AMERICAN UNIVERSITY OF BEIRUT

MERGERS IN CORPORATE FINANCE: IDENTIFYING THE CHARACTERISTICS OF MERGERS AND THEIR EFFECT ON POST-MERGER PERFORMANCE (A CASE STUDY)

by

HADY ISSAM JALLOUL

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AN ABSTRACT OF THE PROJECT OF

Hady Issam Jalloul for Master of Arts in Financial Economics

Major: Financial Economics

Title:Mergers in Corporate Finance: Identifying the Characteristics of Mergers and their Effect on Post Merger Performance (A Case Study)

The implementation of financial liberalization and deregulation in most economies helped us witness a surge in merger activity between institutions both domestically and across borders, thus altering the landscape of markets and economies all together. As a result, expanding financial markets are faced with a changing set of counter acting forces, mainly those of supply and demand. In the United States, where capitalist mentality dominates and competition is fierce the stakes are even higher. The decomposition of these modern economies has had a dramatic influence on how company CEOs and business owners view financial and planning decisions. In fact they are faced with the constant challenge of attracting a larger customer base, maintaining a healthy rise in profits, increasing value and appealing to the investor all at the same time. In this respect the world of finance has to offer a cornucopia of practices that promise to build a sound business model, which gives rise to the topic at hand, merges in corporate finance.

The stability of global financial markets is a public good. If governments and financial regulators fail to protect this public good, then those who stand to lose the most are the working class, the people whose jobs, homes and livelihood depend on it. In the past few decades we have witnessed huge strides in global market integration, driven by policies of financial liberalization and deregulation, which have made businesses increasingly global. But relying on law makers to protect the common interest is no longer enough, investors need to live up to their responsibility as well when it comes to shaping the market.Engaging financial strategies and questioning their validity can only be accomplished when investors know what to look for when a merger decision is brought onto the table.

As manufacturing and trade become global, financial planning needed to follow suit, and in these rising capital markets the world is forever new. For developed economies, such as the US, large enterprises maintain their role as drivers of the business cycle. In fact any news coming out of a fortune 500 company is a catalyst for Wall Street and will therefore have a trickle-down effect from the top management all the way to the average citizen. These enterprises needed to grow bigger and more efficient in order to survive increasing competition and fight off crowding out effects. Under this reality, restructuring

activity and ultimately merging within domestic markets or across boarders seems inevitable.

Bearing in mind that in most empirical studies that use large samples of mergers and acquisitions to evaluate the gains and effects of mergers, they do not explicitly distinguish between these two types of deals. In case-by-case studies like mine, analysts will almost always refer to mergers and not acquisitions, either because they consider them as equal, or because they are built up from theoretical oligopoly models for which the previous distinctions are not relevant in the analysis.

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CHAPTER I

INTRODUCTION

To me corporate finance is more than a collection of equations, metrics and models. It is a set of firm principles that govern how we run businesses. In this project, I hope to lay out some of those principles when it comes to the much debated topic of mergers. Set up some themes for the reader, and hopefully use it as a road map for future projects.

Let me start by giving you what my vision of corporate finance is all about. If you ask most people what they think corporate finance is all about you get a variety of answers. There are some people who think of corporate finance as an extension of accounting, others think of it as financial modelling, still others might see it as a banking subset. That's not what I think about corporate finance. To me corporate finance covers any decision that involves the use of money. That's an incredibly self-serving definition because as I said everything is corporate finance and I truly believe this. In fact if you take a look at marketing, accounting, operational research, corporate strategy, etc. they're all pieces of a much larger puzzle which to me is corporate finance.

With that being said, allow me to lay out my three objectives for my take on mergers in this field. The first is to give you the tools, the techniques, the theories and the rational that are used to justify mergers. The second is to give you the big picture on how these ideas have developed in the real world. How they fit and work together. Hopefully the "motto" of this project is that you can forget the details but you don't miss the story line.

The third and final objective is to have the satisfaction of seeing how those pieces all fit together to make sense of what is actually taking place and draw our own conclusions using a single case study as a reference point.

Those are my three objectives and perhaps by the end of the project we can be able to observe how these objectives have been advanced during the course of my research.

A textbook definition of a business model tells us that it is the plan implemented by a company to generate revenue and profit from operations. Whereas the goal of corporate finance is to maximize shareholder value through long term and short term financial planning. In today's modern economies, financial liberalization and deregulation has made competition fierce and has challenged company CEO's and business owners to pursue new practices that will ensure the longevity and survival of their operations.

In fact, if you take a look at a financial balance sheet, one key item in it lies in the assets side, otherwise known as growth assets. These are the expected value that will be created by future investment, something that all corporations anticipate when entering a merger.

Often referred to as corporate restructuring, there is no "How To" guide when it comes to mergers and acquisitions, and this is the motivation behind my research. It is my hope that the reader will get a glimpse into what drives a company to venture out and pursue a merger. What value it sees from the whole consolidation process and as a market observer to be able to truly pin point the real motive behind a merger by looking at the evidence at hand. One of the largest transactions that could take place in a market, I

personally feel that it is important for us to be able to foresee and fully comprehend a merger wave before it takes place as the market is always inclined to reward those who are ahead of the curve; and more importantly because mergers affect not only the companies or the shareholders involved, but society and the economy at large. Hopefully the reader will be able to use this project as a stepping stone in his critical analysis process, to use it as a reference when dealing with mergers and be able to go past the attention grabbing headlines and really question the validity of the arguments presented in order to identify the gains at hand if there are any to be made and how.

