

**ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF ARTS  
AND SOCIAL SCIENCES**

**How Effective Are the Advertising Expenses Made in the Worst  
Performing Year? A Worldwide Analysis**



**MBA THESIS**

**Sırma ŞEKER**

**Department of Management**

**Management MBA Programme**

**JUNE 2019**



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**Management MBA Programme**

**Thesis Advisor: Assoc. Prof. Cumhuri Ekinici**

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**EN KÖTÜ PERFORMANS GÖSTERİLEN YILDA YAPILAN  
REKLAM HARCAMALARI NE ÖLÇÜDE ETKİLİ?  
DÜNYA ÇAPINDA BİR ANALİZ**

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Sırma Şeker, a MBA student of ITU Graduate School of Arts and Social Sciences student ID 403161026, successfully defended the thesis/dissertation entitled “How Effective Are the Advertising Expenses Made in the Worst Performing Year? A Worldwide Analysis”, which she prepared after fulfilling the requirements specified in the associated legislations, before the jury whose signatures are below.

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**Date of Defense : 11 June 2019**







*To my family and friends,*



## **FOREWORD**

In this study, we would like to determine whether advertising expenditures effect financial performance under different conditions. At companies worst financial performance year, to what extent they keep their advertising spending and to what extent it effects financial performance.

First of all, I would like to express my gratitude to my thesis advisors Assoc. Prof. Cumhur Ekinici and Assoc. Prof. Elif Karaosmanođlu because of taking into account my wishes about thesis and helping me to choose the topic.

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May 2019

Sırma Şeker  
(Student)



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## **ABBREVIATIONS**

<b>ADV</b>	: Advertising Expenditures
<b>ADS</b>	: Advertisements
<b>GDP</b>	: Gross Domestic Product
<b>R&amp;D</b>	: Research and Development
<b>TV</b>	: Television
<b>ROI</b>	: Return on Investment
<b>CPD</b>	: Consumer Packaged Goods
<b>UK</b>	: United Kingdom
<b>USA</b>	: United States of America
<b>VOL</b>	: Volume
<b>PLC</b>	: Product Life Cycle
<b>IGLS</b>	: Iterative Generalized Least Squares
<b>OLS</b>	: Ordinary Least Squares
<b>GRP</b>	: Gross Rating Points



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# **HOW EFFECTIVE ARE THE ADVERTISING EXPENSES MADE IN THE WORST PERFORMING YEAR? A WORLDWIDE ANALYSIS**

## **SUMMARY**

With the differences from past to present; development of technology, rise of competition, reduction of resources etc. give rise to the problem for companies to use their resources effectively. Advertising is an effective investment for companies to gain positive tangible and intangible effects if they implement it with the right strategic decisions. Since the companies are different in nature due to their structures, which resource they have to invest depends on them.

The overall objective of the firms is increase shareholder value and ensure sustainability. If companies want to gain long-term success and increase shareholder value, they need to invest in additional resources such as advertising.

It can be advertised through a wide variety of channels in present. Because of this, companies prefer main media channels like print and Television beside online media channels like social media. Advertisements also increase market value and help to increase companies prestige in the competitive environment.

Advertising also depends on companies spending capacity. Due to the limited resources, even if companies know that advertisement is beneficial for them, they can give up to invest.

In our study, first general information about the topics and literature search was displayed. There are studies that showed advertising decrease risk, so it has a positive effect on firm value. There are also studies that link this with economic fluctuations and showed companies investment in advertising result in different reactions depending on economic activities. Our first purpose is instead of looking at the



recession year, we want to take companies worst financial performance year, then run a regression with regard to this.

We examined cross-continental 43 stock markets, about 15.586 companies, we gathered 3570 of them which we can find all of the variables data, and we took 21 year period between 1998-2018. We find the worst year from this 21 year. We looked their advertising expenditures and its relationship with the other variables in their worst year. We expected to find advertising has a positive value even if in their bad times and advertising helps to decrease companies risk and protect their stocks from strikes in bad times. As recession definition apart from general economic conditions, we preferred to look at the attitudes in companies worst financial performance year. We conducted a regression analysis by choosing Eviews statistical software programme. When we were doing this, with industry type, we looked the relationship from different point of view.



**REKLAM HARCAMALARININ FİRMALARIN EN KÖTÜ  
PERFORMANS GÖSTERDİKLERİ DÖNEMDEKİ ETKİSİ: DÜNYA  
ÇAPINDAKİ BORSALARIN ANALİZİ**

**ÖZET**

Geçmişten bugüne olan teknolojinin gelişmesi, rekabetin artması, kaynakların azalması gibi farklılıklar firmalar için kaynakların en etkin şekilde kullanma problemini doğuruyor.

Reklam, eğer doğru stratejik kararların seçilmesiyle birlikte uygulanırsa firmalar için hem soyut hem de somut bir etki yaratacak etkin bir yatırım haine gelecektir. Firmalar doğası gereği yapısal olarak farklı olduklarından dolayı, hangi kaynağa ne şekilde yatırım yapacakları onlara bağlıdır.

İşletmelerin genel hedefi paydaş değerini arttırmak ve sürdürülebilirliği sağlamaktır. Şirketler uzun dönemli başarı elde etmek ve paydaş değerini arttırmak istiyorlarsa, reklam gibi ek kaynaklara yatırım yapmaya ihtiyaç duyabilirler.

Reklam günümüzde birçok kanal yoluyla yapılabilmektedir. Yani, firmalar hem baskı veya televizyon gibi ana medya kanallarını tercih edebilirler, hem de sosyal medya gibi online medya kanallarına yönelebilirler. Reklam aynı zamanda piyasa değerini arttıran ve firmalara zorlu rekabet ortamlarında prestij kazandıran bir yatırımdır.

Reklam aynı zamanda firmaların harcamasıyla da ilgilidir. Sınırlı kaynaklardan dolayı, firmalar reklamı onlara değer katacak bir yatırım olarak görsen bile yatırımdan vazgeçebilecek konuma getirilmiştir.

Biz kendi çalışmamızda, ilkönce konularla alakalı genel bilgileri ve literatür araştırmasını ortaya koyduk. Reklamın riski düşürdüğü ve buna bağlı olarak firma değerine pozitif yönde etki ettiğine dair çalışmalar mevcut. Buna ek olarak, bunu ekonomik dalgalanmalarla bağdaştıran ve şirketlerin reklam yatırımlarının ekonomik dalgalanmalara bağlı olarak farklı sonuçlandığına yönelik çalışmalar da mevcut. Bizim

temel amacımız durgunluk zamanı yerine en kötü yılı baz almak oldu, buna bağı olarak regresyon analizini yürüttük.

Biz kıtalararası 43 borsa, 15.586 şirketin hisse senetlerini 21 yıllık (1998-2018) periyotta inceledik. Bu periyottan en kötü performans gösterdikleri yılı seçip, veriyi ona bağı olarak elde ettik. Şirketlerin reklam harcamalarını ve kötü koşullar altında diğereğişkenlerle ilişkisini gözlemledik. Kötü dönemlerinde dahi pozitif bir değere gözlemlemeyi ve reklamın riski düşürerek hisse senetlerini kötü darbelerden muhafaza ettiğini gözlemlemeyi bekleedik. Durgunluk dönemi olarak genel ekonomiden ziyade firma bazlı en kötü performans gösterdiği yıldaki tutumlara bakmayı tercih ettik. Eviews istatistik programını kullanarak regresyon analizi uyguladık. Tüm bunları dikkate alırken sektör bazlı bakarak da farklı bir bakış açısı ortaya koyduk.

## INTRODUCTION

With the effect of globalization, international restrictions have taken off, the circulation speed of knowledge and capital has accelerated. In this environment where competition increases, businesses have to do the right strategic decision, protect their positions in the market and have to use their resources in an efficient way.

Advertising can be a right strategic decision for this. Advertising is the most specific and the least comprehensible investment for companies (Graham and Frankenberger, 2000, p. 149). In the present competitive environment, in which scale marketing activities affect the financial performance can't be known easily. This presents the necessity of the analysis about this topic.

Financial performance indicators can be tangible such as profit and sales, it can be intangible such as brand equity. Because of our nature of data and statistical method, we are going to look at tangible effects. In which conditions this tangible effect changes is also important in advertising and financial performance relationship. So, the relationship between advertising and tangible variables is important to explain the effect. Our risk variable is also important in measuring the tangible effect of advertising. We aim to display advertising by lessening systematic risk, ensure companies to help to protect and value their stocks in their bad times. In order to see this fact, we have chosen to use businesses financial indicators like past sales, net income, beta etc. and examine this in Eviews programme. For this aim, we looked at companies' value in a wide range of stock markets with various types of industries in the long-term financial period.

One of the limitations we meet is to reach advertising data that some companies didn't display in their financial statements. So, we eliminate some companies to gain pure company data extracted from companies which do not publish their advertising expenditures. We utilized Thomson Reuters Programme to gain the right data from financial statements.

Industries are also important to explain the financial performance relationship. In order to gather more general data, we took gics-sub industries in Thomson Reuters Programme. So, we gathered a wide range of industry definitions.

Even if there are lots of studies showed the positive effect of advertising, there aren't any studies looked worst financial performance year of companies while examining the performance and advertising relationship. This will be the distinct difference separate us from the other studies.

In the same time, the advantage we're putting forth is taking stock markets worldwide and taking 21 years data that include The Great Recession period can be harmful to lots of companies.



## **FIRST CHAPTER:**

### **ADVERTISING EXPENDITURE**

Competition in today's market encouraged companies to become more offensive to even one tiny movement. In order to show themselves more efficiently in the market, they need to operate their activities cost-effective as much as they can. Because of this, they have to apply their resources when they really need it. It has become difficult to invest excessively or waste resources. We know, doing advertising is one of the important investment decision for most companies. Therefore, they try to use it efficiently.

#### **1.1 Advertising Definition and Characteristic**

There are lots of points can be touched if we mention about advertising. We can explain advertising like; "Advertising is a communication tool using by firms in various ways and different purposes which maintains its importance from past to present, basicly aims to presenting products and services in an attractive way". To put it all in simple terms, 'advertising' word imply 'arousing interest on something' or 'giving information to people about something' (Dyer, 2008, p.2). That's why advertising is one of the key point in marketing phenomenon and also important for firms that ensure them to link with their customers deeply and ensure them to be seen by wide masses.

Advertising is also one of the major marketing integrated communication stuff. Customers can be enlightened for new products by advertising and advertising helps to remove the obstacles between customers and setups (Rahmani and oth, 2012, pp.65-66).

Firms can apply advertising for several motivations: to trigger consumers to procure goods&services, or some consumers not to purchase them, to alter attitudes or

to trigger retailers to stock manufacture (Brierley, 1995, p.1). Advertising has the potential of changing the demand from rivals goods to businesses goods which applied advertising (Dixit and Norman, 1976, p.3).

## **1.2 Advertising Discourses**

There are different discourses about advertising because the truth behind it is in, at the point where it stands. Even if we think the advertisement of the same brand, the key point may be different in each of their ads. Some of them maybe try to ensure customers to be aware of them, maybe the other one try to attack the closest rival to show their power in the market.

Differentiation can be seen like one of the basic elements of marketing environment. The more differentiated brands, the more loyal customers even if the rival decreases the price (Romaniuk and oth, 2007, p.42). One of the thing about advertising is that it provides to show distinctness of a product, show its uniqueness, thus it ensures to continue high market share and earnings. By this, firms can capture market authority (Tremblay and Polasky, 2002, p.253). It emphasizes the role of advertising by creating a competitive advantage through differentiation and by using this, attaining high financial performance.

The other one is from Milgrom and Roberts (1986, p.797), they underlined that advertising points to quality of brand, on account of this, it has positive consequences from a consumer perspective. In the same way, we expect that the firm will gain high market value and superior financial performance.

Whether advertising bear a message upon quality, products uniqueness from rivals, or creating brand awareness etc..., in every way it has to be beneficial now or in the future directly(tangible) or indirectly(intangible).

What do we mean when we say tangible or intangible utility? Intangible values are like brand equity Srivastava and oth. (1998, p.4); Chan and oth. (2001, p.2431),



customer satisfaction whereas tangibles are sales/profit.(Joshi and Hanssens, 2004, p.3)

### **1.3 History of Advertising**

In the past, there was no chance to give advertising from various channels. Strategies was weak, media tools was scarce, resources was more limited and competition was low. There couldn't be lots of imitations and trends couldn't be updated quickly. But now, it is changed.

Years have revealed differences in the environment of advertising. With the globalization and development of internet as a completely different media and different strategies form the past, there are moves away from main media channels like Tv, and there are some distinct changes in consumer attitudes and behavior. With all of these, marketing become a contestable market and face with high competition. With quickly imitating one with others, forming uniqueness is becoming difficult.

### **1.4 Advertising and Marketing Mix**

Marketing like todays discipline present something like 1960s. "The concept of the marketing mix and the Four Ps of marketing – product, price, place and promotion – entered the marketing textbooks at that time" (Grönroos, 1997, p.4). After that it evolved to different concepts like marketing 4C, 4M, 5C, 7P because of consumers increased importance day to day. Whatever it evolves, in the core 4P, advertising represent itself under the promotion mix.

High competitive environment and scarce resources force firms to do their strategic investments in a more conscious way. Resources are not unlimited and it became important more and more to estimate right time fort he proper investment. For

managers, it will be the hard decision in which environment they will take the right decision for one of these marketing mix elements, product-price-place and promotion.

We said that advertising shows itself on promotion. Managers have to take all of them one by one, handle meticulously and they should also look at their relationship with each other. For instance, Sethuraman and oth.(2011, p.461) stated that intense distribution channels effect advertising elasticity positively. So distribution can be relate to advertising and sales. For products that first entered the market, advertising profitability is in between 40%-50%, presenting high efficiency of the new ones advertising expenditures. (Abraham and Lodish, 1990, p.51). For the price, advertising can decrease price sensitivity and convince consumer to give stiff prices (Boulding and oth, 1994, p.171).

