brands that the company has in their portfolio. Brand_names will be used as a constant.

- If the number of brands are 1, the dummy is named Brand_names
- If the number of brands are 2-5, the dummy is named Brand_names1
- If the number of brands are 6-15, the dummy is named Brand_names2

- If the number of brands are 16+, the dummy is named Brand_names3

3.10 Validity

Bryman and Bell (2011) describe validity as whether the researchers really measure the concept they say to be measuring. In the context of this paper that would mean if it truly is brand architecture, product/ brand focus and brand portfolio strategy that is measured in relation to underpricing and market value. Bryman and Bell (2011) divide validity into different categories and the ones pertaining to this study are: measurement validity, internal validity and external validity.

3.10.1 Measurement validity

Measurement validity, or rather face validity, proposes that "*the measure apparently reflects the content of the concept in question*" (Bryman & Bell, 2011, p. 160). The measurement validity of the study is perceived to be high as the variables measured reflect the research question and the theories introduced. A clear list of criteria for the extraction of text has been conducted and followed by the researchers.

3.10.2 Internal validity

Internal validity is the question of whether it is one said variable that affects the other said variable, or if there is another phenomenon that interrupts the correlation (Bryman & Bell, 2011). The results show that the variables introduced and quantified in this study affect the return up to 30 percent. Hence 70 percent of the return on shares is explained by other variables not studied in this thesis. Even though 70 percent can be seen as high, this is a relatively strong result as it is very difficult to find all the explanatory variables of a regression.

3.10.3 External validity

If a research has external validity, it means that the results can be generalized beyond the specific research context (Bryman & Bell, 2011). Since a quantitative research design aims to draw general conclusions, it is favourable if a quantitative thesis can be applied to other areas than the samples researched. Regarding this study, the external validity is deemed to be relatively strong. The results of this study can be of importance to new firms undergoing an initial public offering, hence stepping away from the firms researched in this study. Therefore,

it is generalizable to some extent. Some markets are more difficult to include in papers like these, which is why markets like finance and real estate have been removed and the external validity decreases to some extent.

3.11 Reliability

Bryman and Bell (2011) describe reliability as the consistency in measurement. In the context of this study it would mean that data is gathered in a consistent and reliable manner and that brand architecture, brand/ product focus, brand portfolio strategy, return and underpricing have a similar and systematic quantification process. There are three aspects of reliability in the quantitative research design. They are: stability, internal reliability and inter-observation consistency.

3.11.1 Stability

Stability in research means that there is a high correlation between the observations (Bryman & Bell, 2011). If there is high correlation between observations, then the reliability is high as well. This can be measured by a test-retest, where one test is made twice with one observation each (Bryman & Bell, 2011). If the two observations correlate, the results have high stability and reliability. To validate the results from our coding effort, we assigned the two main coders that were involved in the effort to re-evaluate a sample of 30 randomly selected firms from the dataset. This was equivalent to roughly 27 percent of the overall firm selection of the 110 companies involved in the study, which is enough for a test-retest. The test-retest of the data showed a high degree of consistency between the coders. As such, coder reliability which is represented as the percentage of agreement between the coders was over 90 percent for all areas coded with a mean of 97.2 percent of being correctly coded. This would suggest a high level of internal coder reliability as well as a low variance, suggesting high inter-observation consistency. If a major discrepancy in the data arose, it was evaluated jointly in the team to make sure that consensus was reached and that the analyzed dataset was presented correctly. Overall, the process of classifying and coding the data was seen as straightforward and unambiguous as it was aided by clear checklists and guidelines.

3.11.2 Internal reliability

Internal reliability means to see to which extent there is a lack of coherence between the data

collected (Bryman & Bell, 2011). Since data was collected from one source, the SEC form 10-Ks, there is low internal reliability. If data had been collected from several sources and the data was equal in those sources, the study would have been internally reliable. However, data sources relevant for this study, such as Compustat, were difficult if not impossible to reach and therefore hindered the process of comparing the results of different data. Overall, the internal reliability is low.

3.11.3 Inter-observation consistency

Inter-observation consistency explains how much subjective judgment exists in categorizing and coding text when more than one observer is involved (Bryman & Bell, 2011). This is particularly important in content analysis as many observers are quantifying large amounts of texts into numbers and dummy variables. As can be seen in the test-retest under the stability section, the inter-observation consistency is high. Only 2,7 percent of all observations differed, meaning that every around every 35th firm coded has the probability of being categorized subjectively.

3.12 Replicability

According to Krippendorff (2012, p. 24) *"...for a process to be replicable, it must be governed by rules that are explicitly stated and applied equally to all units of analysis."*. Seeing as great structure and organization must exist to draw out the correct data, this study is deemed to be replicable. This can be seen in the demarcations section and the description of the criteria for data collection. Since the text from the secondary data sources cannot be changed, it will be the same information that is looked at if the study were to be conducted a second time. The use of content analysis also adds to the replicability of the study because of its detailed structure (Krippendorff, 2012).

4. Empirical Findings

This chapter presents the results of how different branding strategies affect the true value of a firm in the event of an initial public offering. The chapter is divided into four sections: description of statistical variables, product/brand focus, brand architecture and brand portfolio strategy.

4.1 The regression analysis

Following are the results of the study, conducted with a regression analysis.