This project is divided up into a number of chapters.

The second chapter is titled Historical Overview and Literature Review. In it we will identify the distinction that is to be made between mergers and acquisitions. We will also observe some of the market conditions that create the foundation for consolidation waves. Moving further we will list the motives behind mergers which are mostly cited or frequently observed by researchers. Staying on track with the topic of mergers, the reader will be introduced to the major merger waves that have taken place in US market history, the subject of my project case study, and furthermore become familiar with a selection of notable cases of mergers in recent history that reflect the different outcomes that may transpire. This chapter will conclude by answering the question of who benefits in the end from a merger, whether it is the shareholder, bondholder or society.

The third chapter will introduce Time Warner Inc. and AOL Inc. respectively. The companies that are the subject case study and give a historical background about how those

two enterprises started out and developed over the years. This chapter will also include highlights of the economic and financial ratios that are relevant for my discussion and set up the framework for the regression model.

The fourth chapter summarizes the merger that took place between the parties involved, discusses the opportunities as well as the threats the companies faced, and ultimately allow us to work through the circumstances that paved the way to the merger, the events that transpired during as well as after.

The fifth chapter offers a framework into the empirical investigation used to test out the model regression. It will provide a brief overview of the CAPM mechanism chosen for this case study, involve a few tests for the validity of our OLS model to see if the assumptions of the CLRM are met and finally include the end result of the data sample under study.

The final chapter is a conclusion that summarizes the main topic points in this project, the results obtained from our regression and includes self-criticism while at the same time offering helpful suggestions when addressing this topic in future papers.

CHAPTER II

HISTORICAL OVERVIEW AND LITERATURE REVIEW

We would be mistaken to suggest that, in reasonably competitive markets, corporate growth through mergers and acquisitions is few and far apart. Empirical evidence concerning the consolidation practice suggests that the market for buying and selling companies does in fact exist and is perhaps stronger than ever. The new millennium ushered through an era of global mega-mergers unlike anything that we had seen before, especially compared to the merger and acquisition frenzy that the markets witnessed in the 1980s and 1990s. A number of factors can be attributed to fueling this activity; easy access to credit, record low interest rates, surging equity markets, technological advances, global competition and industry consolidation just to name a few. But when the speculative housing bubble burst in 2008 and global economies were thrown into recession, merger and acquisition activity dropped by a staggering one third from its previous high as a result of the credit tightening, despite governments' best efforts in stimulus packages, both monetary and fiscal, the slump in merger activity could not be averted.

Academics who have studied mergers and acquisitions have insisted for years that these deals can only destroy shareholder value. However, the recent wave of mergers seems to violate that assumption as this current cycle has managed to create considerable value compared to previous ones. Perhaps the most significant difference this time around is

government intervention. In an effort to restore business and consumer confidence and alleviate credit market tightening, governments have enacted the concept of "too big to fail", and in a number of cases used that rational to assist and at times force merger and acquisition deals. Because of their potential negative impact on the economy in case they go belly up, some companies were given large incentives to merge, thereby "rewarding" them on having reached that golden status. But if experience has taught us anything it's that governments are never better than the markets at deciding who should fail and who should succeed. This disruption in the normal functioning of the markets that rewards certain companies and penalizes others based solely on size can create perverse incentives to seek growth opportunities by managers. The long term effects on these government strategies has yet to manifest themselves but will sure be debated in the years to come. But the current merger boom is characterized by a number of other differences, for one, horizontal consolidation that has the potential of extracting cost synergies is very much observed. Companies are also seen to use a combination of both cash at hand as well as borrowed money to finance these operations as opposed to relying on one method versus the other as seen in previous years. Finally one last contributing factor is the significant reduction in amount of premium paid to proceed with the consolidation process is noted.

In a nut shell, merger and acquisition deals claim to be essential in eliminating inefficiencies. They allow the proper exploitation and transfer of resources to those who can do most with it, as well as getting rid of inadequate management.And when mergers and acquisitions are one of the largest transactions that take place in modern economies, we need to define them before we examine anything further. Mergers and Acquisitions are

used to describe consolidation among companies. And so, consolidation can be an important factor that may help large business growth strategies and expanding activities. A merger by definition is a combination of two or more companies to form a new entity, while an acquisition is the purchase of one company by another in which no new entity is formed. And so with the long term effect that these corporate decisions have, it is important to highlight the intended aim of M&As. Achieving growth in terms of size and value, market share and profits, lowering expenditure, increased market power, reduced earnings volatility, and scale and scope economies are just a few of the incentives behind them. There is also one added theory of efficiency differences; it proposes that the more efficient team of the bidder side will be able to run the corporate and financial resources of the target side more efficiently, and the assets of the target will be put to a higher value use by the acquirer.