## **1.5 Advertising Strategies**

### **1.5.1 Differentiator and Cost Leader**

Besides the positive advertising and distribution relationship, advertising has a benefit like lessening high price sensitivity for reasons such as quality perception. Advertising correlated with firm value further related with firms strategy. For example, a differentiator than a cost leader has more advertising effectiveness is expected (McAlister and oth, 2016, p. 208). They have immense facilities and features to convince consumers to superior and qualified products and services (Riganelli and oth, 2018, p.129). To Boulding and oth. (1994, p.163) advertising which is nonprice leads to differentiation. It causes consumers to have high attainable, unique and favourable associations with the company's proposal. As Keller (1993, p.17) stated that advertising which focus brand (nonprice) increases brand image, provides brand awareness, shows products distinctness (differentiation), thus all of them forms brand equity. This brand equity will positively result in financial performance.

### **1.5.2 Advertising Messages**

Firms try to attract consumers by appropriate advertising strategy with unique messages and various stimulants . From this messages, Shah and Akbar (2008, p. 308) stated that advertising focus on more to inform customer(giving informative messages) tries to weaken loyalty and increase customer selection which ensures to decrease market strength for existing companies. To conclude, different advertising types could have different consequences.

## **1.6 Advantages of Advertising**

### **1.6.1 Different Perspectives**

#### **1.6.1.1 Shareholder wealth**

When companies planning their marketing activities, they focus on increasing shareholder wealthness and producing cash flow (Conchar and oth, 2005, p.445). However, advertising is not just be useful for this. If it is used properly, it will have far more benefits than what we say.

#### **1.6.1.2 Operational Strength**

Advertising signals that company is powerful, company executes their operations on the crest of a wave, companies power of communication network and lastly company is well-known (Wang and oth, 2009, p.138) It displays that their products and services are outstanding and this dicretely increase brand equity.

#### **1.6.1.3 Competitive Strength**

If we continue the intangible benefits of advertising, it is stated that advertising enables value appropriation and this creates competitive advantage (Keller, 1993, p.8). Value appropriation defined as taking out profits from creating value and conserving it from all of their rivals (Mizik and Jacobson 2003, p.63). At the same time, advertising express value by helping to present the product and services uniqueness.

Advertising gain favor in industries which has high competition (Joshi and Hanssens, 2010, p.29); (Edeling and Fischer, 2016, p.519).

#### **1.6.1.4 Market Strength**

From the market perspective, creates a barrier to market entry to me-tooers/similar, meanwhile it presents an opportunity to entry for the self-employed business ownerships.

Thanks to decreases the sensitivity to price, advertising enables price premium. Consumers reconcile them to pay that price (Yoo and oth, 2000, p.196).

Advertising also promotes market capitalization. It acts like a domino for future opportunities. Future purposes that managers has the flexibility to embark on specific differences in the environment of business (Joshi and Hanssens, 2004, p.22).

#### **1.6.1.5 Investor Strength**

From the investor perspective, by creating trust, it enables not to leave in hard times and it enables to attract new ones. That is to say, even if not having a tangible effect , advertising has investor effect (Joshi and Hanssens, 2010, p.31).

#### **1.6.1.6 Consumer Strength**

Consumer awareness and positive attitude can stay permanently. Consumers can stay loyal and it strengthens brand image. Brand rises to more advanced levels in consumer's mind's eye and it evokes positive feelings. In other saying, it supports brand associations and brand attitudes ( Czellar, 2003, p.17).

Peterson and Jaeseok (2010, p.677 ) stated that advertising expenditure boost brand equity and that brand equity boost financial performance of the companies. Brand equity can be defined as utilizing from the product brand by its brand

awareness, quality, brand image&associations and brand loyalty (Forquhar, 1989, p.308); (Aaker, 1996, p.104).

Yoo and oth. (2000, p.200 ) is also stated that advertising create brand awareness and brand associations. Advertising is a robust symbol of investment for the sake of increasing brand equity.

Brand maturity is crucial for advertising as well. It has been advised that mature and reputable brands advertising is not move in the same direction. Like reputable brands which are more susceptible to competitive activities than unfamiliar ones (Kent and Allen, 1994, p.97).

### **1.6.2 Nature of Strength**

Therewithal, this advantage depends on the structure of expenditure and how the firm develop a strategy to elude of imitations. In an environment that rivals has price attacks, gaining competitive advantage by advertising depends on the firms strategy. Are firms execute a new advertising strategy over their rivals by going with the same line? In a challenging environment, strategic movements are connected with targets of the company and expenditure levels of the rivals (Cook, 1983 ,p.69). Managers may prefer one of the attack or offensive strategies depend on these.

Firms have to take into account of the effect of sales, profit, market share. Advertising ensure incremental sales in short-term. Sales growth even happened in recession who increase or stabilize the sales (Kamber, 2002, p.117 ). Along the same line, stock return is excelled who keeps advertising expenditure at high levels (Chan and oth, 2001, p. 2451 ).

Some of the Studies underlined that reducing spending on advertising in recession doesn't increase the profit, nevertheless, it varies in respect to how the profit's measured. For the net income, it's observed an augmentation that year and coming years. For the earnings, it's observed an increase but as we said, not for Return on Investment(ROI) (Tellis and Tellis, 2009, p.23).

## **1.7 Consumer Behavior through Advertising**

### **1.7.1 Main Approaches**

Whereafter created the brand, in order to increase its value, the main points are giving a place to advertising actively, arranging distribution channels and intensity properly, representing the brand in retail stores ideally and minimizing frequent promotions about the price strategically. If it is utilized from the brand adequately, consumers will comply with premium price and firm could overcharge.

For Wang and oth. (2009 , p.130), in the literature, advertising effect on consumers point of view can be explained from two perspective. It is intended for changing consumers selection about the brand and view of buying or changing decisions about consumers beliefs and attitudes. As we know about consumer behavior, there is behavioral, affect and beliefs in hierarchies of effects. Advertising which can have an impact on beliefs and attitudes, therefore it would have an impact on behavior (Ajzen, 2008 ,p.534). By virtue of consumers past experiences and marketing strategies, different attitudes emerge. So, we can expect different attitudes from various consumers.

#### **1.7.1.1 Consumer Selection**

Is the consumer interested in just factors such as quality, price etc. on brand choice? (Toubia and Stephen, 2013, p.369 ) underlined that studies investigated about self-enhancement people communicate between each other about their own brand choice in order to feel themselves happy and to be above from their social sphere. Nominately, the firm shouldn't taken into account barely factors like quality or price, the firm should also has to consider brand image. Thus, the brand could reflect consumer's lifestyle in its line.

Brand image can be increased by advertising. For example, in new era online marketing, advertisers use word of mouth on social media and social media advertising

become an effective tool increasing brand image of different types of goods&services (Kaplan and Haenlein, 2010, p.64).

### **1.7.1.2 Consumer Beliefs&Attitudes**

From the perspective of attitude&beliefs, brand has to touch to those intangibles so as it can be positioned and be placed in consumers life. If there is high advertising expenditure, it can be ensured high consumer brand attitude (Cobb-Walgren and oth, 1995, p. 25).

For the consumers quality which is head and shoulders above is also efficient. The consumer mind who is on shaky ground about quality, sound the past experiences about the brand and make the choice therewith. Because the consumer memory is long-term and perform well, advertising's condition is notable from past to present. In advertising, taking risk can be dangerous. Because consumer memory dwindles day by day (Loftus and Loftus, 1980, p. 418).

### **1.7.2 Advertising Clutter**

We've always embraced the positive things about advertising. Is it effective to give an advertisement intensily? A firm which give advertising extortionately and cause customers to latch on, will the favorable attitude of customers against the brand continue? Advertising clutter doesn't always works.

Advertising clutter defined as "Media put large quantities of ads in one pod when the amont exceeds a consumer's acceptance level in an editorial media vehicle" (Ha and McCann, 1996, p.570). It is not a thing that is intended, for both in point of customers and advertisers. Abhilasha Mehta (2000, table 1) stated that lots of advertising reason in much more negative consumer attitude than positive attitude in his survey. For customers who is get bored by the increase of advertising clutter in recent years, started to give a reaction not like the way it used to be. Especially in

recessions, high advertising intensity cause negative consideration and feeling for consumers.

### **1.7.3 Consumer Wealth and Solvency**

Income is people's adequacy to consume externally degrade stock of resources (Grusky and oth, 2011, p.108). When we determine in point of consumer income level in recessions, it is expected that the ones whose income level is high, because of the decline in income level, they will limit the budget, and for those whose income level is low, they will protect from grievous payments and limit the budget as much as they can.

However, it can be seen different reactions from consumers. In economic fluctuations, no matter what its their income level be, consumers can react variously. Still the bad effects from recession can be continued on consumers depending on the size of the recession. Consumers can be get into debt and may not buy in bad times. More and more the debt increases, past experiences effects can decrease and these effects might not clear away when the debt decreases. This can be come under review for companies in detail, it can be an opportunity to start again.

### **1.8 Companies And Manager's Perspective**

According to their location on the market, firms allot more resources to either R&D or advertising (Mizik and Jacobson, 2003, p.65). They are both applied for acquiring marketing capability (Krasnikov and Jayachandran, 2008, p.3).

Firms obtain a concrete return by putting forth to its capital to these assets. We've touch upon to investor effect of advertising. Despite all of these, why firm may not be requisite invest in those assets?

Doukas and oth. (1999, p.4) stated that people can expect high return from the R&D investments in the long run, whereas people can expect return from the advertising investment in the short-run which makes advertising a low-risk strategy.



However Deleersynder and oth. (2009, p.625) stated that advertising will be in the short-run basis when it is used some sort of expense.

According to the survey of Koller and oth. (2011, p.4), although firms expected a positive result from investments, they are tend to prop up temporarily their strategic marketing investments. One of the facts underlying to this is managers who focus on short-term instead of long-term. Firms might not find appropriate to invest because of advertising start to show its effect in the long run. The burden of the firms can't be just holding the financial performance in maximum level. Because of investors expected to decrease their debts by firms performance, managers try to direct their investments in the most correct way, so they feel pressure to invest.

In every way, consumers and investors will look as a low-risk strategy? People rather than the positive return in expansion, prefer the benefit they can meet during recession. Investors are like this, they can be relate to meet benefit in recession (Ang and oth, 2006, p.1).

Koller and oth. (2011,p.3) is in the side of managers who see pressure from investors. Because of managers keep ahead high degree risk of losing, he stated that they tend to be avoid risk. Even if the investment is promising, they can't be able to perform. Managers who avoid from risk and uncertainty, they might not want to spend sometimes because of indirect way of organizational culture, sometimes even way of country culture. So this result in not giving the right investment decision (Deleersynder and oth, 2009, p.634).

## **1.9 Investor Perspective**

Even if the investor receives profit signal against stocks of promising companies, he/she has to trust the business. Investor has to beleive that the business can be successful. If investor trust the company, he/she may not withdraw his/her investment in even bad times. Advertising become a part of that.

Frieder and Subrahmanyam (2005, p.64) states being under consideration that the firm has powerful position and name in the market, if not all firm doesn't have

dreamy returns, people could invest in a business. Renown works in these situations and takes the company one step forward. Raising awareness is an opportunity in order to prove itself, as well for an unknown company. If the investor trust, he/she invest in both the business without feeling risk, and also doesn't give up from the business even in bad times. And in this manner, firm can preserve the stock price (Unknown, 2010, p.1).

The company which proves itself through advertising creates perception of potential profit gain too (Joshi and Hanssens, 2010, p.22). This cause investor to be in expectation about the future (Chauvin and Hirschey, 1993, p.134 ).

### **1.10 Risk**

With managerial trust and assertiveness, firm gives signal to gain future takings with minimum risk (Shah and Akbar, 2008, p.315). Hereby sistematic risk goes down and firm isolate itself from bad punches of the market (Mc alister and oth, 2007, p.36); (Chen and oth, 2012, p.725).

Especially in recent years, studies intensify about this topic. Except from advertising lower systematic risk, Chen and oth. (2012, p.724) stated that on firms which has high B-risk and idiosyncratic risk, advertising effect is more visible. Whereas McAlister and oth. (2007, p.44) found that advertising cause to fall systematic risk, (Unknown, 2010, pp.22-23) found that ,advertising cause to fall systematic risk apart from idiosyncratic risk. They didn't find an important relationship between idiosyncratic risk and advertising.

Because of the difference of variables and other things, the same result may not be found. In addition to this, Unknown (2010, p.22 ) found that seperated all of these in accordance with market downward and upward, plus short-term and long-term, yet they couldn't find any relation in long-term. Market downward is for Ang and oth. (2006, p.34 ) which will be market return lower than risk-free return from the downward risk and market upward formula as the opposite.

## **SECOND CHAPTER:**

### **ADVERTISING and BAD TIMES**

#### **2.1 Recession And The Great Recession**

Recession's cause economic facilities to diminish gradually and this situation affect the economy enormously and these effects are not short-term (Abberger and Nierhaus, 2008, p.74). Most of us know that there was a global depression in 2008. "As occurred at the outset of the Great Depression, the crisis began with a financial collapse that erased more than half the capitalization of the stock market (Grusky and oth, 2011, Chapter 1, p.4). They also maintain to put across about rapidly decrease in the Dow Jones Industrial Average.

There are lots of sectors affected from the depression especially housing industry. There will be lots of other sectors to be affected from the recession. It can be seen as a falling down for both companies and the market. This kind of down could also impact most of the firms to pass their worst financial year. In this environment, they have to shield themselves from the possible aggressive attacks.

#### **2.2 GDP Indicator**

GDP measures the pecuniary value of ultimate goods&services which is those that are taken through the ultimate user, produced in a country in a particular time period (quarter/year). It includes every output produced within the scope of the country's borders (Callen, 2008, p.48). Recession can be seen by the reverse(negative) enhancement in Gross Domestic Product (GDP). In our model, we also used GDP as the indicator of worst performing year.

Advertising expenditures is affected excessively from GDP's differences. On the strength of keeping expenditures minimum as much as possible in the recession as ordinary, advertising intensity can be low. Consumers approach to advertising can be

more conscious. Because of these reasons, promotional incentives in advertising stands out ever before (Sethuraman and oth, 2011, p.469).