Dependent Variable: RET
Method: Least Squares
Date: 04/25/16 Time: 15:00
Sample: 1 110
Included observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.101611	0.078233	1.298833	0.1972
B2BC	0.140604	0.085496	1.644573	0.1034
B2BCG	-0.054768	0.097339	-0.562658	0.5750
B2BG	0.043428	0.065829	0.659704	0.5111
B2C	0.232921	0.092318	2.523018	0.0133
BRAND_FOCUS	0.044651	0.093184	0.479173	0.6329
HYBRID_FOCUS	0.036233	0.072342	0.500859	0.6176
HOUSE_OF_BRANDS	-0.121327	0.066451	-1.825816	0.0711
HYBRID	-0.239259	0.079875	-2.995426	0.0035
SUB_BRANDING	0.031051	0.083152	0.373428	0.7097
NUM2011	-0.056613	0.081169	-0.697477	0.4872
NUM2012	-0.018358	0.079223	-0.231721	0.8173
NUM2013	0.139705	0.070771	1.974048	0.0513
BRAND_NAME_1	0.018189	0.069134	0.263094	0.7931
BRAND_NAME_2	0.234985	0.085840	2.737475	0.0074
BRAND_NAME_3	0.121485	0.092284	1.316429	0.1912

R-squared	0.303689	Mean dependent var	0.218364
Adjusted R-squared	0.192576	S.D. dependent var	0.287292
S.E. of regression	0.258151	Akaike info criterion	0.263182
Sum squared resid	6.264357	Schwarz criterion	0.655979
Log likelihood	1.525008	Hannan-Quinn criter.	0.422502
F-statistic	2.733148	Durbin-Watson stat	2.142949
Prob(F-statistic)	0.001614		

Figure 2 The outcome of the regression analysis

4.1.1 Regression one, statistical variables

First and foremost, as can be seen in the results above, there was a total of 110 samples collected. Meaning that content analysis was conducted and data quantified, on 110 companies. It also states that the dependent variable for the equation is the return of the company. Important to remember is that the return represents the price of the stock at the end of the first opening day, day one, subtracted by the price of the stock at the end of day zero, the day of the initial public offering and divided by the price at the end of day one. In total it represents a 24-hour time span of how the return of the firm has changed. The change in the return of the company can therefore be explained as the underpricing of the initial public offering. If the return increases after the 24 hours, then the initial public offering was underpriced on day zero. The terms equation one and regression one convey the same meaning and will furthermore be used without distinction.

Looking further into the different columns of the equation, the variables column represent the constant C and the different branding strategies introduced in the theoretical chapter, that is product/ brand focus, brand architecture and brand portfolio strategy. The constant, C, is what the original company looks like in this regression. As the regression is run by dummy variables, one variable is removed from each group. In regression one the C is defined by a company who is segmented B2B, has a product focus, is a branded-house, did the IPO in 2010 and the company only had one brand in the annual report. The other explanatory variables in the results show the relationship between the constant and the explanatory variables. This is also known as the coefficient.

Looking at the second column in equation one, the coefficient is shown. The coefficient represents the return of the company as a result of the different explanatory variables. The coefficient for C is the return for a company which represents all the extracted explanatory variables. In this regression it is 10 percent, which means that the return of the company with a branding strategy that is constant, C, increases by 10 percent after the first 24 h of the initial public offering. That is to say that a company that is segmented B2B with a product focus and branded-house architecture with only one brand name has an underpricing of 10 percent.

The third most relevant column is the one furthest to the right, the probability of the results. Probability is also known as the p-value. It shows the statistical significance, as explained in the methodology chapter. Again it is important to emphasize that the p-value stands for the risk of rejecting a true hypothesis. In the results a 1-percent, 5-percent and 10-percent risk for

rejecting an accepted hypothesis exists. The variables that have a p-value above mentioned percent are, therefore, not statistically significant.

A final note regarding the general results of the study is that the explanatory variable B2BCG includes the segmentations B2G and B2CG as well. The reason for this is because the number of companies that used these segmentation strategies were not enough to stand on their own. Instead, because all had government as a common denominator, it was decided to combine them into one.

4.1.2 Year of IPO

In order to see if any of the initial public offering years proved to better than others, the different years were also included in the regression. 2010 is the year that was removed and included in the constant. It can be seen that by having the IPO in the year 2013 increases the return on the first day of trading by 13 percent. The variable is also proved to be statistically significant at the 10 percent level. This means that there is a 10 percent chance that the accepted hypothesis is mistakenly rejected. For the year 2011 there is a 5,7 percent decrease in return and for the year 2012 there is a 1,8 percent decrease in return. However, neither of the years 2011 and 2012 are statistically significant, meaning that any hypothesis in their regard can neither be rejected nor accepted. Both of those years have a p-value much higher than 1, 5 and 10 percent.

4.1.3 Coefficient of determination

Recalling from the methodology section, R^2 (R-squared in equation one) explains how much of the variation in the dependent variable that is explained by the independent variables. In the case of these results, R^2 in the regression is 0,3, meaning that the regression explains the changes in return to 30 percent. The explanatory variables such as the brand architecture etcetera affect the return of the firms by 30 percent. 70 percent of the changes are thereby explained by factors that are not put forth here.

4.1.4 OLS assumptions

In order to be able to use Ordinary Least Squares, OLS, the assumptions stated in 3.8.1. need to hold. For assumption 1, the average value of the error terms has to be zero is already approved as there is a constant in the outcome of the regression.

The second assumption is regarding heteroscedasticity. As is presented in figure 2, the residuals have a constant variance and consequently the issue of heteroscedasticity is not an issue. By conducting a White's test, it is confirmed that there is no heteroscedasticity in the regression. The probabilities are above 0,05 for the F-test and the first $\chi 2$ test, while it is below 0,05 for the test called Scaled explained SS. The three results all present no heteroscedasticity in the regression.