When it comes to mergers and acquisitions, some are so successful that we can't even envision a time when the entities involved were ever separate, while others have failed so miserably that they resulted in bankruptcies, disbandment of entire institutions, top executives being fired and have become cautionary tales about the hazards of the consolidation process. This leads us to our next idea, the fact that for whatever reason, there is no clear guideline or road map to achieving a successful corporate merger. It is a process that is inherently risky and requires a balanced combination of proper strategy, intuition and know-how. Often times the term corporate restructuring is used by main stream media to refer to the process, as the term suggests a combination of actions used to either grow or

reduce a company's basic operations or at times reference the changes that occur in the fundamentals of a firm's assets or financial structure.

There exists a large body of literature dedicated to the motives behind M&A's which are both complex and overlapped. Often there isn't just one motive cited behind these operations but a variety of motives that represent a certain firms' strategy. In the following we will investigate the more frequently identified reasons that have brought about the shift in a firms strategy and led to either its success or failure.

1. Synergy

Synergy is a concept that promises when two or more entities join forces they will increase their value. This newly fused entity should therefore be more efficient, more profitable and more stable than the separate individual firms can ever be before the combination. This is done through the combination of their individual skills and capabilities. And so it can be defined as the difference in market value of the post-merger firm relative to the pre-merger value of the two firms separately, it has two sub-divisions: financial and operating synergies.

1. Operating Synergy:

Gains in shareholder wealth can be realized through economies of scale or economies of scope or both. Creating economies of scale can be done by spreading fixed costs over

increased levels of production. Fixed costs are those costs that cannot be avoided at least in the short run and include depreciation and amortization of equipment and capital, normal maintenance expenditures, interest payments, lease obligations and employee contracts to name a few. On the other hand economies of scope is using the same set of skills and talents or assets for that matter to produce or sell multiple products and services in order to generate further profits. Firms find it more cost cutting for them to combine multiple product lines in their own value chain than to outsource to someone else.

2. ***Financial Synergy:***

It is basically lowering the cost of capital for the newly formed entity as a result of merger or acquisition. Cost of capital is therefore defined as the minimum return required by investors to convince them to buy the firm's stock or for creditors to lend the company money. Lowering the cost of capital can be done through matching up companies that have cash flows that move in opposite direction. This mismatch of funds can result in economies of scale through lowered transaction costs or better investment opportunities. Combining companies of different growth rates and risk levels can average out the cost of borrowing and help enhance revenues and broaden the field of investment opportunities for the companies involved.

2. Diversification

Gaughan (2002) identifies the diversification as “growing outside a company’s current industry category”. The degree of diversification plays a major role in conglomerate mergers where management may go for diversified expansion to enter more profitable industries when the company faces competitive pressures in its current industry. Salter and Weinhold (1979) define diversification as “the heterogeneity of output from the point of view of the number of markets served by that output”. Diversification levelsfor a firm increases as it produces a broader range of independent products, and the heterogeneity of the markets served by this firm. Jones (1982) says that mergers can introduce greater stability of profits into cyclical or seasonal business by acquiring firms with counter-cyclical characteristics.Diversification can be of two folds, the first of which is where the company attempts to establish related diversification. In that case the firm would be experiencing slower growth in its current market and therefore looks towards selling the same products in new unfamiliar markets, a risky move. The second fold of diversification occurs when the company acquires new products not similar to its original line of business and then sells them in more familiar current markets. This type of diversification offers both the highest forms of return as well as risk and is otherwise known as creating a conglomerate. Since companies that operate in unrelated fields are perceived to be riskier by investors they usually operate at a discount (usually between 10 and 15 percent) compared to more focused firms and is thereby known as the conglomerate discount or the diversification discount. Although evidence suggests that investors usually don’t benefit from unrelated diversification because of the

difficulty that arises from valuing the various parts of a highly diversified business, there are always exceptions to the rule.

3. Strategic Realignment

This theory claims that firms pursue mergers and acquisitions to be able to adjust to rapid changes in their surrounding environment.

1. Regulatory Change:

Deregulation is at the center of M&A driven policies as it encourages increased competition as well as removing artificial barriers that help protect the company's position in the marketplace. This regulatory change is most evident in the financial services sectors in addition to health care, defense, utility providers and the media and telecommunication sectors.

2. Technological Change:

Technological advancements usually bring with them new products or services and industries that thrusts current firms to try and adapt as swiftly as possible or they are forced to exit the market. Mergers and acquisitions offer a quick and cheap defensive mechanism in order to bridge the gap that has been brought forth by the technological

change that has occurred. Sometimes firms lack the luxury of time or the resources to develop their own in house innovations, so they seek new emerging companies that are on the verge of success and capitalize on their newly found expertise and speed that is somewhat lacking in more experienced players and their overwhelming bureaucracy.