### **2.3 Recessions's Continuance Effect and Opportunities**

Scrutinize the recession, bear in mind the effects of short-term and long-term for customers. In the short-term, consumers will postpone their purchases unless it's really necessary. In the long-term, when the recession's bitter strikes set in to decrease, consumer can call to mind the latest advertisings, and then consumer will want to buy from his/her most affected brand.

For firms, bad times effects can be also short-term and long-term. The main idea of the research also stated that, by doing advertising expenditure in bad times, it will be positive consequences and this positive consequences can be permanent. Absolutely, the consequences is not just specify with advertising expenditures, it depends on the position and the strategy they implement totally.

Actually recession in many properties bring some opportunities to light. Companies which wants to catch more chance in advertising market, with increasing advertising share in recesssion, they can possess to these chances in recession times (Srinivasan and oth, 2011, p.49).

By declining profit, consumers can be less affected from advertising. Because consumers postpone their purchases, brand loyalty can be harm. By the way all of these, because of bankruptcy and companies decreases of advertising expenditures, one thiny shot can be very powerful. So, with most companies by virtue of decreasing expenditures in the recession, advertising's that give brand awareness, brand loyalty etc. messages can have more favorable effect than others.

### **2.4 Recession And Strategic Decisions**

Marketing Strategy is the combination of product, price, distribution and promotion most suited to a particular group of consumers (Peter, 1999, Chapter 1). On advertisements that firms launch to the market basically can be focused on price or differentiation.

With taking over these strategies and associate them with economic fluctuations, Steenkamp and Fang (2011, p.631), explained that because of consumers could be very sensitive to price, advertisements would be more concentrated to price herewith they explained this as demand side effect, not supply side. Particularly in recession times, because of factors like wealthiness and labor safety, price is probable major attribute over consumer decision making (Hampson and McGoldrick, 2013, p.832).

In tough recession times, companies are going to choose which one? How they are going to determine their investments direction? Firms in general turn to cut back advertising expenditures in bad times, put aside their desires to launch new products/services, advance promotions apart from price one (Gijsenberg and oth, 2009, pp.3-6).

## **2.5 Advertising in Bad Times and Financial Performance**

There are a fair sum studies that puts forth not to cut back advertising expenditures during recession, on account of matters like liquidity, scarce resource, etc. , companies don't give up cutting back. Of a verity they have to track a procyclical policy that reducing expenditures in recession and increasing expenditures in expansion or they have to choose exactly reverse direction? (Lamey and oth, 2007, p.10).

In spite of studies show the opposite is true, because of some factors, they prefer procyclical policy. It can be indeed financial insufficiencies, it can be behavioral such as culture/environment or pressure.

In recession, one of the studies associate strategic marketing investment and behavioral/financial factors is Srinivasan and oth. (2005, pp.11-13). They defined factors as scarce resources, financial flexibility, strategic emphasis and entrepreneurial culture and looked into them. Companies possess organizational culture like focusing short-term has a procyclical tendency. Therewithal, managers suffer oppression from investors who consider risk to spend much in recession times. Interestingly enough,

advertising serve as a shield on stocks in recession times, very turn into an advantage in expansion times. Companies who takes stock of this situation as an investment, afterwards they catch their eye. (Unknown, 2010, p.22 )

Some of the assumptions that they are looking forward to is rivals. Minority that stands out among those who don't invest as necessitated, takes the gilt off the ginger. By reason of economy started to thrive, each company can do investments, but the profit of those who spend in recession remains. If a small number of companies embrace the idea of nothing ventured, nothing gained, with industries that have more competitive intensity and doesn't cut back expenditures during recession, we can anticipate to gain more profit than the others. I wonder in industries whose competitive intensity level is low and with companies doesn't cut back expenditures in recession, even so we can expect it will be positively effect companies financial performance? Considering from a different angle in the way (Tellis and Tellis, 2009, p.5).

Some of the important studies in the literature is Graham and Frankenberger (2000, p.154) stated that increasing expenditures provoke earnings to increase so they prefer profit indicator as earning. (Kjewski, 1982, p.4) stated that increasing advertising expenditures during recession doesn't increase ROI but it also doesn't make a loss on ROI. Steenkamp and Fang (2011, p.628), Andras and Srinivasan (2003, p.81) stated that it relates with profit therefore financial performance positively. Steenkamp and Fang (2011, p.628) state further positive relationship with advertising and market share. If we generalize all of these, we expect that there will be a strike shot when we do advertising expenditure in bad times.

## **2.6 Industries in Bad Times**

### **2.6.1 Industry factor**

In recession, competition in the industry is important as well as industry types are important. Each sector doesn't equally affected by recession. Back to the old, housing industry was the most affected one from recession on financial global crisis in 2008. America's real housing prices decrease around one-third over the country

(Grusky and oth, 2011, p.4). Not just in America, in Europe financial markets was in a big trouble and also it effected all over the world.

If we look from the viewpoint of advertising, thinking about industries affected unequally from recession, we can't underestimate industry factor in studies that relates with advertising. As in industry, multinationality is significant because multinational companies doesn't in just one market, they can be in many. Different strategies in different areas they are in position. To wit, in advertising expenditure and firm value relationship, economic and market movements, multinational companies and industry is influential factors that also present in studies on literature. (Morck and Young 1991, p.178) (Wu and Bjornson 1996, pp.149-151)

Turning to industry factor, studies used this as a dummy variable, and related with risk factors like systematic risk and correlated with advertising investment (Mc Alister and oth, 2007, p.39)

Thinking about industry types, in which way can we seperate? Studies seperated industry as product and service, and related with performance. Graham and Frankenberger (2000, p.151) seperated into consumer products firms (selling products to final consumers), industrial products firms (selling manufactured products to other firms), and sales&services firms (retail, wholesale, and other service providers) and found more earnings during recession not expansion, but it lose validity in service sector.

### **2.6.2 Durables and Non-Durables**

Durable and non-durable goods under the thumb of economic fluctuations are well-explored in the literature. However companies sell durable and non-durable goods under the economic fluctuations and what shall to do with advertising expenditures is more complex.

There are studies that mentioned durables are more cyclical (Steenkamp and Fang, 2011, p.628). Thereby they found on high cyclical industries market share and profit effect is more than low cyclical industries. When the industry cyclicity is calculated, they made us of Braun and Larrain (2005, p.1125)'s time-series regression

industry cyclical computing. If the industry cyclical is superior, the value it add will be so magnificent?

The core meaning of this is consumers who can't buy durables during recession when came back after the situation started to get better, the firm who stick in consumers mind will be one move ahead of others. The new arrivals will be updated and the company will be also gained back the customers.

We are going to take all of the companies in stock markets from all around the world so we can widely analyze the advertising effect. Advertising effect also can be different geographically, maybe change continent by continent or country by country.

### **2.6.3 New Products**

How we define the product is again substantial in advertising and firm value relationship. When a new product enter the market, on account of lacking information about the product, advertising becomes more powerful (Lodish and oth, 1995, p.138). Consumer awareness rise in value and attracts more customers. It is like sure signs to the fact that product life cycle reveals disparate opportunities in each stage of the cycle. In addition to this, we can say that advertising is also crucial and a key tool in markets that doesn't present new products/services too much. (Brierley, 1995, p.9).

### **2.7 Product Life Cycle Definition And Stages**

As we enter the subject of product life cycle, we have to define it. "The product life cycle is a numerical term of unit sales volume of a explicit product type, which starts with introduction, ends with market demise."(Harrell and Taylor, 1981, p.70). It is formed that we mentioned before the introduction stage plus growth, maturity and market demise stages.

Out of all, there is a problem to see the product life cycle stages effects seperately in studies and using this in the models because it is hard to distinct precisely product categories in several firms and posit them to their stages where they belong.



We couldn't know when they will move to the other stage further (Dhalla and Yuspeh, 1976, p.103); (Day, 1981, p.60)

In which stage the product is prominent while deciding durable goods advertising expenditure level. For instance, in product life cycle introduction stage, Sethuraman and oth. (2011, p.457), recommended to spend more to durables than others. The underlying reason is there is few trial chance in durable goods in point of consumers, so they try to choose the optimal one according to their needs. Because of this, in the first stage, promotions are important and information flow is a must. (Srinivasan and oth, 2004, p.628)

There is a time fact that being short-term or long-term. After for a length of time new product can start to effect firm value. By reason of the fact that it has to be looked at long-term.

Short-term ideas are focus on the present; strategies, customer, markets and products. They are not related with product/market enlargement strategies higher than five years (Kotler, 1977, p.68).

Long-term results are impacts that they form quite fast but they incline to continue in progress of time. For example, Abraham and Lodish (1990, p.56) stated that advertising effects sales positively even after the company stops to advertise, and this effect will continue more than one year.

For the sake of maximizing profit in the long run, it is hard because we cannot know what changes are going to be happen or what will be our present activities condition in the future? (Dekimpe and Hanssens, 2014, p.397) It is also voiced that product life cycle is significant in short-term but insignificant in long-term. Maybe product may have passed from one stage to another.

On new products advertising, there is a key point for professionals can't missed is consumer memory. Consumers could forget the advertisement after a while. Because of this, when entering a new market, using main media channels especially TV is more sensible due to being catchy (Abraham and Lodish, 1990, p.51). So the media tool

companies use when they place an ad is important. In this manner, firms can increase their effectiveness (Assael and Poltrack 1993, pp.50-51).

As for that growth stage, we can see advertising effect to financial performance is increasing. Nevertheless, it can change by categories.

## **2.8 Private Label Products**

Private label means “symbolizing a product produced or packaged for sale below the name of the retailer instead of that of the producer”. Deelersynder and oth. (2010, p.633) stated that private-labels are powerful rivals to local brands in different industries, especially in packaged goods.

Even though consumers response to products/services can be diverse, it is expected to be a decrease in demand to products/services during recession. However, for private label products, it is quite opposite. In recession, it is observed to increase in private label products market share, but in expansion, it is observed to decrease slightly. (Gooner and Nadler 2012, p.90)

Private label share increase is not temporary. If consumer is satisfied, consumer’s loyalty will be long-term after the recession. (Romero, Giner 2014, p.670). In other words, private label products behave assymmetrically. In recession their share is increasing, in expansion it is different (Lamey and oth, 2007, p.1) For consumers perspective, it also reacts different for product type (Batra and Sinha 2000, pp.178-181).

## **THIRD CHAPTER:**

### **The Effects of the Advertising Expenditure under the Company's Worst Financial Year: an Application of Stock Markets Worldwide**

#### **3.1. Aim of the Research**

We aimed to look companies that belong to stock markets from all over the world. We tried to show that advertising as an investment has positive effect even if their performance level is low. Durable industries has to be more effective to profit with independent variable advertising expense. Also advertising has to increase the profit by decreasing risk.

#### **3.2 Literature**

##### **3.2.1 Advertising Effectiveness**

Although there are various studies in the literature to what extent advertising is effective, basicly as brand awareness, customer satisfaction, customer loyalty, competitive advantage measurements and as sales, profit, market value measurements are used to observe the performance level. So, we can say that there are two approaches or further to determine advertising effectiveness (Hamelin and oth, 2017, p.103).

##### **3.2.2 Preferences**

###### **3.2.2.1 Data Period Variable**

Which variables used to measure advertising effectiveness on financial performance up to the present? First, there are studies prefer advertising expenditure data yearly. Ho and oth. (2005, p.3); McAlister and oth. (2007, p.39), and there is also an example which prefer mothly data (Gijsenberg and oth, 2009, p.9). The point to be

considered here is the increasing lagged sales effect when they prefer yearly data. When yearly data is used, they stress advertising elasticity is higher than using other data types. (Sethuraman and Tellis, 1991, p.160)

### **3.2.2.2 Advertising Variable**

Some studies gathered advertising data from various resources as expenditure directly Müzik, Jacobson (2003, p.69); Chauvin and Hirschey (1993, p.132), some studies calculated advertising elasticities with it(Gijsenberg and oth, 2009, p.23); (Lodish and oth, 1995, p.130).

### **3.2.2.3 Financial Performance Variables**

Studies differentiated from each other when they analyze the profit. While Graham and Frankenberg (2000, p.149) examined into Earnings, Kijewski (1982, p.4); Andras and Srinivasan (2003, p.82) mentioned about Return on Investment, Steenkamp and Fang (2011, p.628); Kijewski (1982, p.6) examined into market share. Market share is utilized instead of sales&profits; it checks on differences in total market demand, which companies have pretty low effect (growth&decline due to economic fluctuations), it's a quite good measure of the effectiveness of administrative decisions, because they are associated with the decisions of rivals and better to form than profitability (Deleersynder and oth, 2007, p.313). Studies Milgrom and Roberts (1986, p.820) took sales as a financial performance indicator is also exist. Studies Erickson and Jacobson (1992, p.1277); Hirschey (1982, p.379); Hirschey and Weygandth (1985, p.327); Chauvin and Hirschey (1993, p.128); Ho and others (2005, p.4); Quereshi (2007, p.12) also looked at market value can be accessed.

“Return on investment (ROI) refers to the firm's internal ratio of revenue minus costs over a given period divided by investment” (Tellis and Tellis, 2009, p.6).

Ebitda is also a good indicator using for calculating a company's profit-making capability and to calculate the earning potential of the company.

I have already mentioned about studies which demonstrate advertising intangible value as an instrument that related with financial performance, examined by authors mostly look at from consumer behavior point of view (Wang and oth, 2009, p.131); (Peterson, Jaeseok, 2010, p.688). If we come to more recent studies related with advertising and performance, there are studies which considered advertising as an important marketing activity, which tried to give the possibility of either keeping stock return stable or increasing stock return on stock market movements, namely in upturns and downturns, and depending on this, gaining investor confidence and associating with decreasing systematic risk Mc Alister and oth.(2007, p.35); or idiosyncratic risk, or both of them Frieder and Subrahmanyam (2005, p.63); Tuli and Bharadvwaj (2009, p.18); Unknown (2010, p. ), and also B risk Singh and oth. (2005, p.435), and both with idiosyncratic risk. (Chen and oth, 2012, p.724)

#### **3.2.2.4 Economic Fluctuations Variable**

Handling advertising yearly data and taking into consider as long-time series, is it possible to ignore financial global crisis effect to firms strategies to use their resources in an efficient way? Studies Lamey and oth. (2007, p.11); Steenkamp and Fang (2011, p.628); Kijewski (1982, p.7); Sethuraman and oth. (2011, p.466) looked for a response to this question: During or after bad times, what do they need to do their advertising expenditures; do they have to decrease, increase or continue in the same way? Firms putting forward advertising as strategic investment, to what extent affected by their worst year? Can advertising decrease risk by doing more advertising? What kind of a relationship between firms worst-ever year performance and advertising? We wanted to take an answer in this study to some of these questions. We aim to support these questions by long-term yearly data and seperating industries, so taking more accurate answers.