Heteroskedasticity Test: White

F-statistic	1.438092	Prob. F(15,94)	0.1460
Obs*R-squared	20.53148	Prob. Chi-Square(15)	0.1525
Scaled explained SS	40.64588	Prob. Chi-Square(15)	0.0004

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 05/06/16 Time: 10:08
Sample: 1 110
Included observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.064998	0.039205	1.657871	0.1007
B2BC^2	0.010169	0.042845	0.237332	0.8129
B2BCG^2	-0.035195	0.048780	-0.721500	0.4724
B2BG^2	-0.036069	0.032990	-1.093326	0.2770
B2C^2	0.031605	0.046264	0.683133	0.4962
BRAND_FOCUS^2	0.017778	0.046698	0.380703	0.7043
HYBRID_FOCUS^2	0.033915	0.036254	0.935494	0.3519
HOUSE_OF_BRANDS^2	-0.049068	0.033301	-1.473461	0.1440
HYBRID^2	-0.073323	0.040028	-1.831772	0.0702
SUB_BRANDING^2	-0.027640	0.041671	-0.663290	0.5088
NUM2011^2	-0.005439	0.040677	-0.133721	0.8939
NUM2012^2	0.007120	0.039702	0.179334	0.8581
NUM2013^2	0.076965	0.035466	2.170103	0.0325
BRAND_NAME_1^2	-0.013354	0.034646	-0.385447	0.7008
BRAND_NAME_2^2	0.006641	0.043018	0.154374	0.8776
BRAND_NAME_3^2	-0.027469	0.046247	-0.593970	0.5540

R-squared	0.186650	Mean dependent var	0.056949
Adjusted R-squared	0.056860	S.D. dependent var	0.133212
S.E. of regression	0.129370	Akaike info criterion	-1.118560
Sum squared resid	1.573236	Schwarz criterion	-0.725762
Log likelihood	77.52078	Hannan-Quinn criter.	-0.959239
F-statistic	1.438092	Durbin-Watson stat	2.089182
Prob(F-statistic)	0.145997		

Figure 3 White's test to investigate if there is heteroscedasticity in the regression.

Assumption number 3 covers autocorrelation. By conducting a Durbin-Watson test it is shown that there is no autocorrelation in the regression. As can be seen in figure 1, Durbin-Watson presents a number of 2,14 which means that there is no autocorrelation in the regression.

The fourth assumption is regarding to the dependent variables being correlated with the error term. This is not possible in this regression as the dependent variables are dummies.

The last assumption requires normal distribution, as seen in figure 3 the regression is normally distributed and the hypothesis of being normally distributed is not rejected as the probability of the Jarque Bera test is below 0,05. The hypothesis is automatically stated by Eviews when the test is conducted.

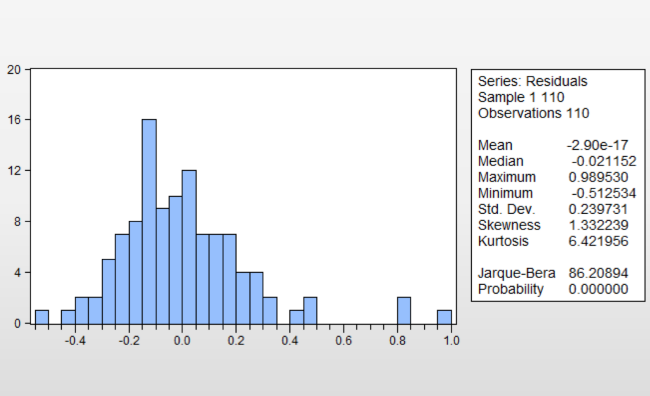

Figure 4 Distribution of the regression.

4.1.5 Multicollinearity

The dependent variables were assumed to be uncorrelated with the error term as all the dependent variables are dummy variables. For multicollinearity, the same assumption can be made. As the regression consists of only dummy variables, they cannot be correlated to each other and multicollinearity is consequently not an issue in the regression.

4.2 Product/ Brand Focus

As for the focus strategies, it is product focus that has been removed from equation one. In the regression, both brand focus and hybrid focus show higher return. Compared to product focus, brand focus has a 4,4 percent higher return on the first day. For hybrid focus, the same number is 3,6 percent. None of them are significant as they all have a p-value significantly larger than 10 percent. Therefore, the hypotheses is not supported for neither product focus, brand focus, nor hybrid focus.

4.3 Brand Architecture

The brand architecture strategy extracted from the explanatory variables and added to the constant is branded-house. Hence all results for brand architecture are in relation to the

branded-house strategy. Among the other explanatory variables, one brand architecture stands out: hybrid. The hybrid architecture is proven to be worse than branded-house and is also showing significance. The minus in front of the coefficient means that when a company has a hybrid architecture it has a lower return than a company with a branded-house. In this regression the difference is 23,9 percent which in turn gives the company a negative return on the first day of trading. The hybrid strategy is significant on a 1 percent level, which means that there is a one percent chance that the hypothesis is rejected when it actually is accepted.
As the chosen level of significance is 5 percent, there are some of the results that are not statistically significant at a desired level. However, if the level of significance is increased to 10 percent statistical significance can be showed and thereby the results are showing that even though the significance value needed to be increased, it is still a sign that the particular strategy had an effect on the return. One example is house-of-brands, which is statistically significant, but with a p-value of 10 percent. According to the coefficient, companies with a house-of-brands strategy will have a 12,1 percent lower return on their trading on the first day of the initial public offering. In comparison to the branded-house constant it is therefore worse to have a house-of-brands architecture. There is a 10 percent chance that a hypothesis based on house-of-brands architecture will be rejected when it actually is true, even though it is still statistically significant.

For the remaining brand architecture, sub-branding, the coefficient shows that the return on a company's trading will be 3,1 percent higher than for the branded-house. However, since the p-value and statistical significance of sub-branding is not 1, 5, or 10 percent, the hypothesis can neither be rejected nor accepted.

4.4 Brand Portfolio Strategy

4.4.1 Segmentation strategy

In regression one, B2B has been removed and added to the constant, C. Following the guidelines of statistical significance there is one choice of segmentation that is statistically significant. The p-value for B2C is below 5 percent, meaning that any hypothesis that has been written would be proven significant if the hypothesis is correct. Those companies that have consumers as customers have a return that is 23 percent higher than those firms that have businesses as final customers. This means that during the first 24 hours of the opening of an initial public offering, the price will have increased by 23 percent. Furthermore, it shows that

the market has underpriced the firm's stock at day zero. For the other segmentations, B2BC has a 14 percent higher return on the first day than B2B, B2BG has 5.5 percent lower return than B2B and B2BCG has 4,3 percent higher return than B2B. However, the other explanatory variables for segmentation strategy, B2BC, B2BCG and B2BG, can neither be rejected nor accepted as they are not statistically significant. They have a p-value that is above 1, 5 and 10 percent.