4. Hubris or The Manager's Pride

Sometimes, the management may pursue their own aims rather than those of shareholders and acquire other firms to increase the size of the firm under their control in order to enjoy higher compensation and benefits. Hubris, or the pride of the managers of the acquiring firm, might represent another main reason for takeovers where managers see great reputational benefits in doing so even though they may not be completely rational in assessing the expected value of these benefits. Amihud et al. (1986) declare that managers of "manager controlled" firm whose compensation depends on the firm's outcomes exploit benefits from a merger beyond those which accrue to the shareholders and view it as more valuable than the manager of a "shareholder controlled" firm whose compensation depends on their efforts. Allen and Cebenoyan (1991) compared banks with different managerial stake ownership. They found that the greater the managerial stake, the more active the merger policy. The most active acquirers were the firms with the most powerful managers, and manager controlled firms are more likely to engage in risk reducing mergers and pursue acquisitions to increase size, than are shareholder controlled firms.Sometimes referred

to as the winner's curse, managers will at times perceive their own evaluation of the target as superior to that of the market and end up overpaying for the target no matter how optimistic the present synergies may be. Just like in daily auctions, bidders are overwhelmed with feelings of excitement and desire to get what they are looking for. As a result, that drive can push the price of an acquisition far more than the actual generating capacity of economic value at hand and at often times create what is known as shoppers' remorse. Empire building is also one facet of Hubris, according to the managerialism theory managers will pursue acquisitions to assert their dominance, add to their prestige, enhance their compensation, create an aura of influence, and ultimately self-preservation within the company itself.

5. Buying Undervalued Assets (The Q-Ratio)

A theory that sprung into existence during the 1970s to explain the wave of mergers and acquisitions that took place at a time where the markets suffered from high interest and inflation rates, as well as depressed stock prices that lowered the book value of many firms. By definition the q-ratio is the ratio of market value of acquiring firm's stock to the replacement cost of its assets. Firms that are looking towards growth can either do so through internal development of new plants and equipment or acquire a company that has a market value less than it would cost to replace the assets, in other words a q-ratio < 1.

6. Agency Problems

Mismanagement arises when there is disagreement between the current management and the shareholders about what is best for the company. Usually occurs when incumbent management holds in its hand a small fraction of the firms' outstanding shares. Managers can at times get distracted at maximizing their own value and way of living rather than that of the shareholders, and as a result, mergers can be a solution to correct this behavior when there is separation between what the owners and managers want.

7. Tax Considerations

Creative bookkeeping has a way of establishing tax shelters that would prompt acts of mergers or acquisitions. If the target company has accumulated losses, then its acquisition might offset any future gains the combined entity would generate and therefore become less liable to the government tax wise but still remain more profitable than before the combination occurred. The same tax rationing can be applied the other way around. If in fact the merger or acquisition generates a higher tax bracket than before the combination, then the target might use the tax angle as an excuse to demand higher premium to compensate the added burden.

8. Market Power

Those who are adamantly opposed to mergers will use the market power theory to defend their point of view. It tells you that mergers only improve a company's monopoly power and allows them to set market prices in a way that is no longer competitive. There is little proof however to support that notion, in fact, in most cases increased merger activity has only helped the combined entities improve their operational efficiency rather than their market power.

We need to keep in mind that although mergers and acquisitions offer at times a component of the business strategy of a firm that cannot be overlooked, there still remain a number of other ways to execute a business plan that is just as viable or that offers the same economic value if not more. That being said, we will take a look at the history of mergers and acquisitions in the United States, in order to offer a backdrop for our case study in the next section. Although the performance of mergers and acquisitions is constantly evolving, reflecting the climate surrounding the period, we can always draw parallels with the past and therefore gain insight into how the structure and financing takes place.

A closer observation of the history of mergers and acquisitions in the United States shows us that they always tend to occur in waves or clusters at a time and can be classified into six major waves since the late 1890s. In order to understand this phenomenon two major arguments are presented as to why these waves tend to occur. The first argument identifies external shocks in the surrounding environment as a trigger for M&As, these shocks include changes in the operating environment (i.e. deregulation), changes in the

distribution channels, emergence of substitute products, or rise in commodity prices. The second argument suggests misevaluation as a reason behind spurs of mergers and acquisitions. Informational asymmetry is defined as when one party has additional information that another party lacks when entering a transaction, and so investors can at times overvalue or undervalue the firm.

The size and length of an M&A boom is therefore dependent on how many industries are affected by the occurring shocks in addition to the valuation of many firms which must increase at the same time. For that we will classify the merger and acquisition waves into six major ones and will briefly dissect them and examine some of their defining characteristics.

1. **First wave (1897-1904): Horizontal Consolidation**

   This wave of mergers and acquisitions was characterized as horizontal as it saw heavy concentrations especially in the metal, transportation and mining industries. This was brought forth by the need to improve efficiency and benefited from the lowered enforcement of antitrust laws. The era saw the formation of some of the biggest companies in US history, some that are still key players in today's market like Kodak, American Tobacco and General electric in addition to America's first billion dollar corporation in 1901, however the stock market crash of 1904 that was a result of fraudulent financing brought the boom to a halt.

2. **Second wave (1916-1929): Increased Concentration**

A major contributor to this wave was the postwar economic boom following world war one. Mergers continued on the same track of increased concentration in related industries and retained the same horizontal characteristic. This era ended however with the stock market crash of 1929 and the adoption of the Clayton antitrust law that limited the definition of monopolistic practices.

3. **Third wave (1965-1969): Conglomerate Formation**

This was without a doubt the conglomerate era as financial engineering soared to new heights. It was a result of the combination of rising stock prices and the longest uninterrupted period of growth in the United States that saw a hike in P/E ratios across the board. It didn't take corporations long before they decided to capitalize on that growth, as companies with high P/E ratios given to them by investors acquired those with lower ones in an effort to grow earnings per share rather than through reinvestment and ultimately boost the price per share of the combined entity. This buildup of prices paid for targets coupled with the added leverage taken on by conglomerates toppled the pyramid effect that was in play and brought the era to an end.