### **3.2.2.5 Media Channels Variable**

In the perspective of media channels evolution, it is inevitable that main media channels like television, print and such allow the new ones to capture the market leisurely. “Advertising delivered over the Internet—“online advertising”—has become a significant source of revenue for web-based businesses” (Evans, 2009, p.37).

On the other hand, it doesn't mean main media channels is over when online advertisement is become popular and people are slightly less involved to others. Such as Television, still has an important position on advertisement budget (Joo and oth, 2016, p.508). Television continue to be one of the most important tool for emotional appeals (Cartwright and oth, 2016, p.83).

Main media channels also separate from each other in somehow. Consumers keep in mind print advertising for a longer time than TV advertising, nevertheless television has a more effective role with regard to brand awareness.

Once and for all, one of the online advertising's complexity is advertising clutter. When we do online surfing, we come across lots of things and our brain trying to detect many things at the same time. In these intensity, due to the excess of stimuli, consumers become less responsive to advertising.

**Table 1:** Literature Review

Author(s)	Core Variables	Data	Risk Variable	Methodology	Results
1. Chen and others, 2012	Advertising expenditure, B-risk, idiosyncratic risk,	Companies dealt on New York Stock Exchange included period between 1981 and 2007, U.S.A.  Dependent Variable: Risk  Others: Asset Growth Rate, Leverage, Liquidity, Total Asset, Competitive Intensity, ADV/Sales, R&D/Sales	Yes	OLS regression, 5-year moving averages are used.  Quantile regression analysis (Categorize risk as lower, medium, high)	Advertising is significantly related with lower B-risk, it is same as Mc Alister's study in 2007. Firms B-risk can be minimized by advertising, however it can be increased by R&D.  Companies which are more vulnerable to market differences are also vulnerable to their advertising expenses.
2. Sethuraman and others, 2011	Advertising elasticity, economic fluctuations	Time period consists 1960 to 2008.  Variables: Categorize product type, product life cycle stages, advertising elasticity, advertising	No	IGLS Model (Iterative Generalized Least Squares), Meta Analyses	Advertising to sales effect is higher for durables than other type of products. Short-run advertising to sales effect is more in early stage of PLC. Advertising to sales effect is more in Europe than

		type, time trend, regions, recession, advertising measure			U.S.A(excessive ADV.). Elasticities are more when used weekly or yearly data than quarterly. TV elasticity is more than print in short-term, but in long-term opposite.
3. Steenka mp and others, 2011	Economic fluctuations, profit and market share, industry cyclicity, advertising share	Time period consists 1971 to 2005, randomly 600 firms B2B, 575 firms B2C and total 1,175 selected. Compustat database is used, U.S.A.	No	Panel -time series data. Validation analysis	Advertising utility higher in contractions, when both market share and profit variables are used. Advertising is more beneficial in highly cyclical industries, and this benefit is even much better in contractions rather than expansion.
4. Peterson and Jeong, 2010	Brand value, financial performance, advertising expenditures	Time period consists 1991 to 2007. Variables: Brand Value, Market Value, Market-to-book Ratio, Advertising Expenditure, R&D	No	Path analysis	Higher advertising expenditures were related to more brand values, and this after associated to higher financial executiveness.



		Expenditure, Market Asset Value, Consumer/Non-Consumer Brands			
5. Unknown Article, 2010	Systematic risk, idiosyncratic risk, stock market fluctuations, advertising expenditures	1980-2010. Monthly stock data. 2951 observations from 287 firms in 17 industries. 10 time-series data points for one firm  Variables: Advertising intensity(share of total R&D), systematic risk, idiosyncratic risk, market trends, economic fluctuations	Yes	OLS	Advertising investment protect stocks from short-term downside shocks, starts to being beneficial in short-term upside shocks. Advertising can allure investors. Advertising significantly lowers systematic risk in a downturn. Long-term market trends don't significantly affect the correlation between advertising intensity and stock return risk.

6. Joshi and Hanssens, 2010	Firm value, investor effect, stock price, advertising expenditures	Monthly returns used and included two industries; personal computers and sporting goods leading rivals. Both industries have aggressive advertising. Computer industry is in growth and sporting industry is mature. Time period is 15 years (1991–2005).  Variables: market-to-book ratio, matched firm returns, firm size, advertising expenses, sales revenue, profit, R&D expenses.	No	VAR model, Profit-Maximizing expense: Dorfman-Steiner conditions	Investor effect of advertising exist far from its expected effects tangible. Double impact of advertising on firm value also exist by direct or indirect. They also display the significance of continuing expenditures approxiametly to the optimum.
7. Heerde and others, 2009	Advertising elasticity, economic fluctuations	Four types of brands /products, 36 CPD goods included. Time period is 18-years 1993 to 2010, 5 leading national brands in UK is used.	No	Regression model, Meta Analysis	They find advertising elasticity is high even if in economic downturn. Advertising effectiveness is low in bad times but it is not significant.

		Variables: Monthly sales, GDP, advertising and price elasticities, time trend, business cycles, brand types, product classes			
8. Wang and others, 2009	Brand equity, firm value, advertising expenditures	11 years (1996–2006), 367 companies Variables: Market Value, Sales, Sales Growth, Industry Growth, Industry Concentration, Advertising Expenses, Market Share, Industry Size, Industry Beta	No	Regression, Persistent Analysis	Advertising can form brand equity. Consumer awareness and attitude formed from advertising are crucial and permanent. It displays strong business operation, advertising appeals customers, and so reputation, preferable environments like strong network ,or growth stage of life cycle that advertising create brand intangible. Bad advertising effect to brand equity is also can be. May like over-advertising, negative environments like aggressive rival reactions, unefficient strategy etc.

<p>9. Mc Alister and others, 2007</p>	<p>Systematic risk, advertising expenditures, sales</p>	<p>Firms on New York Stock Exchange between 1979 and 2001.</p> <p>Variables: Firm Size(TA), leverage, liquidity, lagged Advertising/Sales, lagged R&amp;D/Sales, growth, earning variability, dividend payout, age, competitive intensity</p>	<p>Yes</p>	<p>Panel Data, Regression used STATA.</p>	<p>Advertising decrease systematic risk of stocks. Elements to influence the companies systematic risk, increases in advertising/sales decrease companies systematic risk.</p>
<p>10. Ho and others, 2005</p>	<p>Advertising expenditures, firm value, manufacturing/nonmanufacturing firms</p>	<p>40 years (1962-2001) and 15039 firm-years</p>	<p>Yes</p>	<p>Portfolio analysis approach</p>	<p>High investment in advertising effects positively to one-year stock market displays of nonmanufacturing firms. Coming to three-years, manufacturing firms utilize from investment in advertising. Performances are going down when they invest in something far from their main competencies.</p>

<p>11. Andras and Srinivasan, 2003</p>	<p>Advertising expenditures, profit, competitive advantage, consumer/manufacturing product firms</p>	<p>consumer and manufacturing product firms for year 2000(196 consumer and 876 manufacturing product firms)</p>	<p>No</p>	<p>General Least Squares Regression</p>	<p>Consumer product firms expense more on advertising rather than manufacturing product firms. Firms look to continue a long-term competitive advantage to survive and ensure high performance. While advertising is one of the top activity to cut its budget during bad times, it wouldn't be ignored that variable is correlated positively to performance.</p>
<p>12. Graham and Frankenberg, 2000</p>	<p>Advertising expenditures, earnings, market value</p>	<p>Companies on New York, American, and OTC stock exchanges. 10 years of data. 1,504 available firm-years. consumer products , industrial products, and sales and services firms (retail, wholesale, and other service providers</p>	<p>No</p>	<p>OLS Regression Analysis</p>	<p>Advertising asset value is the best in current year and shrinks in other years. It is best lived in industrial products and worst lived in sales&amp;services industry. Real dollar advertising differences are correlated with market values and future earnings. The impacts of raising or reducing advertising expenditures can be long. There are a powerful support of</p>

					expenses with market values and earnings.
13. Chauvin and Hirschey 1993	Advertising intensity(ADV/Sales), market value, firm size	1988-1990 (3 year) period, manufacturing and nonmanufacturing industries, 1500 companies each year, Leading Compustat companies	Yes	OLS, F-test: permanent utilities to advertising by displaying their valuation effects for size-based samples of companies gathered from both manufacturing and the other industry.	Beneficial impacts of advertising to market value of the company are represented. Current cash flow, growth, risk and market share are the MV variables. Advertising is appealing alternative tool of investment in precious capital that various range of relevance in lots of economic industries. Firm size advantages happens in advertising. The MV impact of one dollar in advertising incline to be better for relatively bigger companies.
14. Erickson and	Advertising expenditures,	Annual information for 20-year periods for industrial companies	No	Prediction by regression or	Advertising expenditure is not raise market value of the firm farther than

<p>Jacobson , 1992</p>	<p>market value, competitive advantage</p>	<p>on New York, American, and OTC stock exchanges. Advertising (both media and promotional expenses). Sample period begins in 1972.</p>	<p>time-series models, Specification tests: display the range that each type of unpredictable is present and cause bias in the coefficient measures for the models not checking for their potential impact. IV/SC/FX model is used that best for advertising equations.</p>	<p>others. Inadequate of this expenditure to ensure a comparative advantage for unique returns. It based on mostly on the particular nature of the expenditure and how it associates with the firm's entity and competency base to avoid imitation by rivals.</p>
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<p>15. Hirschey , 1982</p>	<p>Advertising expenditures, market value, capitalization</p>	<p>Sample of 390 firms and 12 product groups. Six types of advertising: network television, spot television, newspaper, magazine, radio and outdoor billboard advertising. Leading National Advertisers.</p>	<p>No</p>	<p>Regression analysis</p>	<p>Advertising expenditure is positively correlated with market value impacts. Due to the market value impacts of advertising might come from medium-associated impacts of TV advertising, the expensing vs. capitalization is beyond clearness. Mostly letting the firms to capitalize and depreciate expenditure is only suitable for handling steady future impacts ensure adequate motivation. More sharp policy would be need to the capitalization of TV expenditure.</p>
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### **3.3 Financial Performance**

#### **3.3.1 Internal Impacts**

##### **3.3.1.1 Managerial Impacts**

- Evaluating of both internal organizational patterns and management legacies.
- Improvement and executive of promoting mechanisms to reinforce continuance.
- Catching up potential chances in the business.
- Proper risk management. When appropriate, need to know to take risk.
- Audit quality and security of employees

In summary, managers always has to check their environment and they has to adopt the changes as soon as possible they can. When appropriate, they have to catch the opportunity or leave the possible threats. So, managerial decisions can effect financial performance.

##### **3.3.1.2 Executional Impacts**

- Recognition of Environmental Necessities
- Descension of Stock Inputs
- Acquiring Energy Efficiency
- Executing Licenses

In summary, these factors that both internal and external operationals can effect the firm's financial performance.

##### **3.3.1.3 Economical Impacts**

- New Area Chances
- Cost efficiencies
- Innovational Chances

In summary, these economical metrics can also be have an impact to the firm's financial performance.

### **3.3.2 External Impacts**

#### **3.3.2.1 Market Impacts**

- Differentiation
- Values from Consumer Perspective (ecological life, equality etc.)
- Reach to new markets
- Competition
- Reputation
- Socially-Connected Investors

In summary, investors, consumers and rivals are the determinants to form market impacts and effect financial performance.

#### **3.3.2.2 Government Impacts**

- Economical shocks
- High regulatory interference
- Executing licenses

In summary, government can be have an impact indirectly to financial performance through economy and regulatories

#### **3.3.2.3 Stakeholder Willingness**

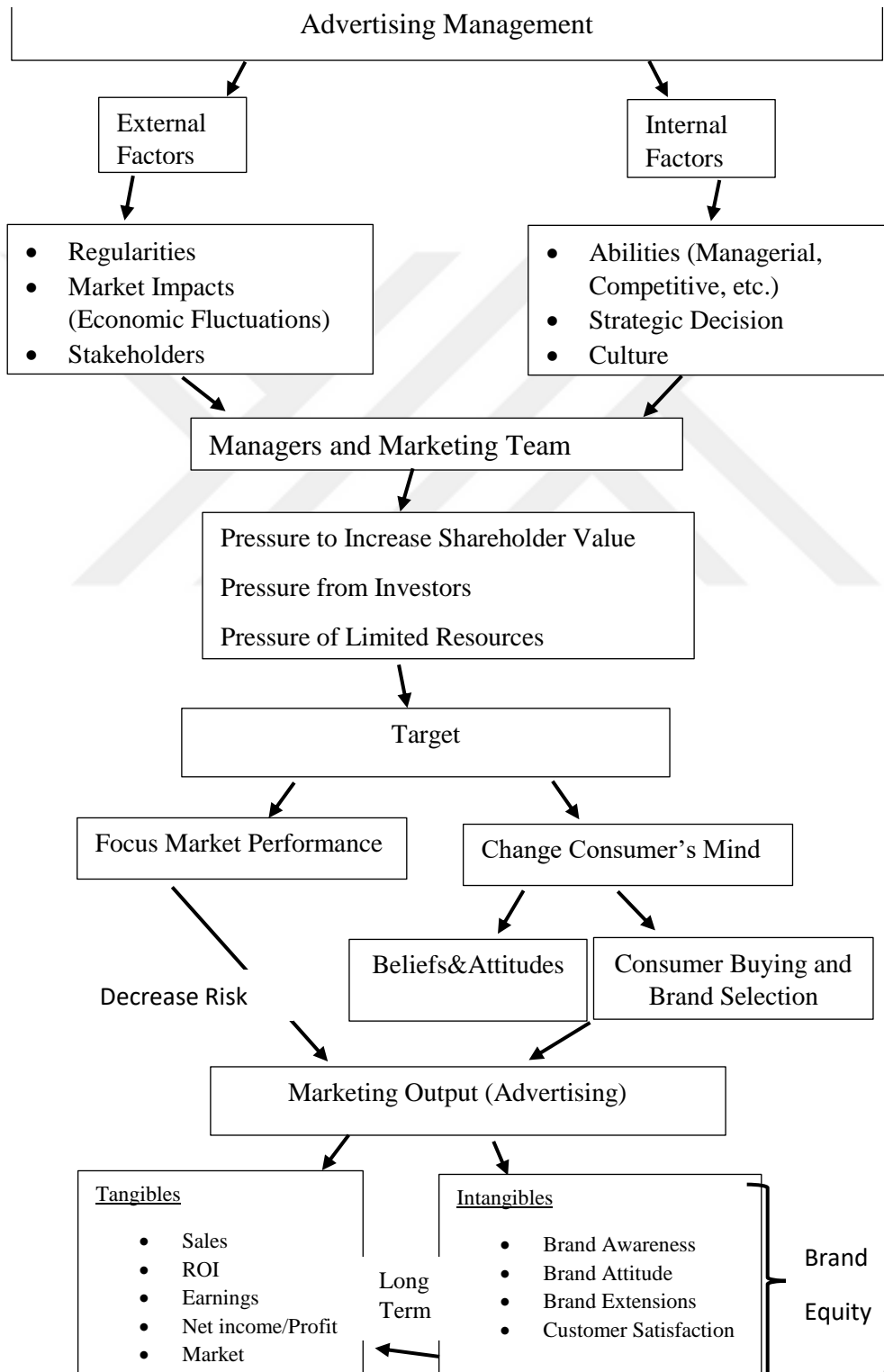
- Clearness and reach to information
- Internalization of network exteriors
- Pressure for shrinked equipment depletion
- Globalization
- Clearness in Reporting

In summary, stakeholders trust and willings can be have an impact to financial performance (Szekely and Knirsch, 2005, pp.629-630).