4.4.2 Brand names- portfolio strategy

The last dummy variable tested is the amount of names that has been mentioned in the earlier specified section of the annual report (see the methodology chapter). The part of the dummy variables that has been removed in this case are the companies that have one brand mentioned in the section. It is instead included in the constant, C. Brand name 2 shows statistical significance and includes the companies that have 6-15 brands within the firm. It is significant at the 5 percent level. This means that a company that has between 6-15 brands will have 23,5 percent higher return than a company that only has one brand. For the other explanatory variables, brand name 1 (2-5 brands) will increase the return compared to the constant with 1,8 percent and brand name 3 (16+ brands) will increase the return with 12.1 percent. However, neither of these explanatory variables are statistically significant as both of them have a p-value that is larger than 1, 5 and 10 percent. Hence, the hypotheses regarding brand names 1 and 3 can neither be rejected nor accepted.

4.5 Summary

Several tests have been conducted in order to make sure the regression analysis has not been affected by any statistical errors. The model presents neither multicollinearity nor failing any of the OLS assumptions that are needed in order for the regression analysis to hold. The results of the study are summarized in Table 6 below:

Table 6 Summary of results

Branding strategy	**Hypothesis**	**Results**	**Statistical significance**
Product/brand focus	H1. A product focus will have a negative effect on return	Neither rejected nor accepted	Insignificant
Product/brand focus	H2. A brand focus will have a positive effect on return	Neither rejected nor accepted	Insignificant
Product/brand focus	H3. A hybrid product and brand focus will have a positive effect on return	Neither rejected nor accepted	Insignificant
Brand architecture	H4. A branded-house brand architecture will have a positive effect on returns	Neither rejected nor accepted	Insignificant
Brand architecture	H5. A sub-branding brand architecture will have the strongest positive effect on returns	Neither rejected nor accepted	Insignificant
Brand architecture	H6. A house-of-brands brand architecture will have a negative effect on returns	Accepted	Significant on a 10 percent level
Brand architecture	H7. A hybrid-brand architecture will have the strongest negative effect on returns	Accepted	Significant on a 1 percent level
Brand portfolio strategy	H8. The choice of a specific customer segment has positive effect on returns	Accepted	Significant on a 5 percent level
Brand portfolio strategy	H9. Having more than one brand in the brand portfolio will have a positive effect on returns	Accepted	Significant on a 1 percent level

5. Analysis

The analysis chapter aims to discuss the empirical findings in relation to previous literature. This is done to analyze how the results of the study can be applied to existing literature. The analysis chapter is also based on the purpose of this study, which is to analyze the effects of branding on underpricing in initial public offerings and the value of the firm post IPO.

5.1 Product/Brand Focus

The empirical findings of the study show that neither hypothesis within product/brand focus can be accepted or rejected. It is therefore not possible to analyze the results in terms of previous literature written, as there exists no statistical significance.

5.2 Brand Architecture

The empirical findings showed that there is a statistical significance in the hypotheses regarding hybrid-brand architecture and house-of-brands. The two hypotheses were both accepted which shows that both a hybrid strategy and a house-of-brands strategy will have a negative effect on return.

As mentioned in previous literature, Rao, Agarwal and Dahlhoff (2004) explore the brand equity of firms using different architecture strategies. Showing that a house-of-brands strategy lowers brand equity, is in line with the results of this study. Rao, Agarwal and Dahlhoff (2004) state that it is more difficult to ensure that multiple brands have high brand equity than a few, leading to many lesser known brands instead of a few known ones in a house-of-brands strategy. The results of this study show that a negative return will exist during the first day of trading if a house-of-brands strategy is used. Seeing as it is difficult in the beginning of a firm's lifecycle to achieve high brand equity it is also more difficult to receive high return in the initial public offering (Rao, Agarwal & Dahlhoff, 2004). Research has also shown that it is becoming more important to focus on existing brands within a brand portfolio, moving away from the trend before the 1990's that the more brands that exist in a firm the better (Petromilli, Morrison & Million, 2002). The results of this study is in line with the recent trend of a more focused architecture, since a house-of-brands strategy shows negative return on the first day of IPO trading. A unitized branded-house strategy is therefore better if a company wants to increase returns and underpricing.

Continuing to the results of the hybrid architecture strategy it was concluded that it has a negative effect on returns with 23,9 percent and the results were statistically significant. According to Hsu, Fournier and Srinivasan (2015) a hybrid architecture strategy entails higher costs than other brand architecture strategies and the results are often mediocre even before accounting for all said costs. Relating the findings of Hsu, Fournier and Srinivasan (2015) to this study it can be seen that even the returns of a company using a hybrid strategy will be negative, meaning that not only will it be costly to construct a hybrid architecture strategy, the returns of such a choice will be non-existing. Worth noting is that the findings of Hsu, Fournier and Srinivasan (2015) was based on established companies on returns over a longer time frame, whilst we have chosen to observe initial IPO returns.

A paradox that exists in the results is between the house-of-brands architecture and brand portfolio strategy. They oppose each other as the negative return on a house-of-brands architecture points towards a more streamlined and concerted brand architecture, while brand portfolio strategy somewhat contradicts this, as it has found that an optimal interval between 6-15 brands creates a positive effect on returns. This paradox has also been seen in recent literature. Hsu, Fournier and Srinivasan (2015) highlight a similar paradox between brand portfolio strategy and brand architecture, although on already established firms. They oppose the findings of Rao, Agarwal and Dahlhoff (2004) saying that a house-of-brands strategy underestimates the risk distribution of multiple brands (Hsu, Fournier & Srinivasan, 2015). Our results further highlight that this paradox exists and suggest that it be researched in more detail in a new study.

Generally, for all brand architecture strategies, Petromilli, Morrison and Million (2002) emphasize that it is important to have an overriding brand architecture that is well defined within the borders of the firm. This is an important aspect to include when analysing the different results of brand architecture strategies. It can be seen that certain brand architecture strategies result in higher return than others, but if the brands within the architecture are not well defined, it can become increasingly difficult to communicate a coherent image of the company to relevant stakeholders (Petromilli, Morrison & Million, 2002). Following the current trend of well-defined brands with high brand equity, choosing a branded-house strategy would simplify the process of understanding the different brands because there is only one brand that needs to be understood.