4. **Forth wave (1981-1989): Retrenchment Era**

This decade saw the dismantlement of some of the major conglomerates formed in the previous wave. Dominated by hostile takeovers and leveraged buyouts as a primary acquisition strategy by investors; it was also a time when foreign investors took center stage in the US market. It was the combination of US firms eager to profit from divestiture opportunities as well as foreign investor willingness to pay higher premiums for US companies capitalizing on the strength of their currencies that paved the way for more cost effective acquisitions. For the first time ever we saw foreign acquisitions of US firms outnumber both in terms of quantity and dollar value the number of takeovers made by US firms on the global stage.

5. **Fifth wave (1992-2000): Strategic Mega Mergers**

This age of strategic mega mergers was aided by the longest period is US history of both uninterrupted economic expansion and stock market boom that the country had yet to see. Many speculated that the wave of M&As could never return to its levels during the 1980s, as most were overpriced and overleveraged, but with the rise of the information technology revolution, increased deregulation, removal of trade barriers and a global mentality focused on privatization all helped this wave gain additional momentum up until the internet bubble finally burst in 2001 bringing with it weaker global growth.

6. Sixth wave (2003-2007): Leverage Rebirth

This most recent wave ushered in a process of mergers and acquisitions that was characterized by excessive leverage buyouts and where takeovers were financed by limited partnerships. The complexity of these consolidations coupled with varying levels of risk created a mechanism of syndication in which much of the debt was sold off and dispersed to the investing public. Under these conditions investors were incentivized to lower their lending criteria to generate enough income allowing them to take on additional risk. Excess liquidity brought on by low interest rates only seemed to worsen the pyramid of loose practices that was taking place. Ultimately the inability to trace holders of debt once it had been sold and resold, along with a few highly publicized defaults in 2007 raised some concern among investors about the real value of their assets versus what was announced on their balance sheets. It wasn't long before instability in the financial markets mirrored the excessive leveraging that was taking place, and soon after the housing markets crashed we saw a slowdown in the global economy as many developed countries faced recessions which brought this wave to a screeching halt.

So what is it about these waves of mergers and acquisitions that bear similarities and differences? In our rendering of the six major phases of consolidation activity throughout the US market place, historically speaking each wave was fueled by its own development path, like innovation in financial services offered, or emergence of new technologies, the level of enforcement of regulation or the type of transaction taking place whether it be horizontal or vertical or strategic or conglomerate. However the common

element that prevailed among them was that they all occurred in times of high economic growth periods, as well as falling interest rates and rising stock markets, something to look out for during the next boom in the economic cycle.

In the world of corporate finance, the question that managers have to deal with is if bigger is better? Well the short answer is yes. Companies, especially those that tend to operate in highly competitive industries where the smallest competitive edge can mean the difference between leading the market place or falling short of expectations and declining profits, need to strive to gain the most ground and offer the widest range of products and services that are all encompassing they become a one shop place for the customers they serve. But, and there will always be a But, being able to harness the appropriate balance in creating value must always be the bottom line. If we think about some of the most successful mergers and acquisitions out there, it seems hard for us to envision them ever being two separate entities apart. The name alone becomes embedded in our minds, so much so that when we mention one, the other quickly follows as if they were synonyms. Imagine saying Disney without quickly following it up with Pixar, or JP Morgan without the Chase, its hard even for those who are not well versed in corporate structure, and that alone signals success.

When Disney and Pixar merged, it seemed like the logical step in the next evolution of the multimedia conglomerate era. Disney, with its impressive range of distribution channels and product placement, and Pixar with its unparalleled talents in creating characters that define generations at a time, became a force to be recon with in the entertainment industry and a giant in its own right.

The United States had only two satellite radio providers, Sirius and XM, so when the two rivals joined forces, they were able to corner the market brilliantly and raise the entry bars high enough to generate concerns about antitrust and monopoly issues. Nevertheless, their listener base stock shot up, having added to their sound waves some of the biggest names in show business, the likes of Oprah, Martha Stewart and Howard Stern.

Exxon and Mobil were two big oil companies that when joined in an $81 billion deal got even bigger. The combined power translated into one of the strongest leaders in the industry and is now considered the second largest publically held company in the world earning in one of its quarters over $11 billion in revenues.

Despite these instances of success, there have also been numerous cases of failure.

When Daimler Benz, the car manufacturer behind Mercedes Benz decided to merger with Chrysler to form Daimler Chrysler in a $37 billion deal, they anticipated forming the trans-Atlantic manufacturing powerhouse that would dominate the car industry. Sadly the culture clash between a company that specializes in high end products and another that values affordable prices to meet all budgets proved to be a recipe for disaster. That ultimately translated into Daimler selling off Chrysler for just $7 billion.