## Advertising Financial Performance Model

**Figure 1:** Advertising Financial Performance Model



### 3.3. Research Data and Methodology

**Table 2: Stock Market in the Study Worldwide**

<b>CONTINENTS</b>	<b>COUNTRY NAMES</b>	<b>STOCK MARKET CODES</b>
Africa	Egypt	egx100
	South Africa	zap
Asia	Bahrain	bax
	China	hs1
	China	ssec
	China	szsc
	Indonesia	jkkm
	Philippines	pse1
	India	nifty500
	Japan	jpx
	Kazakstani	kase
	Korea	ks11
	Kuwait	bka
	Malaysia	klse
	Russia	irts
	Russia	pftsi
	Sri Lanka	cse
	Suudi Arabia	tasi
Thailand	seti	
Australia	Australia	asx
Europe	Germany	dax
	Austria	atx
	Belgium	bel
	Czech Republic	px
	France	cac
	Crotia	crbex
	Netherland	aex

	Ireland	Ígen
	Spain	smsi
	Sweden,Denmark,Finland	omx
	Switzerland	ssmi
	England	ftse
	Hungary	bux
	Norway	oseax
	Poland	wig
	Portugal	ps1
	Romania	beti
	Slovakia	sax
	Turkey	bist
	Greece	atf
North America	America	Dow Jones
	America	nasdaq
	America	nyse
	America	S&P
	Canada	tsx
	Mexico	mxx
South America	Argantina	mevy
	Brazil	bovespa
	Colombia	coleqy
	Peru	spblpgpt

## Industry Type

**Table 3:** Durable Industry

Construction & Engineering	Household Appliances
Steel	Heavy Electrical Equipment
Aluminum	Semiconductors
Automobile Manufacturers	Aerospace & Defense

Home Furnishings	Highways & Railtracks
Construction Materials	Communications Equipment
Electrical Components & Equipment	Application Software
Building Products	Copper
Diversified Metals & Mining	Technology Hardware, Storage & Peripherals
Agricultural Products	Oil & Gas Storage & Transportation
Cable & Satellite	Biotechnology
Precious Metals & Minerals	Household Products
Gold	Electronic Equipment & Instruments
Industrial Conglomerates	Industrial Machinery
Home Improvement Retail	Semiconductor Equipment
Air Freight & Logistics	Consumer Electronics
Renewable Electricity	Trucking
Metal & Glass Containers	Motorcycle Manufacturers
Auto Parts & Equipment	Agricultural & Farm Machinery
Railroads	Homebuilding
Electric Utilities	Computer and Electronic Product Manufacturing
Electronic Components	Machinery Manufacturing
Independent Power Producers & Energy Traders	Marine Freight & Logistics
Construction Machinery & Heavy Trucks	Transportation and Warehousing
Systems Software	Electric Power Generation, Transmission and Distribution
Airlines	Silver

**Table 4:** Nondurable Industry

Fertilizers & Agricultural Chemicals	Broadcasting
Packaged Foods & Meats	Chemical Manufacturing
Commodity Chemicals	Tires & Rubber
Pharmaceuticals	Paper Packaging
Diversified Chemicals	Health Care Equipment
Oil & Gas Equipment & Services	Forest Products
Apparel, Accessories & Luxury Goods	Commercial Printing

Textiles	Footwear
Paper Products	Oil & Gas Refining & Marketing
Food Retail	Health Care Technology
Drug Retail	Merchant Wholesalers, Nondurable Goods
Coal & Consumable Fuels	Soft Drinks
Specialty Chemicals	Industrial Gases
Integrated Oil & Gas	Medical Equipment and Supplies
Oil & Gas Exploration & Production	Manufacturing
Personal Products	Multi-line Insurance
Brewers	Gas Utilities
Publishing	Oil & Gas Drilling

**Table 5: Service Industry**

Marine Ports & Services
Integrated Telecommunication Services
Real Estate Development
Asset Management & Custody Banks
Wireless Telecommunication Services
Diversified Banks
Investment Banking & Brokerage
Diversified Real Estate Activities
Health Care Facilities
Health Care Distributors
Hotels, Resorts & Cruise Lines



Specialized Finance
Regional Banks
Diversified Capital Markets
Gas Utilities
Office Services & Supplies
IT Consulting & Other Services
Movies & Entertainment
Marine
Housewares & Specialties
Accommodation
Other Diversified Financial Services
Life & Health Insurance
Food Distributors
Diversified REITs
Real Estate Operating Companies
Department Stores
Property & Casualty Insurance
Casinos & Gaming
Distillers & Vintners
Retail REITs
Hypermarkets & Super Centers
Financial Exchanges & Data
Education Services
Consumer Finance
Restaurants
Industrial REITs
Technology Distributors
Diversified Support Services
Specialized REITs
Office REITs
Interactive Media & Services
Electronic Manufacturing Services
Multi-line Insurance

Airport Services
Life Sciences Tools & Services
Specialty Stores
Water Utilities
Health Care Supplies
Environmental & Facilities Services
Health Care Services
Interactive Home Entertainment
General Merchandise Stores
Alternative Carriers
Specialized Consumer Services
Research & Consulting Services
Internet Services & Infrastructure
Data Processing & Outsourced Services
Advertising
Leisure Facilities
Securities, Commodity Contracts, and Other Financial Investments and Related Activities
Real Estate Services
Human Resource & Employment Services
Thrifts & Mortgage Finance
Reinsurance
Security & Alarm Services
Hotel & Resort REITs
Personal and Laundry Services
Real Estate
Insurance
Funds, Trusts, and Other Financial Vehicles
Hospitals
Insurance Carriers and Related Activities
Residential REITs
Insurance Brokers
Health Care REITs

Waste Management and Remediation Services
Professional, Scientific, and Technical Services
Finance and Insurance
Real Estate and Rental and Leasing
Accommodation and Food Services
Managed Health Care
Mortgage REIT's
Educational Services
Scientific Research and Development Services
Amusement, Gambling, and Recreation Industries

**Table 6: Other Industry**

Trading Companies & Distributors
Multi-Sector Holdings
National Security and International Affairs
Distributors
Multi-Utilities
Manufacturing
Utilities
Information
Investment Holding Companies

### 3.3.1. Data Set

We got the adverting expense information from Thomson Reuters. We combined Advertising Expenses and Advertising Expenses, Supplementary functions of Thomson Reuters. If the data was the same, we eliminated them. We got all other variables information from Thomson Reuters also. GDP data was from different resources. We combined Worldbank, Oecd and Country Economy to get GDP data.

We gathered Total Liabilities and Total Assets to compute the Leverage variable (TL/TA). We thought companies Leverage level is important when try to do an expense. We gathered company Total Assets to see how the size of the companies is effective in financial performance relationship. We divided company Total Assets to GDP to clean each of the countries from the economic impacts.

We gathered Ebitda information but we looked the lagged effect, the next years Ebitda because we thought the profit effects could be seen in the next year. We divided this to next years Sales to gather Ebitda Margin. It could be our outcome variable. We also gathered next years Net Income same as Ebitda Margin, and also Price-to-book value (+1).

We gathered beta information, because beta symbolizes systematic risk of the companies. It is uncertainty inherent in an industry or company investment. We all know, advertising expense is an investment. So maybe, a new competitor can capture the companies market share. What coul companies do in this position? They choose to invest? If they don't, company sales could reduce. We assume, advertising expense reduce systematic risk, so it effects financial performance in a better way. We can see this in the model by beta information.

Other variables we gathered from Thomson Reuters are Countries of Exchange, Countries of Headquarters, Stock Market RIFs, Stock RIFs. We put continent and industry type information also.

After collecting all of the variables, we had to find companies worst financial performance year data. Because we had to convert time-series data to one worst year data, and by doing this, taking all of the information depending on the worst financial performance year. In order to do this, we implement a formula,

$$\text{Min.Year}=(\Delta\text{Sales}/\text{GDP})/\text{Sales}$$

We did this for a sample of 43 stock markets and total of 15.586 companies dealt in these stock markets.

After finding companies worst financial year, we prepared a table in excel, all the data came according to worst year. We eliminated which companies don't have

advertising expense data and eliminated all the extreme values from the data. Then our sample decrease to approximately three thousands.

We gathered industry data from Thomson Reuters Gics-sub Industries function. We separated industries to four categories. Durable, non-durable, service and others. Others are multinational companies, unknown industries or unsure ones. We utilized from Harrison (2003, p.970) and Engel and Wang (2011, p.40). Because the industries can't separate explicitly, we had to turn some of them in order to our model.

### 3.3.2. Methodology

Regression analysis use to measure the relationship of two or more variables. Regression analysis enables us both descriptive and inferential information.

If variables are more than two, we can say that we can conduct multiple regression analysis. If the relationship is linear, the model is like

$$Y_a = (b_0 + b_1x_1 + b_2x_2 + \dots + b_nx_n) + e_a, \text{ where is}$$

Y as an outcome variable,  $x_1, x_2, \dots, x_n$  is the explanatory variables.  $b_0$  is the y axis cut-off point of the regression curve, and other b's are the parameters.

In order to run regression analysis, we created our linear multiple regression model and we formed our hypothesis. Our models are;

$$\mathbf{EBITDA}_{+1} = (b_0 + b_1 \text{Addexp}_0 + b_2 \text{ta}_0 + b_3 \text{beta}_0 + b_4 \text{d}_{01}) + e_a$$

$$\mathbf{EBITDA}_{+1} = (b_0 + b_1 \text{Addexp}_0 + b_2 \text{S}_0 + b_3 \text{beta}_0 + b_4 \text{d}_{01}) + e_a$$

$$\mathbf{EBITDA/SALES}_{+1} = (b_0 + b_1 \text{Addexp}_0 / \text{S}_0 + b_2 \text{ta}_0 / \text{gdp}_0 + b_3 \text{d}_{01}) + e_a$$

$$\mathbf{NET INC}_{+1} = (b_0 + b_1 \text{Addexp}_0 + b_2 \text{beta}_0 + b_3 \text{d}_{01}) + e_a$$

$$\mathbf{NET INCOME}_{+1} = (b_0 + b_1 \text{Addexp}_0 + b_2 \text{ta}_0 + b_3 \text{beta}_0 + b_4 \text{d}_{01}) + e_a$$

Where, durability is dummy variables, advertising expense-total assets- beta are independent variables. We used EBITDA, Net Income or EBITDA Margin as the dependent variables. Dummy variable is:

=1 if durable, 0 otherwise

$e_a$ : is the residual for the  $a_{th}$  unit.

After all of this we could form our hypothesis.

**H<sub>0</sub>**: Durable industries doesn't have a greater effect on profit in companies worst financial performing year.

**H<sub>1</sub>**: Durable industries has a greater effect on profit in companies worst financial performing year.

**H<sub>01</sub>**: Advertising can't decrease systematic risk of the firm in their worst financial performing year.

**H<sub>11</sub>**: Advertising can decrease systematic risk of the firm in their worst financial performing year.

When we run our regression, we utilized from multiple linear regression to conduct our analysis. Eviews is a statistical analysis programme which can be used in economy department. With e-views, we can conduct analysis like,

\*Least Squares Regression

\*System of Simultaneous Equations

\*Logistic Regression

\*Time-Series Analysis

\*Cointegration

\*Granger Causality

\*Simulations

We used Least Squares Regression function (OLS).

When we add variables in regression, we utilized from entering. We put all of the predictor variables in the same time to the model.

There are some assumptions to measure the model accuracy. When applying a multiple regression, we have to implement some tests to build a statistically significant model. We have to measure the level of these;

- 1) Normality
- 2) Linearity
- 3) Constant variance(no heteroskedasticity)
- 4) Autocorrelation(independent error terms)
- 5) Normality of errors
- 6) Multicollinearity

### **3.3.2.1. Normality Tests**

Normality tests are good for to look whether the data is appropriate for normal distribution or not. When there is lots of independent variables, normality is not a big problem. But we have to look still. The most known normality tests are chi-square, Kolmogorov-Smirnov, Liliefors and Shapiro-Wilk. Because our sample is bigger than 30, we have to look Kolmogorov-Smirnov test. There is statistically significance for KS test, significance is lower than 0,05. We would reject the null hypothesis so the data is not normally distributed.