5.3 Brand Portfolio Strategy

The empirical findings in relation to brand portfolio strategy showed that there is a statistical significance in regards to a specific segments effect on returns as well as the number of brands in a firm's brand portfolio. As such, the two hypotheses were both accepted which shows that both a choice of a specific segment portfolio strategy and the usage of multiple brands have a positive effect on return.

Previous literature by Morgan and Rego (2009) studied the effects on using a brand portfolio strategy where the firm actively engages with several narrow segments was shown to be unattractive to investors. Whilst looking at broader segmentations similar to those used in this study, Hsu, Fournier and Srinivasan (2015) found that the choice of segmentation had no discernible effect on brand architecture choices. This study built upon these notions but found that a specific focus on consumers was found with a statistical significance to have a 23 percent positive effect on returns, when compared to firms targeting other businesses only. Whilst no other segmentation than B2C can be found to be statistically significantly different than B2B. A pattern could possibly be seen emerging, but not proven, as the p-value of these are above 10 percent with segments involving consumers possibly having higher returns. What the results of this study can show with certainty is that firms with a specific focus on mainly B2C will have higher returns on the first day of IPO trading. As such, the study has shown that a B2C brand portfolio segmentation strategy is the better choice for a firm that wants to increase returns and underpricing. This shows similar traits to the study by Morgan and Rego (2009) where a focused company segmentation strategy was perceived as more attractive to investors in already established and listed companies. Further explanations might be connected with the fact that B2C brands tend to be more visible and have stronger emotional resonance with its customers (Keller, 2001). Information can possibly be gleaned from Bhat and Reddy (1998) who showed that clarity in branding strategies and marketing efforts helps customers understand what a brand can do for them. They mean that the more clear the marketing and communication of companies are, the more efficient the firm will be. For the new investors this means that it is easy to understand the true value of the company, making it easier to find the IPOs that are the best investments with the highest underpricing.

Continuing to results that relate to the number of brands in a firm's brand portfolio. This study has concluded that having 6-15 brands in the brand portfolio had a 23.5 percent positive

effect on returns in comparison to having only one brand. It could not be proven with a statistical significance that 2-5 or 16+ brands in the portfolio had a positive effect on returns.

The previous literature by Morgan and Rego (2009) in relation to the effect on the number of brands in a firm's brand portfolio showed a complex but important relationship with financial performance. They identified that there were several perceived scale and synergy benefits with larger brand portfolios, but also issues arising from inefficiency and strained resources were identified. This might help explain the results from this study and why larger brand portfolios with more than 15+ brands could not be shown to have a statistical significant difference from single brand portfolios. This can be connected to the previously discussed issue of achieving high brand equity due to limited resources in the beginning of a firm's lifecycle. Hsu, Fournier and Srinivasan (2015) also showed that as more brands enter the portfolio inter-brand competition, brand cannibalization might arise which negatively affects both the customer's view of the firm and, in extension, the investor's view of the firm. Similar effects on brand dilution was identified by Park, Jaworski and Maclnnis (1986). It might also help to explain why only a specific range was to have a proven effect, as such this further strengthens the argument presented earlier that it is connected to the modern trend of having a more focused brand portfolio. As such, it can be seen to be beneficial for a company in its pre-IPO phase to focus its resources on developing a focused and coherent brand portfolio strategy if the goal is to maximize returns in connection with the first day of IPO trading.

5.4 Financial impact

As both Fama (1970) and Modigliani and Miller stated there is no such thing as a perfect market (Ogden, Jen & O'Connor 2002), at least not how it looks like today. We can therefore assume that there exists information asymmetry in the market. Like Akerlof discussed in 1970, it is the quality of the product that is unknown and thereby increases the information asymmetry. The companies that have shown the highest return on the first day have been companies who have more than one brand and has a focus towards consumers. If the consumers have more information about the company, there is less information asymmetry and thereby the risk of buying a lemon decrease.

Like Chiang and Venkatesh (1986) explained, the risk of higher asymmetry is when the firm-specific risk is high. When focusing the marketing towards consumers, the firm-specific risk

decreases in regards of the market (as they have more information about the company) and they might be more inclined to purchase the stock. By having more than one brand, it is possible for the market to see the company as diversified and thereby less sensitive towards specific changes in the market.

The same can be seen for companies who have a hybrid brand architecture. For a consumer it can be seen as the company does not have a clear strategy, which could mean an increased risk for the investors. Bhat and Reddy (1998) concluded that managers should stick to a specific branding strategy. In that way the consumers gain a bigger understanding for the brand. As the consumers might not understand what the product and the company can do for them, they might not understand the true value which decreases the return as the company goes public.

6. Conclusion

The research question of the study is "*how does a firm's branding strategy during a firm's IPO year affect the return of the firm, reflected in share price, at the time of the IPO?*". The results of our study indicates that certain brand strategy choices are more or less beneficial in terms of returns for new owners post-IPO. The branding strategies that are found to affect the return on share price significantly are: house-of-brands architecture, hybrid-brand architecture, business-to-consumer brand portfolio segmentation, as well as 5-16 brands in a brand portfolio. Consequently, we advise investors with a short investment time frame to acquire shares in IPOs of firms that have business-to-consumer brand portfolio segmentation and 5-16 brands in a brand portfolio. If a firm chooses a house-of-brands architecture strategy the new owners will see a negative return compared to branded-house architecture, which informs new investors not to invest in a firm with a house-of-brands strategy. Similar conclusions can be drawn in regards to hybrid-brand architecture strategy. New investors are advised not to invest in such ventures. The opposite effect is, as stated above, observed for business-to-consumer brand portfolio segmentation and firms having 5-16 brands in their brand portfolio.