What seems to be a poor attempt at corporate expansion, Mattel, a children products staple in every home, decided to tap into the online market by buying an almost out of business The Learning Company. Lack of synergy between Mattel's off the shelf toys, and online software gaming that the two companies wanted to create, drove Mattel to losing on average $1.5 million a day as stocks plummeted. The two companies broke off their

marriage in 2000, but that cost Mattel to lose 10% of its workforce just to be able to handle the cost cutting measures it needed to restore the value it had lost from the deal.

Sears and Kmart are two chain stores in America that were struggling to create a niche for themselves in the market as they were in the middle of the shopping spectrum. They weren't as cheap as other low-end small priced stores such as Walmart or Target, and they weren't exactly attracting the customer base of other high end shoppers that choose department stores like Sacks Fifth Avenue. So when they merged into Sears Holding, they transformed from two failing companies into one large failing one, as they struggled to clear those blurred lines of what they are and who they target, earning its CEO the title of America's worst in 2007.

Despite these failed attempts at mergers, there are even certain cases that can only be described as utter and complete disasters.

Quaker Oats, the company behind the popular sports beverage Gatorade was looking to invest its money in the next best thing when it decided to acquire Snapple. A company that was producing a drink that grew in popularity in the early 1990s. Quaker paid $1.7 billion dollars, a price tag that was frowned upon on Wall Street, as analysts estimated that the company was overpriced by $1 billion than its actual worth. As you might expect, the company struggled with selling the product in chain stores around the country as successfully, especially after both Pepsi and Coca Cola started offering similar products, and people's taste for Snapple grew old. After just 27 months, Snapple was sold off for just

$300 million, in other terms, a generated loss of $1.6 million a day for the entire marriage between the two firms.

It is important to foresee merger and acquisition waves before they actually occur, as the market is inclined to reward those who act early on and anticipate promising investment opportunities while at the same time punishes others that merely follow suit as they are more likely to end up overpaying for their investment. So this begs the question of who do mergers and acquisitions actually benefit, is the payoff directed towards shareholders or bondholders or society?

If history is any indication, it will point out that on average the shareholder gains at the time of the announcement date are at their highest as the combined market value of the merged firm increases, with most of these gains directed towards the target firm shareholders while bidder firms' shareholders often show little or no abnormal returns. Furthermore we notice that during the first three to five year period after the acquisition takes place, many bidder firms are either underperforming compared to industry peers or have destroyed shareholder value or both. This downturn of events, performance wise or concerning loss of shareholder value is unclear if it can be attributed to mergers and acquisitions, and so analysts usually turn to event studies to examine the effects of the consolidation process deeper. By looking at the pre and post-merger returns of both the bidder and target we can study the impact of the merger or acquisition process on shareholder value and determine if it was a leading cause or just a result of other external market variables that coincided with this shift in operating structure. Therefore positive abnormal returns are usually evident at the time of the announcement for both the bidder

and the target as it reflects anticipated future synergies from the combination of the two entities. Abnormal returns can be defined as the excess of what an investor would receive normally for a given level of risk. They are calculated against a benchmark that reflects an investor's required return often using the capital asset pricing model. Abnormal returns vary however depending on the type of offer at the table. Hostile offers usually tend to generate excess returns than friendly ones even though they receive no competing bids and have less contingent negotiations between management. If takeover bids are unsuccessful they can still manage to attain abnormal returns for the target, but shareholders need to act fast, usually within a year selling off their shares after the failure announcement. The opposite can be exhibited for the bidders, as on average acquirer shareholders only gain slightly modest if not negative abnormal returns when a takeover is successful. For unsuccessful offers the impact is even worse, lower returns of 5 to 8 percent are at times recorded, a reflection of investors that are wary of the company's business plan at large.

If we were to examine the post-merger return for shareholders we find conflicting results. Between the three to five year periods following the closing of the deal, some studies showcase better than average returns on shareholder value as a result of M&A activity while others report that the newly formed entity is underperforming its industry peers of up to 50 and 80 percent and have failed to earn back their cost of capital regardless of what the reason cited may be. There are however specific characteristics on certain acquisition deals that can influence returns. Upon close examination researchers have found a negative correlation between the size of the acquirer and the financial returns it stands to gain or lose. A smaller acquirer tends to realize higher returns than a larger one because of

its ability to generate shareholder wealth as opposed to the empire building strategies used by large establishments. More often than not, returns on acquisitions of private or subsidiary targets are much larger than those targeting publically traded companies. The difficulty that surrounds a deal concerning a private company or subsidiary means that investors are making their purchase at a discount and are less inclined to overpay for the general economic value that is foreseen. We can also notice that the size of the target influences to a certain degree the outcome of the returns. A target of smaller size will at most times generate higher returns than targets of equal or larger size, as it reflects less risk for the acquirer and a reduced challenge of integration paving the way for an easier realization of projected synergies. But that cannot be considered as the norm, in many instances large acquisition deals do generate higher abnormal rates of return, depending on how well management is able to fill in the gaps in their product offering. When it comes to financing the deal, cash payments often exceed equity financed mergers in establishing higher rates of return. Relying on stock issuance has come to signal overvaluation to the market, as investors perceive management unable to make investments that will keep the current share price afloat except by chance and are therefore enticed to pursue larger and riskier investment moves. Recurring acquisition deals by a bidder is also a negative indication to the amount of returns that are to be expected. Practice doesn't make perfect in this sense, as serial acquirers have seen slowing abnormal returns with each added deal. Overconfidence and hubris come into play as managers tend to overestimate the level of synergies surrounding the deal and end up over paying for their target.