**Figure 2: Normality Outlook**

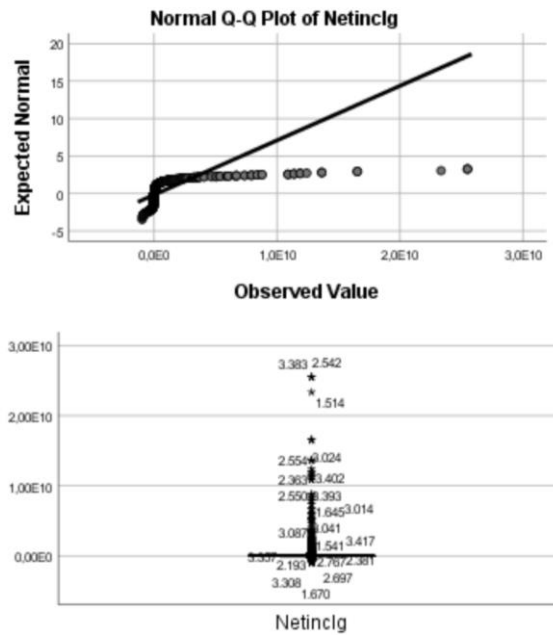
**Explore**

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Netinc1g	,384	3570	,000	,186	3570	,000

a. Lilliefors Significance Correction

**Netinc1g**

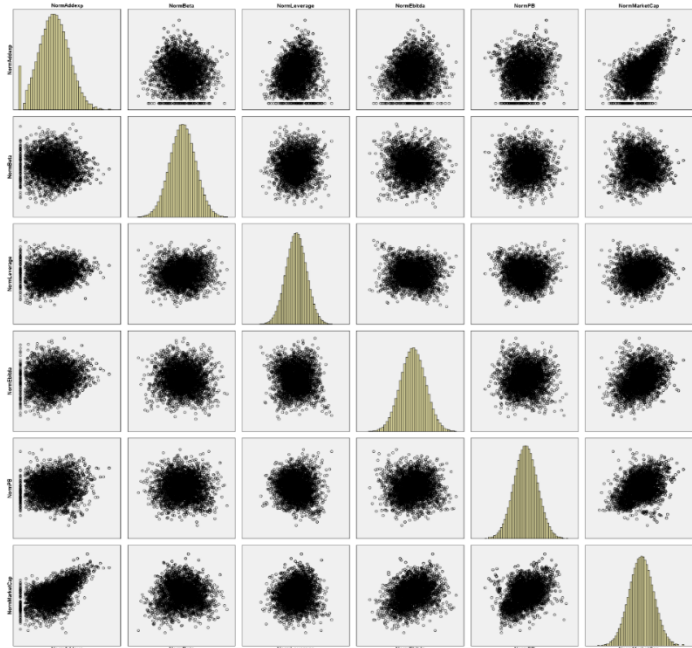


**3.3.2.2. Linearity**

If we want to conduct a multiple linear regression, we have to depict a linear relationship between variables. It is important especially for the multiple regression analysis. Linearity assumes that correlation between variables are linear. Scatterplots can show if there is a linear relationship or non-linear relationship. In order to test this, we have to examine the bivariate correlation for each variables. If we detect non-linear correlation between independent variables, we have to do some other tests.



**Figure 3: Linearity Table**



We can say that advertising expense and market capitalization has a nearly perfect linearity and they have a positive relationship with each other. We can't be sure for the other variables, because of this we can look at the correlation table.

**Figure 4: Correlation**

		Correlations					
		NormAddexp	NormBeta	NormLeverage	NormEbitda	NormPB	NormMarketCap
NormAddexp	Pearson Correlation	1	-.061**	.203**	.148**	.095**	.608**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	3570	3569	3569	3569	3569	3570
NormBeta	Pearson Correlation	-.061**	1	.080**	-.079**	-.040*	-.006
	Sig. (2-tailed)	.000		.000	.000	.017	.727
	N	3569	3569	3568	3568	3568	3569
NormLeverage	Pearson Correlation	.203**	.080**	1	-.070**	-.098**	.110**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	3569	3568	3569	3569	3568	3569
NormEbitda	Pearson Correlation	.148**	-.079**	-.070**	1	.070**	.320**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	3569	3568	3569	3569	3568	3569
NormPB	Pearson Correlation	.095**	-.040*	-.098**	.070**	1	.383**
	Sig. (2-tailed)	.000	.017	.000	.000		.000
	N	3569	3568	3568	3568	3569	3569
NormMarketCap	Pearson Correlation	.608**	-.006	.110**	.320**	.383**	1
	Sig. (2-tailed)	.000	.727	.000	.000	.000	
	N	3570	3569	3569	3569	3569	3570

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

All variables are statistically significant except NormBeta and NormMarketCap. We can state that there is a negative relationship between PB value and leverage. Also beta and advertising expenses, ebitda and beta, PB value and beta, ebitda and leverage is the same.

If the significance level is smaller than 0.0050, we can say that there is a linear relationship (0.01level). If the significance level is smaller than 0.025, we can say that there is a linear relationship (0.05 level). We can see that all the variables are linear except from market capitalization and beta.

### 3.3.2.3. Heteroskedasticity

We expect heteroskedasticity as zero. There should be no explicit pattern in the distribution. If we see a cone-shaped, it could be a signal for heteroskedasticity problem.

With heteroskedasticity, standard errors can't be relied. To detect this, Goldfeldt-Quant test or Breusch-Pagan test can be executed.

We used unstandardized variables. The plots are getting wider. There may be a heteroscedasticity problem.

### **Breusch-Pagan Test**

The Breusch-Pagan is one of the best test for heteroskedasticity problem. It starts by letting the heteroskedasticity process being a function of one or more of our explanatory variables, and this is generally implement by assuming that heteroskedasticity might be a linear function of each of the expanatory variables in the model. This assumption can be depict as:

- Get the squared residuals,  $\hat{\epsilon}_i^2$
- Then run,  $\hat{\epsilon}_i^2 = g_0 + g_1X_1 + g_2X_2 + \dots + g_aX_a + v^i$

In Excel in order to do Breusch-Pagan test, we need to use predicted values in the regression. We first found the g number from the equation  $g = \text{res1sq}/(\text{RSS}/N)$ . Then we run a regression and found the  $\beta$  number from the equation  $\beta = 1/2 * (\text{REGSS}) \chi^2_{(1)}$ . Our  $\beta$  value is 349,4788. After this, in order to find p value, we used excel chidist function. Our p value is approxiametly 0,00. Because  $0,00 < 0.05$ , the null hypothesis of homoskedasticity is rejected and heteroskedasticity is assumed.

To solve heteroskedasticity, we can use White's standard errors, weighted least squares or log things. We prefered White's standard errors.

#### **3.3.2.4. Autocorrelation**

In a regression model, autocorrelation means that error terms can be related with each other. If some of the explanatory variables don't include to model, there may be some measurement errors for explanatory variables or maybe the mathematical form is wrong to determine the relationship between the variabkes. With autocorrelation, standard errors can't be relied. There is no AutoCorrelation in our model.

### **3.3.2.5. Normality of Errors**

The issue here is that normality is broken, N is small, standard errors in output are damaged. The residuals of the regression must have a normal distribution. To detect this, Histogram-Q-Q plot, Shapiro-Wilk test, Komolgorov-Smimov test and Anderson-Darling test can be conducted.

### **3.3.2.6. Multicollinearity**

Multicollinearity can be seen in various ways. The most used ones are Correlation Matrix and Variance Inflation Factor(VIF). We preferred VIF. The VIFs of the regression state that the the degree of the variances in the regression findings are raise due to multicollinearity. VIF values higher than 10 shows a big multicollinearity problem can be there.

If there is a multicollinearity problem, the possible solution we can do is centering the data like we showed before in moderator variable assumption. In order to center the variables, we have to subtract the mean values from observations one by one and then, we have to do this for each independent variable. We can also think to subtract the variable which depicts multicollinearity, but this will be the last solution.

We choosed advertising Expense as the dependent variable. After this, we looked VIF values with other variables. Because the VIF values are smaller than 3, we can't have multicollinearity problem. We have to do this for each independent variable, take each of them as a dependent variable respectively.

We can conclude that there is no multicollinearity problem here for each of the independent variables.

## RESULTS

**Figure 5: Model 1 Summary**

Dependent Variable: EBITDA1  
 Method: Least Squares  
 Date: 06/10/19 Time: 18:47  
 Sample: 1 3570  
 Included observations: 3570  
 White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.17E+08	43380502	2.691594	0.0071
ADDEXP0	0.404717	0.205727	1.967253	0.0492
TA0	0.108139	0.010431	10.36751	0.0000
BETA0	-1.14E+08	23214532	-4.890268	0.0000
DUMMY01	-13082579	40797730	-0.320669	0.7485

R-squared	0.787659	Mean dependent var	5.63E+08
Adjusted R-squared	0.787421	S.D. dependent var	2.59E+09
S.E. of regression	1.19E+09	Akaike info criterion	44.63952
Sum squared resid	5.08E+21	Schwarz criterion	44.64818
Log likelihood	-79676.55	Hannan-Quinn criter.	44.64261
F-statistic	3306.012	Durbin-Watson stat	1.935499
Prob(F-statistic)	0.000000	Wald F-statistic	88.90141
Prob(Wald F-statistic)	0.000000		

In our model, all of our variables are statistically significant to explain our outcome variable. Adjusted R square is really high, so the explanatory power of the model is really high. F statistic shows significance, so we can assume that model explains a significant amount of the variance in outcome variable. Durbin-Watson shows there is no autocorrelation.

One unit of advertising cause an increase in 0.40 point of companies financial performances. This model accepts the emphasis that more advertising expense means more profit. Total Asset is an indicator of firm size. Total Assets is positively correlated with profit. Larger firms shows better financial performance by increasing advertising expenses. Beta shows the volatility or systematic risk of our individual stock, how risk of each individual companies stocks compared to the entire market.

Here, if advertising expense and profit increase, beta decrease and it is perfectly significant and high.

Durability is not significant in this model with p value 0.74. We can't predict anything through industry types.

**Figure 6: Model 1 Multicollinearity**

Variance Inflation Factors  
 Date: 06/10/19 Time: 18:50  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.88E+15	23.66855	NA
ADDEXP0	0.042324	4.153458	2.423017
TA0	0.000109	12.23459	2.263178
BETA0	5.39E+14	7.882646	1.438111
DUMMY01	1.66E+15	6.692904	1.353411

All of the VIF values are under 3, so we can assume that there is no multicollinearity problem here.

**Figure 7: Model 1 Confidence Interval**

Coefficient Confidence Intervals  
 Date: 06/10/19 Time: 18:51  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C	1.17E+08	45389590	1.88E+08	31709615	2.02E+08	4962088.	2.29E+08
ADDEXP0	0.404717	0.066238	0.743195	0.001363	0.808071	-0.125484	0.934917
TA0	0.108139	0.090977	0.125300	0.087688	0.128589	0.081257	0.135020
BETA0	-1.14E+08	-1.52E+08	-75330854	-1.59E+08	-68010187	-1.73E+08	-53696583
DUMMY01	-13082579	-80206317	54041158	-93071819	66906660	-1.18E+08	92061704

All of the variables are significant in %95 confidence interval. Their coefficients are in between upper and lower limits.

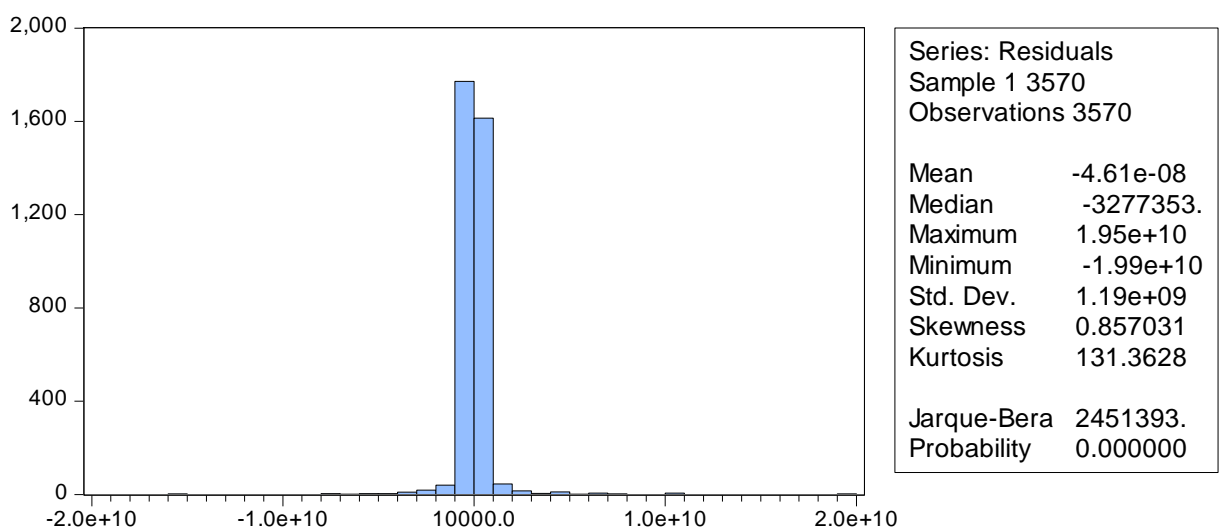
## Correlations

**Figure 8: Model 1 Correlations**

	EBITDA1	ADDEXP0	TA0	BETA0	DUMMY01
EBITDA1	1.000000	0.613641	0.885285	-0.047232	-0.042365
ADDEXP0	0.613641	1.000000	0.642959	-0.057973	-0.066067
TA0	0.885285	0.642959	1.000000	-0.023031	-0.037679
BETA0	-0.047232	-0.057973	-0.023031	1.000000	0.148088
DUMMY01	-0.042365	-0.066067	-0.037679	0.148088	1.000000

We have to look the independent variables correlations, not EBITDA. Advertising and total assets is moderately correlated with each other. Because it is under 0.7, we can skip because this is not matter. Now, there is no multicollinearity problem. All of the other variables are normal.