6.1 Theoretical Implications

The results of this study highlights the importance of branding as discussed by Hsu, Fournier and Srinivasan (2015), Morgan and Rego (2009) and Srivastava, Shervani and Fahey (1998). To the extent of our knowledge, no previous studies have been made combining branding and initial public offerings. Our study gives a new insight into the returns that can be created in IPOs due to different brand architectures and portfolio segmentation strategies. Applying the results of the study to Keller's Customer-Based Brand Equity Pyramid (2001), it can further develop the second step in the pyramid by supporting the fact that stakeholders look for unique brand associations when building a relationship with firms. A branded house strategy would therefore enable faster relationship-building with stakeholders, as compared to either a house-of-brands strategy or a hybrid architecture strategy. Furthermore, house-of-brands have during the previous decade been an effective brand architecture to use, something our study implies to be the opposite.

The focus group of this study has been the new investors and therefore underpricing has been seen as something good. However, for the future companies who are aiming to do an IPO they will need to decide if they want the return to be the highest for the old investors or the new investors of the first day of the IPO. During the time of an IPO, the firm needs to decide who they will be creating value for? Depending on their answer, the brand architecture might not need to change but the management and the board of directors must still be aware of the effect on the return that their chosen strategy has.

6.2 Managerial Implications

With the natural progression moving from a single brand architecture to multi-branded architecture, managers are advised to take into consideration the importance of using a branding strategy that establishes value for the company. This in terms of both creating well established brands and also regarding the financial aspects of creating value for the firm and its new owners. Our study suggests that managers should coalesce around clear strategy choices as can be seen in business-to-consumer and branded-house strategies, instead of strategies such as house-of-brands and hybrid brand architecture.

When deciding to undergo an IPO and underpricing it, a company expects the prices of the shares to rise. As higher underpricing (i.e. lower initial price and a much higher price the day after) shows that the company is strong enough to recoup the initial loss for the owners, it is well received when the shares increase during the first day of trading. For a company who needs to prove itself strong, we suggest that the company keep more than one brand and have a focus segment of consumers as it will give a positive return on day one.

If a company, who is not considered strong, already have this as a strategy they have an opportunity to prove the opposite. If the prices spikes during the first day, they have shown that they are a strong company and thereby increase their reliability on the market. Which in turn can help them later on if they need to raise capital in the future. For this kind of a company the power of signaling is the strongest.

Going back to the CFO-CMO dilemma, the results of this study aids greater communication between the two parties. Developing a branding strategy that positively affects the return for new investors will guide the CMO in his or her marketing plans. The CFO will have a better understanding of why the branding strategy is the best because it is clearly stated in the results

that a B2C segmentation strategy with a brand portfolio of 6-15 brands will equal higher returns. We suggest that managers with financial and marketing responsibilities work together to reach the best strategies for the firm, as it will create better results for the company as a whole.

7. Further Research

The study conducted has observed and explored the effects of branding strategies on the return of shares of a firm at the event of an initial public offering. As stated earlier in the thesis, the marketing-finance hybrid is an interesting dilemma in the work of CMOs and CFOs and more studies would broaden the knowledge around the subject. One such study would be to see if and how a firm's marketing strategy has changed pre-IPO to post-IPO and if it is the initial public offering that started such a change. This study only looked at the branding strategies during the year of the initial public offering and did not explore the changes that the observed firms have undergone since This would give new investors even more information to base their investment decision on.

A second study could look at how marketing strategies pre-IPO have changed over time. It would give this study a longitudinal approach and outline the possible changes in marketing strategies for companies about to go through an initial public offering. It would also give an outline of historical events that could further help firms see in which direction marketing trends are moving.

A third study could look into the sales of the firm and how different marketing and branding strategies affect the amount of sales, not the return of the initial public offering. This type of study could also be done in the event of an initial public offering, to see if the sales of the company have increased after the event of the IPO. It would give even more in-depth managerial implications of how marketing strategies affect the financial values of a firm at the time of initial public offerings.

8. Limitations

The study conducted includes a couple of limitations. These limitations include population limitations, depth of research, a short term focus, bias in processing previous literature and macroeconomic factors.

The first limitation is the population selection. As mentioned in the demarcations section and population criteria, certain guidelines were followed to use a relevant population sample. This sample did not include all sectors going through an initial public offering during the stated years. Therefore, the population sample could have been more inclusive of more industries and sectors.

The second limitation is the depth of research. In this study the branding strategies were based on product/ brand focus, brand architecture strategy and brand portfolio strategy. These strategies do not go into the actual marketing campaigns of the firms. Hence, there could have been more depth in how the strategies are used by the firms and if so, how it would affect the underpricing of an initial public offering. This was not done in this study as it was the data in the business section in the 10-Ks that was deemed appropriate following the methodology of Noble, Sinha and Kumar (2002). However, we only used one type of data collection strategy, there are several other methods that can be used to collect data. An example is a longitudinal research design, which leads to our third limitation. For this study we chose a short term focus, which is the third limitation. Since branding strategies naturally have a long term focus, it can be interesting to see what the long term returns are after an initial public offering. This study only measured the results after a 24-hour time period, which is not abnormal in financial research but in branding terms is a very short period of time.

The fourth limitation is the bias created when reading previous literature. This bias means that it is the researcher's information processing of theories that affects the methodology chosen. There is no one way to conduct this type of study and other researchers can possibly process previous literature differently. It is therefore important to remember that this study reflects one way of answering the research question.

The last limitation of the study regards other factors that can affect the outcome of the study. These factors can be macroeconomic and therefore difficult to abstain from. Since the

financial crisis occurred not too long ago, there is a possibility that finance-related aftershocks still exist. These aftershocks could in turn affect what financial decisions a firm makes and how investors choose to divide their investment. Other macroeconomic factors are, for example, the changes in the price of products or if new research has deeming something unhealthy or fatal. Since pharmaceutical companies were coded in this study it is a possibility. These are the major limitations of the study but not the only ones, which means that other limitations can also exist.