Bondholder payoff is minimal in cases of mergers and acquisitions and has very little impact on their abnormal returns partly due to the relationship that governs leverage and management behavior. As long as the business deal results in larger, less risky operating performance then the impact on bondholders is negligible.

Mass media has a tendency to portray merger and acquisition waves as harmful to society arguing that they can result in cases of monopoly powers as producers are now at a better position to charge higher than normal prices and control supply levels. However there is no evidence to support that idea. On the contrary, industry concentration has helped improve operating efficiency and lower prices than if mergers and acquisitions hadn't taken place.

After having listed the major payoffs that can be accomplished through acts of merger or acquisition, and the valid reasoning behind them, why is it that some deals fail to meet investor expectations? Failure in this sense is defined as not being able to achieve the predetermined levels of financial returns announced or gaining the strategic objectives that managers set out to establish. Overpaying, overestimating synergies, and slow integration are key reasons behind the most publicized failure cases. Having had to overpay for a target firm will only further increase the hurdles in front of the bidder especially in the sense of regaining the cost of capital incurred during the process. Not being able to achieve the potential synergies that management had hoped for will also have a deteriorating effect on the returns that would follow the deal. And finally, regardless of what was paid to close the deal, fast integration is a crucial element in the success of the M&A process, especially

when it comes to setting in place cost cutting measures and enhancing revenue at the same time.

To reiterate what has been mentioned, mergers and acquisitions take place in times of economic growth, low interest rates, deregulation and a booming stock market. We also need to keep in mind that the success or failure rates in M&A deals is not that different from those of other growth strategies that can entail internal reinvestment decisions, strategic alliances or other forms for that matter.

CHAPTER III

COMPANY PROFILES

1. TIME WARNER INC.

Time Warner Inc., most commonly known as Time Warner, is an American multinational mass media corporation headquartered in New York, USA. According to the company's mission statement, it defines itself as a global leader in media and entertainment with businesses that branch out into television networks, film and TV entertainment. The company takes advantage of its industry leading operating scale and multiple brands to create, package, and deliver high quality content worldwide using multiple platforms in the process. Time Warner has a clear and concise strategy of becoming the world's leading video content company. But the company started out with a much different vision a century ago.

In February 1922, two Yale university graduates, Briton Hadden and Henry Robinson Luce founded Time Inc., a publishing company with Time magazine as its flagship circular. They launched *Time,*a weekly news magazine with the sole mandate of keeping the public informed, something that grew into the philosophy of the entire firm. Armed with only $86,000 of borrowed capital, Hadden as the magazine's editor and Luce its business manager, spent a year building up an investor base, staff, and tradesmen while at the same time gathering criticism and advice before the first issue hit bookshelves on March 3, 1923.

In its first year of inception, the magazine grew and prospered modestly, relying on a novel approach of marketing using postcard inserts and a mentality of everything published had to be relatable to the reading public and its own authority, they managed to garner 30,000 paid subscribers. Time also managed to set itself apart from other competitors through the use of historical background in its journalistic reporting. The company first became lucrative in 1928 when it posted its first net profit of $125,788, a figure that dwarfs in comparison to today's net income of $3.691 billion (2013). The company continued to add magazines to its roster, and in February 1931, with Time Inc. board's approval they launched Fortune magazine on the eve of the great depression. The publication gained warm acceptance as it won over its target audience.

In 1931, the company made a bold move as it transitioned into radio. The march of time was a radio show that included re-enactments of historical events. Despite gaining listener popularity, the move brought with it controversy as some critics believed it would jeopardize Time's journalistic integrity.

The following year, Time completed its acquisition of *Architectural Forum*; a professional journal aimed at builders, and reflected the socio-political shift that was occurring at the time, as new legislation deals gave way to almost $3.3 billion in new construction projects. For the ten years that followed, Forum managed to gain 40,000 following in readers but only posted one year of profits. However attempts to sell off the publication were met with resistance from Luce.

In 1936, Luce began toying with the idea of creating a weekly photo magazine, and from that idea sprung Life into existence, a publication that brought pictures to print.

1937 saw Time Inc.'s first divisional system, the organizational chart that came to define the company's operations for decades later. As the three cornerstone publications: Time, Fortune and Life all were assigned their own publisher, managing editor and advertising director for better focus on content. Despite being a circulation success, Life became the dark horse for Time Inc., the financial burdens that the magazine brought forth were mostly due to the unexpected high cost of production. A second indirect cause to losses was felt as Time readers were making the switch themselves to Life. The losses incurred drained the company from almost $5 million in potential profits, and sparked a bitter argument between management about the importance of maintaining certain publications.

When world war two broke out, Time magazine enjoyed critical success among readers on its reporting of major news and tumultuous events that were taking place in Europe. It assumed a prominent role chronicling the time of war and gaining at the same time significant additional readership as circulation increased to reach one million.