**Figure 9: Model 1 Histogram**



We see that the data is not normally distributed but it is not a big problem in multiple regression. We did with normalized values but we didn't see any differences between the models with normalized and non-normalized. Skewness is 0.85, so the data is highly skewed. Kurtosis is really high so the dataset has heavier tails than normal distribution.

**Figure 10: Model 2 Summary**

Dependent Variable: EBITDA1  
 Method: Least Squares  
 Date: 06/10/19 Time: 18:55  
 Sample: 1 3570  
 Included observations: 3570  
 White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.49E+08	46672602	3.193814	0.0014
ADDEXP0	1.767859	0.324767	5.443476	0.0000
SALES0	0.086357	0.013129	6.577378	0.0000
BETA0	-14132418	25557439	-0.552967	0.5803
DUMMY01	-24212385	52135866	-0.464409	0.6424

R-squared	0.640915	Mean dependent var	5.63E+08
Adjusted R-squared	0.640512	S.D. dependent var	2.59E+09
S.E. of regression	1.55E+09	Akaike info criterion	45.16489
Sum squared resid	8.59E+21	Schwarz criterion	45.17355
Log likelihood	-80614.33	Hannan-Quinn criter.	45.16798
F-statistic	1590.752	Durbin-Watson stat	2.143154
Prob(F-statistic)	0.000000	Wald F-statistic	39.41572
Prob(Wald F-statistic)	0.000000		

In our model, all of our variables are statistically significant to explain our outcome variable. Adjusted R square is really high, so the explanatory power of the model is really high. F statistic shows significance, so we can assume that model explains a significant amount of the variance in outcome variable. Durbin-Watson shows there is no autocorrelation.

One unit of advertising cause an increase in 1.76 point of companies financial performances which is really high. This model accepts the emphasis that more advertising expense means more profit. This is the most fitted model in point of direct



relationship between advertising expenses and financial performance apart from our hypothesis. Sales is positively correlated with profit but worse than total assets. In this model, both beta and our dummy variable became nonsignificant so we can't explain our hypothesis with this model.

**Figure 11: Model 2 Multicollinearity**

Variance Inflation Factors  
 Date: 06/10/19 Time: 18:56  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	2.18E+15	9.264246	NA
ADDEXP0	0.105473	1.854367	1.418508
SALES0	0.000172	3.390016	1.419784
BETA0	6.53E+14	4.742707	1.292137
DUMMY01	2.72E+15	2.649767	1.295622

All of the VIF values are under 3, so we can assume that there is no multicollinearity problem here.

## Correlations

**Figure 12: Model 2 Confidence Interval**

Coefficient Confidence Intervals  
 Date: 06/10/19 Time: 18:56  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C	1.49E+08	72274076	2.26E+08	57555942	2.41E+08	28778574	2.69E+08
ADDEXP0	1.767859	1.233527	2.302192	1.131112	2.404606	0.930868	2.604851
SALES0	0.086357	0.064755	0.107958	0.060615	0.112099	0.052520	0.120194
BETA0	-14132418	-56181590	27916755	-64241090	35976255	-79999282	51734447
DUMMY01	-24212385	-1.10E+08	61565774	-1.26E+08	78006740	-1.59E+08	1.10E+08

All of the variables are significant in %95 confidence interval. Their coefficients are in between upper and lower limits.

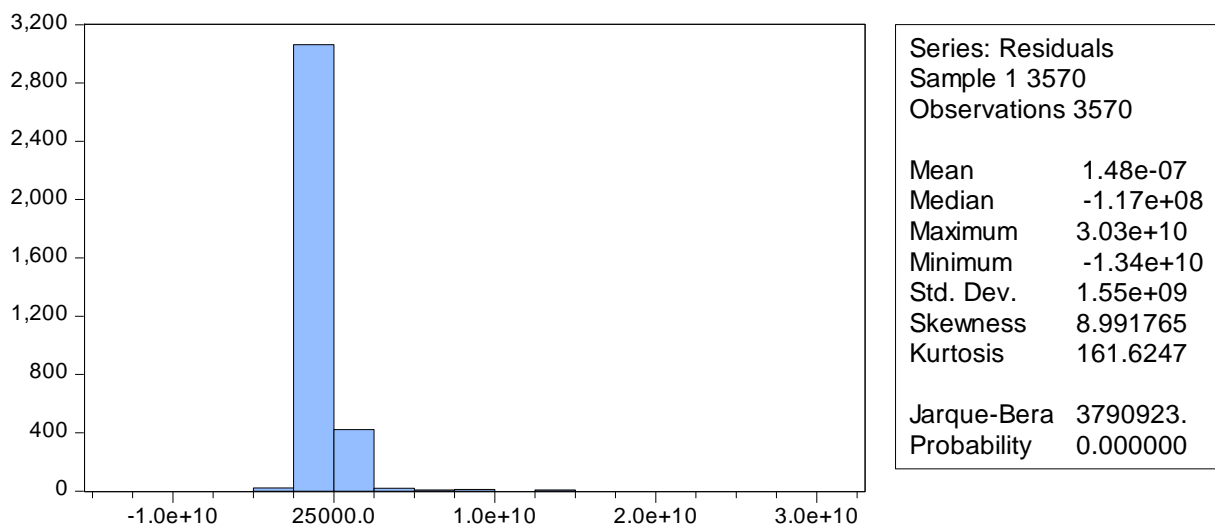
## Correlations

**Figure 13: Model 2 Correlations**

	EBITDA1	ADDEXP0	SALES0	BETA0	DUMMY01
EBITDA1	1.000000	0.613641	0.749496	-0.047232	-0.042365
ADDEXP0	0.613641	1.000000	0.491966	-0.057973	-0.066067
SALES0	0.749496	0.491966	1.000000	-0.042241	-0.027111
BETA0	-0.047232	-0.057973	-0.042241	1.000000	0.148088
DUMMY01	-0.042365	-0.066067	-0.027111	0.148088	1.000000

We have to look the independent variables correlations, not EBITDA. Advertising and total sales is moderately correlated with each other but better than total assets. There is no multicollinearity problem. All of the other variables are normal.

**Figure 14: Model 2 Histogram**



We see that the data is not normally distributed but it is not a big problem in our multiple regression. Skewness is 8.99, so the data is not highly skewed. Kurtosis is really high so the dataset has heavier tails than normal distribution.

**Figure 15: Model 3 Summary**

Dependent Variable: EBITDA1/SALES1  
Method: Least Squares  
Date: 06/10/19 Time: 19:01  
Sample: 1 3570  
Included observations: 3570  
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.048380	0.062469	0.774469	0.4387
ADDEXP0/SALES0	-0.483096	0.274311	-1.761128	0.0783
TA0/GDP0	10.05930	2.971181	3.385623	0.0007
DUMMY01	-0.005036	0.076301	-0.065997	0.9474
R-squared	0.012686	Mean dependent var		0.029761
Adjusted R-squared	0.011855	S.D. dependent var		2.646266
S.E. of regression	2.630533	Akaike info criterion		4.773370
Sum squared resid	24675.67	Schwarz criterion		4.780295
Log likelihood	-8516.466	Hannan-Quinn criter.		4.775839
F-statistic	15.27306	Durbin-Watson stat		1.845389
Prob(F-statistic)	0.000000	Wald F-statistic		6.486154
Prob(Wald F-statistic)	0.000225			

In our model, all of our variables are statistically significant to explain our outcome variable except dummy variable. Adjusted R square is very low, so the explanatory power of the model is very low. F statistic shows significance, so we can assume that model explains a significant amount of the variance in outcome variable. Durbin-Watson shows there is no autocorrelation.

One unit of advertising cause an decrease in 0.48 point of companies financial performances. This model doesn't accept the emphasis that more advertising expense means more profit. This may be because of the structure of the model, taking ratios rather than levels. Total assets/gdp is positively correlated with profit.

**Figure 16: Model 3 Multicollinearity**

Variance Inflation Factors  
 Date: 06/10/19 Time: 19:01  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.003902	8.095112	NA
ADDEXP0/SALES0	0.075246	1.485548	1.478399
TA0/GDP0	8.827915	2.387885	1.654440
DUMMY01	0.005822	5.808189	1.761827

All of the VIF values are under 3, so we can assume that there is no multicollinearity problem here.

**Figure 17: Model 3 Confidence Interval**

Coefficient Confidence Intervals  
 Date: 06/10/19 Time: 19:02  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C	0.048380	-0.054399	0.151159	-0.074098	0.170859	-0.112615	0.209376
ADDEXP0/SALES0	-0.483096	-0.934414	-0.031778	-1.020918	0.054725	-1.190052	0.223860
TA0/GDP0	10.05930	5.170871	14.94773	4.233914	15.88468	2.401946	17.71665
DUMMY01	-0.005036	-0.130572	0.120500	-0.154633	0.144562	-0.201678	0.191607

All of the variables are significant in %95 confidence interval. Their coefficients are in between upper and lower limits.

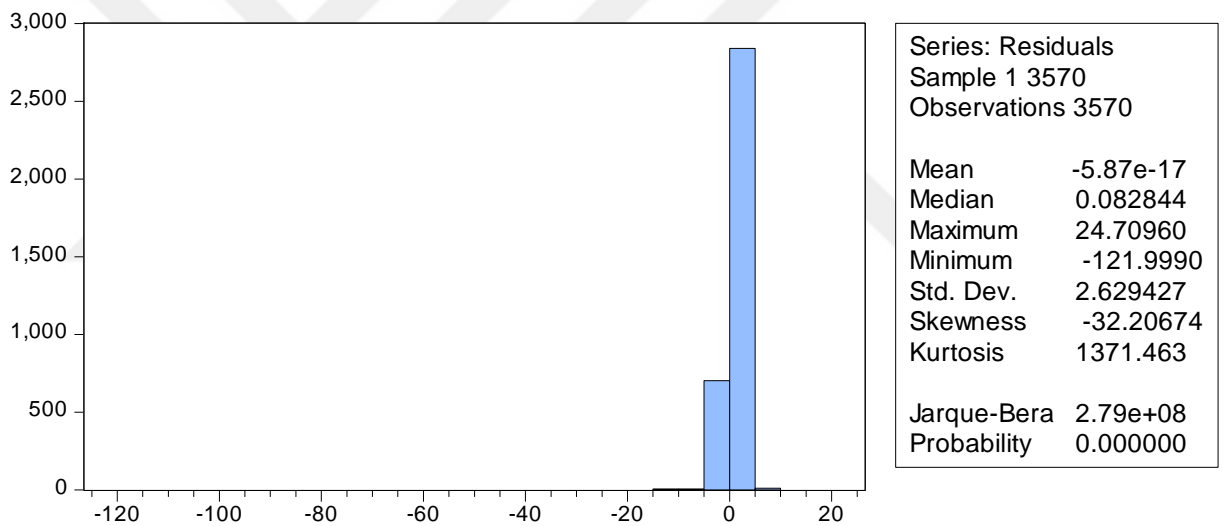
## Correlations

**Figure 18: Model 3 Correlations**

	EBITDA1/SALE S1	ADDEXP0/SAL ES0	TA0/GDP0	DUMMY01
EBITDA1/SALE S1	1.000000	-0.110743	0.020258	-5.37E-05
ADDEXP0/SAL ES0	-0.110743	1.000000	0.002337	-0.019453
TA0/GDP0	0.020258	0.002337	1.000000	-0.062157
DUMMY01	-5.37E-05	-0.019453	-0.062157	1.000000

We have to look the independent variables correlations, not EBITDA Margin. There is no multicollinearity problem. All of the other variables are normal.

**Figure 19: Model 3 Histogram**



We see that the data is not normally distributed but it is not a big problem in multiple regression. Skewness is -32, so the data is not highly skewed. Kurtosis is really high so the dataset has heavier tails than normal distribution.

**Figure 20: Model 4 Summary**

Dependent Variable: NETINCOME1  
 Method: Least Squares  
 Date: 06/10/19 Time: 19:05  
 Sample: 1 3570  
 Included observations: 3570  
 White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	1.33E+08	33294496	4.007148	0.0001
ADDEXP0	1.608171	0.248516	6.471090	0.0000
BETA0	-45330746	17293740	-2.621223	0.0088
DUMMY01	28454253	41378643	0.687656	0.4917
R-squared	0.305805	Mean dependent var		2.41E+08
Adjusted R-squared	0.305221	S.D. dependent var		1.38E+09
S.E. of regression	1.15E+09	Akaike info criterion		44.55906
Sum squared resid	4.69E+21	Schwarz criterion		44.56598
Log likelihood	-79533.92	Hannan-Quinn criter.		44.56153
F-statistic	523.6290	Durbin-Watson stat		1.750149
Prob(F-statistic)	0.000000	Wald F-statistic		19.61498
Prob(Wald F-statistic)	0.000000			

In our model, all of our variables are statistically significant to explain our outcome variable. Adjusted R square is middle, so the explanatory power of the model is middle. F statistic shows significance, so we can assume that model explains a significant amount of the variance in outcome variable. Durbin-Watson shows there is no autocorrelation.

One unit of advertising cause an increase in 1.60 point of companies financial performances. This model accepts the emphasis that more advertising expense means more profit. Beta is negatively correlated with profit so advertising expense decrease risk and increase financial performance. Our durability dummy is again non-significant.

**Figure 21: Model 4 Multicollinearity**

Variance Inflation Factors  
Date: 06/10/19 Time: 19:05  
Sample: 1 3570  
Included observations: 3570

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.11E+15	7.654040	NA
ADDEXP0	0.061760	1.709831	1.129569
BETA0	2.99E+14	3.951960	1.169946
DUMMY01	1.71E+15	2.259771	1.244274

All of the VIF values are under 3, so we can assume that there is no multicollinearity problem here.

**Figure 22: Model 4 Confidence Interval**

Coefficient Confidence Intervals

Date: 06/10/19 Time: 19:05

Sample: 1 3570

Included observations: 3570

Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C	1.33E+08	78637188	1.88E+08	68137821	1.99E+08	47609125	2.19E+08
ADDEXP0	1.608171	1.199292	2.017050	1.120923	2.095420	0.967693	2.248650
BETA0	-45330746	-73783808	-16877684	-79237361	-11424131	-89900323	-761169.6
DUMMY01	28454253	-39625245	96533750	-52673934	1.10E+08	-78187148	1.35E+08

All of the variables are significant in %95 confidence interval. Their coefficients are in between upper and lower limits.