9. References

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10. Table of Figures and Tables

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11. Appendix

11.1 Branded house results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRANDED_HOUSE	-0.031051	0.083152	-0.373428	0.7097

11.2 List of companies

Acceleron Pharma Inc
Aegerion Pharmaceuticals, Inc.
Aerie Pharmaceuticals Inc
Agios Pharmaceuticals Inc
Alpha & Omega Semiconductor Ltd
Ambarella Inc
American Capital Mortgage Investment Corp.
Amyris, Inc.
Angie's List, Inc.
Applied Optoelectronics, Inc.
Bazaarvoice Inc
Benefitfocus,Inc.
Bloomin' Brands, Inc.
Bluebird Bio, Inc.
Boingo Wireless Inc
Bravo Brio Restaurant Group, Inc.
Brightcove Inc
Broadsoft Inc
Caesars Entertainment Corp
Cafepress Inc.
Carbonite Inc
Cdw Corp
Chefs' Warehouse Holdings, Llc
Codexis Inc
Commscope Holding Company, Inc.
Control4 Corp
Cornerstone Ondemand Inc
Covisint Corp
Cyrusone Inc.
Del Frisco's Restaurant Group, Llc
Dunkin Brands Group, Inc.
Enphase Energy, Inc.
Erickson Air-Crane Inc
Exa Corp
Exone Co
Facebook Inc
Fairway Group Holdings Corp
Fate Therapeutics Inc
Fireeye, Inc.
Five Below, Inc
Fluidigm Corp
Foundation Medicine, Inc.
Fox Factory Holding Corp
Francesca's Holdings Corp
Fresh Market, Inc.
Genmark Diagnostics, Inc.
Gogo Inc.
Gordmans Stores, Inc.
Groupon, Inc.
Hd Supply Holdings, Inc.
Houghton Mifflin Harcourt Co
Ignite Restaurant Group, Inc.
Intermolecular Inc
Ironwood Pharmaceuticals Inc
Jive Software, Inc.
Keyw Holding Corp
Ldr Holding Corp
Lgi Homes, Inc.
M/A-Com Technology Solutions Holdings, Inc.
Marketo, Inc.
Marrone Bio Innovations Inc
Mattress Firm Holding Corp.
Nanostring Technologies Inc
Noodles & Co
Norwegian Cruise Line Holdings Ltd.
Oncomed Pharmaceuticals Inc
Ophthotech Corp.
Oxford Immunotec Global Plc
Pacific Biosciences Of California Inc
Performant Financial Corp
Potbelly Corp
Premier, Inc.
Primo Water Corp
Proofpoint Inc
Qlik Technologies Inc
Qualys, Inc.
Quinstreet, Inc
Reachlocal Inc
Realpage Inc
Relypsa Inc
Renewable Energy Group, Inc.
Retailmenot, Inc.
Rignet, Inc.
Rocket Fuel Inc.
Rpx Corp
Sagent Holding Co.
Sciquest Inc
Semileds Corp
Servicesource International Llc
Skullcandy, Inc.
Solarcity Corp
Solazyme Inc
Splunk Inc
Sprouts Farmers Market, Inc.
Sps Commerce Inc
Ss&C Technologies Holdings Inc
Stock Building Supply Holdings, Inc.
Surgical Care Affiliates, Inc.
Synacor, Inc.
Tandem Diabetes Care Inc
Telenav, Inc.
Tesaro, Inc.
Tesla Motors Inc
Tetralogic Pharmaceuticals Corp
Ubiquiti Networks Inc
Veracyte, Inc.
Verastem, Inc.
West Corporation
Zeltiq Aesthetics Inc
Zynga Inc

11.3 Company information regarding IPO

Name	IPO Date	IPO Price ($)
Acceleron Pharma Inc	9/18/2013	15
Aegerion Pharmaceuticals, Inc.	10/22/2010	9.5
Aerie Pharmaceuticals Inc	10/24/2013	10
Agios Pharmaceuticals Inc	7/23/2013	18
Alpha & Omega Semiconductor Ltd	4/29/2010	18
Ambarella Inc	10/9/2012	6
American Capital Mortgage Investment Corp.	8/3/2011	20
Amyris, Inc.	9/27/2010	16
Angie's List, Inc.	11/16/2011	13
Applied Optoelectronics, Inc.	9/25/2013	10
Bazaarvoice Inc	2/23/2012	12
Benefitfocus,Inc.	9/17/2013	26.5
Bloomin' Brands, Inc.	8/7/2012	11
Bluebird Bio, Inc.	6/18/2013	17
Bmc Stock Holdings, Inc.	8/8/2013	14
Boingo Wireless Inc	3/3/2011	13.5
Bravo Brio Restaurant Group, Inc.	10/21/2010	14
Brightcove Inc	2/17/2012	11
Broadsoft, Inc.	6/16/2010	9
Caesars Entertainment Corp	2/7/2012	9
Cafepress Inc.	3/28/2012	19
Carbonite Inc	8/10/2011	10
Cdw Corp	6/26/2013	17
Chefs' Warehouse, Inc.	7/28/2011	15
Codexis Inc	4/21/2010	13
Commscope Holding Company, Inc.	10/24/2013	15
Control4 Corp	8/1/2013	16
Cornerstone Ondemand Inc	3/16/2011	13
Covisint Corp	9/25/2013	10
Cyrusone Inc.	1/17/2013	19
Del Frisco's Restaurant Group, Inc.	7/26/2012	13
Dunkin' Brands Group, Inc.	7/26/2011	19
Enphase Energy, Inc.	3/29/2012	6
Erickson Inc.	4/10/2012	8
Exa Corp	6/27/2012	10
Exone Co	2/6/2013	18
Facebook Inc	5/18/2012	38
Fairway Group Holdings Corp	4/18/2013	13
Fate Therapeutics Inc	9/30/2013	6
Fireeye, Inc.	9/19/2013	20
Five Below, Inc	7/18/2012	17
Fluidigm Corp	2/9/2011	13.5
Foundation Medicine, Inc.	9/24/2013	18
Fox Factory Holding Corp	8/7/2013	15
Francesca's Holdings Corp	7/20/2011	17
Fresh Market, Inc.	11/4/2010	22
Genmark Diagnostics, Inc.	5/28/2010	6
Gogo Inc.	6/20/2013	17
Gordmans Stores, Inc.	8/5/2010	11
Groupon, Inc.	11/3/2011	20
Hd Supply Holdings, Inc.	6/26/2013	18
Houghton Mifflin Harcourt Co	11/13/2013	12
Ignite Restaurant Group, Inc.	5/10/2012	14
Intermolecular Inc	11/17/2011	10
Ironwood Pharmaceuticals Inc	2/2/2010	11.25
Jive Software, Inc.	12/12/2011	12
Keyw Holding Corp	9/30/2010	10
Ldr Holding Corp	10/8/2013	15
Lgi Homes, Inc.	11/6/2013	11
M/A-Com Technology Solutions Holdings, Inc.	3/14/2012	19
Marketo, Inc.	5/16/2013	13
Marrone Bio Innovations Inc	8/1/2013	12
Mattress Firm Holding Corp.	11/17/2011	19
Nanostring Technologies Inc	6/26/2013	10
Noodles & Co	6/27/2013	18
Norwegian Cruise Line Holdings Ltd.	1/17/2013	19
Oncomed Pharmaceuticals Inc	7/17/2013	17
Ophthotech Corp.	9/24/2013	22
Oxford Immunotec Global Plc	11/21/2013	12
Pacific Biosciences Of California, Inc.	10/26/2010	16