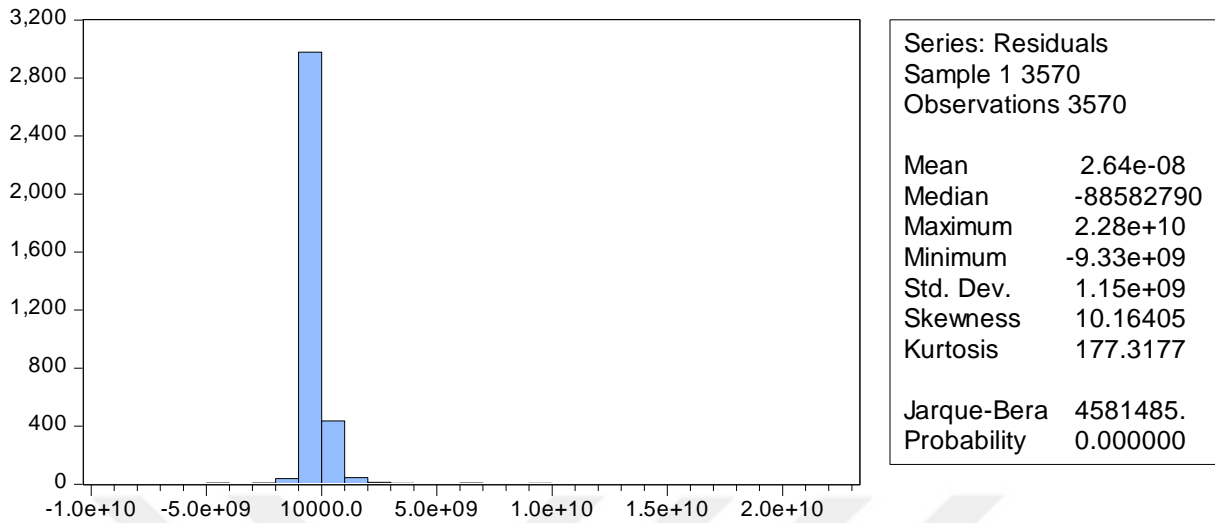
### Correlations

**Figure 23: Model 4 Correlations**

	NETINCOME1	ADDEXP0	BETA0	DUMMY01
NETINCOME1	1.000000	0.552673	-0.048019	-0.028891
ADDEXP0	0.552673	1.000000	-0.057973	-0.066067
BETA0	-0.048019	-0.057973	1.000000	0.148088
DUMMY01	-0.028891	-0.066067	0.148088	1.000000

We have to look the independent variables correlations, not Net Income. There is no multicollinearity problem. All of the other variables are normal.

**Figure 24: Model 4 Histogram**



We see that the data is not normally distributed but it is not a big problem in multiple regression. Skewness is 10, so the data is not highly skewed. Kurtosis is really high so the dataset has heavier tails than normal distribution.

**Figure 25: Model 5 Summary**

Dependent Variable: NETINCOME1  
 Method: Least Squares  
 Date: 06/10/19 Time: 19:07  
 Sample: 1 3570  
 Included observations: 3570  
 White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	39013290	28869462	1.351369	0.1767
ADDEXP0	0.258343	0.121584	2.124814	0.0337
TA0	0.049419	0.006601	7.486682	0.0000
BETA0	-71211939	13260774	-5.370119	0.0000
DUMMY01	22810435	30987594	0.736115	0.4617
R-squared	0.609739	Mean dependent var		2.41E+08
Adjusted R-squared	0.609301	S.D. dependent var		1.38E+09
S.E. of regression	8.60E+08	Akaike info criterion		43.98368
Sum squared resid	2.64E+21	Schwarz criterion		43.99234
Log likelihood	-78505.87	Hannan-Quinn criter.		43.98677



F-statistic	1392.476	Durbin-Watson stat	1.864281
Prob(F-statistic)	0.000000	Wald F-statistic	57.11118
Prob(Wald F-statistic)	0.000000		

In our model, all of our variables are statistically significant to explain our outcome variable. Adjusted R square is really high, so the explanatory power of the model is really high. F statistic shows significance, so we can assume that model explains a significant amount of the variance in outcome variable. Durbin-Watson shows there is no autocorrelation.

One unit of advertising cause an increase in 0.25 point of companies financial performances. This model accepts the emphasis that more advertising expense means more profit. Total assets is positively correlated with profit. Beta is again statistically significant that advertising expenses decrease risk and by this, increase performance.

**Figure 26: Model 5 Multicollinearity**

Variance Inflation Factors  
Date: 06/10/19 Time: 19:07  
Sample: 1 3570  
Included observations: 3570

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	8.33E+14	16.69289	NA
ADDEXP0	0.014783	2.823587	2.100714
TA0	4.36E-05	7.667227	2.297422
BETA0	1.76E+14	4.516468	1.054245
DUMMY01	9.60E+14	5.778869	1.336400

All of the VIF values are under 3, so we can assume that there is no multicollinearity problem here.

**Figure 27: Model 5 Confidence Interval**

Coefficient Confidence Intervals  
 Date: 06/10/19 Time: 19:07  
 Sample: 1 3570  
 Included observations: 3570

Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C	39013290	-8485093.	86511672	-17589034	95615613	-35389352	1.13E+08
ADDEXP0	0.258343	0.058303	0.458382	0.019962	0.496723	-0.055004	0.571690
TA0	0.049419	0.038558	0.060279	0.036477	0.062361	0.032407	0.066430
BETA0	-71211939	-93029640	-49394237	-97211405	-45212472	-1.05E+08	-37036151
DUMMY01	22810435	-28172870	73793740	-37944761	83565630	-57051075	1.03E+08

All of the variables are significant in %95 confidence interval. Their coefficients are in between upper and lower limits.

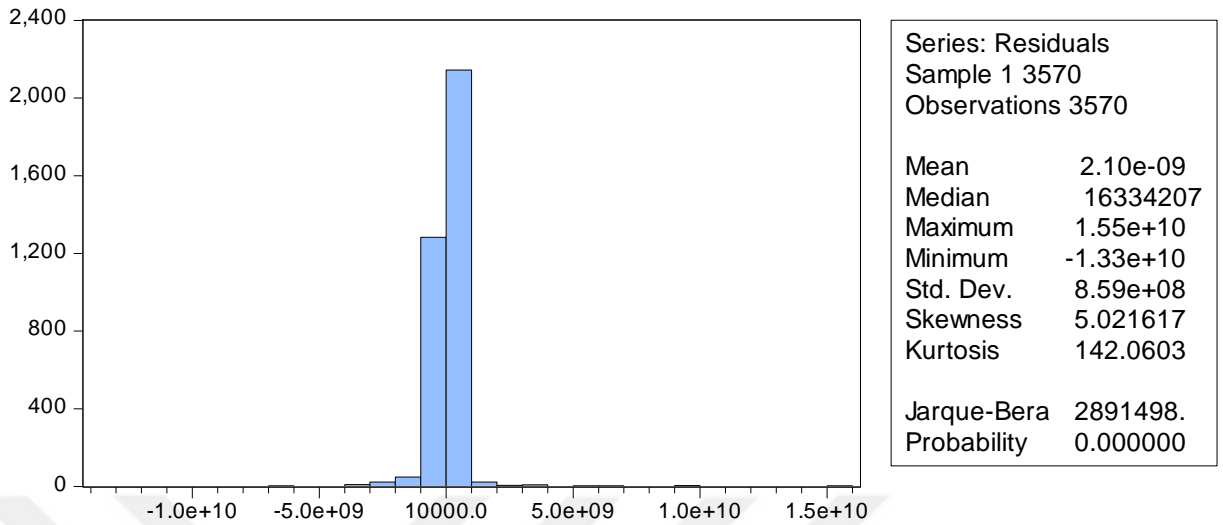
**Correlations**

**Figure 28: Model 5 Correlations**

	NETINCOME1	ADDEXP0	TA0	BETA0	DUMMY01
NETINCOME1	1.000000	0.552673	0.777312	-0.048019	-0.028891
ADDEXP0	0.552673	1.000000	0.642959	-0.057973	-0.066067
TA0	0.777312	0.642959	1.000000	-0.023031	-0.037679
BETA0	-0.048019	-0.057973	-0.023031	1.000000	0.148088
DUMMY01	-0.028891	-0.066067	-0.037679	0.148088	1.000000

We have to look the independent variables correlations, not EBITDA. Advertising and total assets is highly correlated with each other. Now, there is no multicollinearity problem. All of the other variables are normal.

**Figure 29: Model 5 Histogram**



We see that the data is not normally distributed but it is not a big problem in multiple regression. Skewness is 5, so the data is not highly skewed. Kurtosis is really high so the dataset has heavier tails than normal distribution.

In the first model, we tried to know how advertising expenditures effect next years EBITDA. Our independent variables are Advertising Expense, Total Assets and beta. Due to our findings from Eviews statistical software programme, we found that the explanation power of independent variable is 78% that allows us to show it is significant and positive. The best Adjusted R Square point is in this model. One unit of increase in advertising result in profit. Beta is negatively correlated with Ebitda. But with the total model, one unit of increase in advertising, by decreasing systematic risk, cause increase in financial performance.

So, this idea is supported that advertising decrease risk, so it creates an intangible effect. From this perspective, we can say that advertising expenditures have positive effect on profit by decreasing systematic risk, protecting company from the bad effects of environment, so,  $h_{01}$  is rejected. This is statistically significant, but with this model, our other alternative hypothesis can't be accepted because durable industries doesn't have a more impact on profit than other industries. It is not statistically significant and not positive. Spending level and industry variables are in the reverse trend but nonsignificant. In industries which necessitate more advertising budget shows procyclical trend beyond firms worst financial year period. Companies

spent less when industry luxuriousness increase. So it can effect their financial performance negatively.

Overall, results show that there is a positive and significant relationship and explanatory power of variables is high.

In the second model, we revealed that spending variable of company explain performance variable 64%. It is same with the first model but we used sales instead of total assets independent variable. The explanatory power is lower than the first model but advertising expenses coefficient is better than the first model. So, this model is better than the first model in point of advertising expenses relationship with profit with these variables.

However, this model doesn't accept the hypothesis that advertising expense decrease risk, by this increase financial performance although each of the variables are significant except beta and durability dummy. P values can be close to 0.05 but higher, so these variables are not statistically significant. Our other models R-squares are worse than our first and second model. In direction of our hypothesis, our first model is best fitted to explain the relationship.

## **CONCLUSION AND RECOMMENDATIONS REFERENCES**

Advertising is one of the most influential and effective marketing strategy exists to marketers to convince and appeal buyers, the effectiveness of the advertising expenses is really important interest for both practitioners and academicians. Advertising expenses has to be in optimum level for companies to arrange their resources for gainin maximum benefit from their whole activities.

In total; in conclusion of determining 43 stock markets, 21 years and 3.570 number of companies, we found that with our first and best fitted model, advertising has a power to create tangible value by decreasing systematic risk. Systematic risk is one of the parts of the total risk that is caused by factors far from the audit of a specific firm, like social, economic and political factors.

Companies in their worst performing year, they can be affected by these kind of factors. It may be a recession period globally, it may be recession in their country or it may be their worst year because of their companies internal problems. By decreasing this kind of risk, they can ensure their investors trust. In their bad times, investors couldn't leave them, so their firm value or financial performance couldn't be low. So, increasing advertising expenditure isn't just increasing profit, the value it provides is far beyond.

Second, our models couldn't provide any data about durable industries and other industries. This can be caused by our data split. We split industries by looking to just two studies and we had to split it like durables, non-durables, service, pharmaceuticals and others. More precise industry definitions will be much better for to understand the relationship though different industries.

Third, for managers tend to cut back advertising expenditures in bad times, this study will be beneficial. They shouldn't see advertising as an expenditure, they have to see this as an intangible investment tool. They can face pressure by the stakeholders not to do advertising expenditures during bad times. But choosing the optimum

spending level is very important for the companies future position. If they miss the opportunities during bad times, it may be too late in the future.

This study also revealed that advertising utility is versatile. Advertising has tangible effect like profit, sales or market value, but it has intangible effects like investor or consumer trust. It increases loyalty. However, it depends on lots of factors like different industry types or companies spendability.

From the marketing point of view, more advertising and good financial performance can reflect valuable business operation, where advertising appeals customers and firm reputation is high. The negative effects may signal over advertising. These points are not explicit in our analysis. Apart from just taking profit indicators, with market value or market share indicators, this kind of relationship can be more specific. Brand-oriented analysis have to be conduct to take into consideration these kind of thing.

Factors like limited resources, stakeholders and investors pressure cause companies not to spend advertising more. This study proved that expending on this is important for future returns. Rather than just looking from the short-term perspective, considering the expenses from both short-term and long-term perspective must be preferential for companies. With this perception, they can execute their internal and external activities efficiently.

Future researchers can study with more specific data to understand that results are accurate in for both general and particular. In huge samples, calculating some variables or gathering the information of some variables are really hard. Taking a small sample can be helpful to create a more complex model to better understand the relationship.

Future researchers could also make industry definitions more specific to gather more specific results by handling each of the industries meticulously. Because some of the industries sell durable goods, but sell other goods or provide other services also. To explore whether it is durable or whether it is other type of industry is a little bit complex.

Future researchers could also implement a more complicated model, not study with cross-sectional, they can use time-series and they can use a model like VAR or

they can study with panel data. They can see the relationship in a multidimensional way. For example, panel data unite horizontal sections and time-series.

Future researchers could also handle this process by taking products rather than industries. They can look into new products and others, they can look also only to the private label products because new product advertisings are more effective rather than others, and also for private label products, because bad times can be their good times, the output can be very different.

Future researchers can also take into account of advertising types. Companies which makes traditional or online advertising may have a different effect on the relationship. Additionally, advertising strategy could also effect the relationship in various ways. Companies which choose differentiation strategy or cost-leader strategy may reflect different output.

Future researchers could also prefer to take regression year, they can look countries bad financial year separately or they can calculate economic downturns and upturns by gdp of the countries. This would be the external factor that may be cause companies to experience their bad times.

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