Performant Financial Corp	8/9/2012	9
Potbelly Corp	10/4/2013	14
Premier, Inc.	9/25/2013	27
Primo Water Corp	11/4/2010	12
Proofpoint Inc	4/19/2012	13
Qlik Technologies Inc	7/16/2010	10
Qualys, Inc.	9/27/2012	12
Quinstreet, Inc	2/11/2010	15
Reachlocal Inc	5/19/2010	13
Realpage Inc	8/12/2010	11
Relypsa Inc	11/14/2013	11
Renewable Energy Group, Inc.	1/18/2012	10
Retailmenot, Inc.	7/18/2013	21
Rignet, Inc.	12/14/2010	12
Rocket Fuel Inc.	9/19/2013	29
Rpx Corp	4/4/2011	19
Sagent Pharmaceuticals, Inc.	4/19/2011	16
Sciquest Inc	9/24/2010	9.5
Semileds Corp	12/8/2010	17
Servicesource International, Inc.	3/24/2011	10
Skullcandy, Inc.	7/19/2011	20
Solarcity Corp	12/12/2012	8
Solazyme Inc	5/26/2011	18
Splunk Inc	4/18/2012	17
Sprouts Farmers Market, Inc.	7/31/2013	14
Sps Commerce Inc	4/22/2010	12
Ss&C Technologies Holdings Inc	3/30/2010	15
Surgical Care Affiliates, Inc.	10/29/2013	24
Synacor, Inc.	2/10/2012	5
Tandem Diabetes Care Inc	11/13/2013	15
Telenav, Inc.	5/13/2010	8
Tesaro, Inc.	6/27/2012	13.5
Tesla Motors Inc	6/29/2010	17
Tetralogic Pharmaceuticals Corp	12/11/2013	7
Ubiquiti Networks, Inc.	10/13/2011	15
Veracyte, Inc.	10/29/2013	13
Verastem, Inc.	1/26/2012	10
West Corp	3/21/2013	20
Zeltiq Aesthetics Inc	10/13/2011	13
Zynga Inc	12/15/2011	10

11.4 Article

The choice of marketing *really* matters!

Marketing is not just putting up posters where they are seen or creating jingles that are stuck on your mind forever. Research has shown that depending on which strategy a company chose for its brands. It can have effect on a possible IPO in the future.

For an everyday consumer, you are always exposed to marketing. However, you might not always realize that the finished marketing campaigns are created from several hours and millions spent, where the companies are trying to expose their brands in the best way possible. Recent research has shown that it really does matter which type of strategy the company implements, especially regarding the return for new investors.

Findings
The research, conducted at Lund University School of Economics and Management, found that when a company undergoes an IPO, different branding strategies create different levels of abnormal return during the first day of trading. According to the research, companies with between 6 to 15 brands have a 23% higher return compared to companies with only one brand. If the company has consumers as their business segment, the company can also expect higher return on their stocks during the first day of trading.

However, there are also strategies that tend to destroy value for new shareholders rather than creating value. The market appears to be thinking less of those companies with a lack of strategy, that is companies with a hybrid marketing strategy. The tests conducted in the paper confirmed the authors' suspicion regarding hybrid architecture and the fact that It would present the lowest return out of the 4 different brand architectures tested.

The paper has been connected to previous research where it has been found that investors like both branded-house and house-of-brand to be better than the hybrid brand architecture. Companies with house-of-brand present a negative return, compared to companies with branded house, during their first day of trading. However, it is with a higher risk of rejecting a correct hypothesis. As the findings are still proven statistically significant, companies might need to rethink their strategy regarding their branding architecture.

Research with a twist
An interesting, and very unusual twist of the research is that the findings are connected to the financial aspects regarding the companies. Information asymmetry and underpricing is particularly highlighted in this paper. The authors' arguments are in line with previous research (where both Eugene Fama and George Akerlof are represented), concluding that one reason could be that consumers who know more about the company will lead to a market more certain in regards of their investments. The market may thereby be thinking that companies with more brands and a focus towards the consumers are less likely to have lower quality, hence decreasing the risk of buying a stock who might eventually lose its value.

As the research is conducted in the view of new investors, the authors present the underpricing to be a good thing. For you who already have invested in a company with hybrid brand architecture, your shares will be sold to an overpriced value and the price of the share are expected to decrease during the first day of trading.

Research of the future?
This type of research, having mixed financial aspects with the marketing focus, is bound to take a bigger role in the field of business and economic research. Helping the financial departments better understand the positive (and negative) effects that marketing strategies might bring to the table.