The mid 1950s saw arguably one of the biggest and most profitable long term decision moves aimed at diversification; Time Inc. launched Sports Illustrated, a magazine that became later on a cash cow for the company. The post war era saw expansion into media outlets other than print. Looking at gaining additional experience in the broadcasting field, the company founded its first broadcasting subsidiary in addition to making similar

acquisitions in television and radio properties across the nation, for a then record sum of $16 million.

The 1960s generated explosive growth for Time Inc. as a result of management's reorganization of operations that pushed towards sales expansion both domestically and abroad as well as tighter cost cutting controls. As a result, net revenues climbed from $287.12 million to $412.51 million and net income jumped from $9.30 million to $26.53 million. Throughout the 1960s and 1970s Time Inc. underwent yet another phase of diversification steps by bringing up the total number of its publications to 24 and launching the pay-TV service Home Box Office (HBO), which would later become one of the company's few commercial successes.

Time Inc.'s growth continued to soar during the 1980s concentrating on both video and print businesses while at the same time divesting more sluggish ventures that were no longer considered to fit the company's core business, these efforts culminated the 1989 agreement to acquire Warner Communications Inc. for an impressive $14 billion price tag in an era of unseen before leveraging and hostile bids. The proposed merger between Time and Warner created the world's largest entertainment and media cluster. This strategically driven move did not receive warm welcome from all of Time's board members, as some voiced concern over the taken course of action and how wise it is. Eventually the merger created a vertically integrated company that claimed its media and entertainment franchises all ranked first or second in their respective categories. This claim was supported by record performance numbers posted by HBO and Cinemax, with record earnings and revenues brought on by four million basic cable and three million premium subscriptions.

To benefit from the synergies of the combined assets, Time Warner created Time Warner Publishing to oversee the entire company's publishing deals, a portion of their business that accounted for $3 billion of annual revenues. They also established plans to open a chain of retail stores across the country, taking a cue from The Walt Disney Company, with the purpose of selling merchandise related to Warner brother classics such as Bugs Bunny and other literary proprietorships in addition to other products that had relevance to the company's operations. They took a creative approach indeed capitalizing on their multiple platforms to cross market products and publications. Product placement became the norm in anything they released.

Although Time Warner was facing a sluggish economy during the 1990s, it still managed to become the second biggest cable company in the United States. They relied on the quantity and quality of content to earn them a competitive advantage in the market. Having mastered the diversification strategy, both in related and unrelated fields, they capitalized on the multi-facets that were at hand, and offered products like books, magazines, cable TV services, retail, music, theme parks, movie production and distribution serving in markets domestic and abroad.

On January 10th, 2000 the merger between AOL and Time Warner was announced. As a result, AOL paid $183 billion in stock for Time Warner and assumed at the same time $17 billion of Time Warner's debt. This meant that AOL would own 55% of Time Warner, and the estimated value of the stock combination was approximately at $350 billion.

For the below part, we will examine together the overall performance of the firm, and take a closer look at its stock price movement, operating as well as financial ratios that are key to any investor and should allow us to get a closure look about the market performance of Time Warner Inc.

Figure 1: Stock price movement for Time Warner (TWX:NYQ) for past five years.

Depending on the time frame we would assume that the company has experienced significant and consistent growth rates over the past five years. However a broader examination tells a different story.

As previously mentioned, the 1990s decade saw growth for the company and manifested itself in terms of stock price movement leading up to the merger deal with AOL in the year 2000, and that was reflected in the price that the shares were trading, the stock is seen in figure 2 to peak at over $200 per share at the time of the announcement. Shortly after in the years that followed the merger, we notice that the stock price hitting all-time lows in the years 2003 and again in 2008 before slowly recovering some of its lost value.

Figure 2: Stock price movement for Time Warner (TWX:NYQ) 1995-2015.

Time Warner Inc. is traded on the New York Stock Exchange, and if we compare the company to the market index NASDAQ we can see that despite the troubles the company faced with its stock price, it still managed to outperform the market in the entire date range as seen in figure 3.

Figure 3: TWX vs. NADAQ market value change from 1995-2015

Revenues for Time Warner Inc. grew year on year average of 3.71% from $28.73 billion to $29.80 billion.

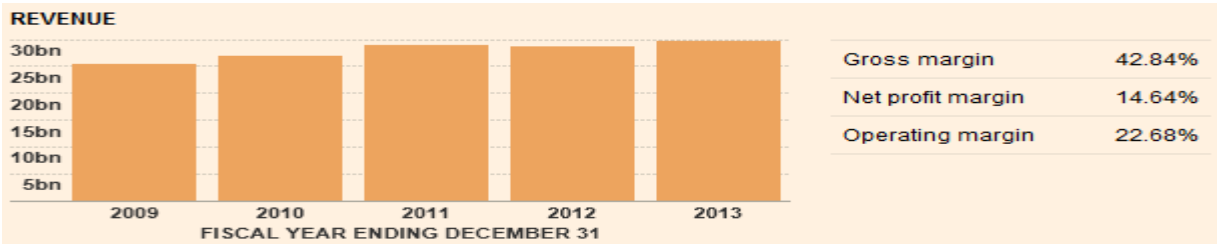

Figure 4: Time Warner Revenue 2009-2013 in Billions of US Dollars

Net income for the same time frame also improved from $2.93 billion to $3.69 billion, an increase of 26.19%.

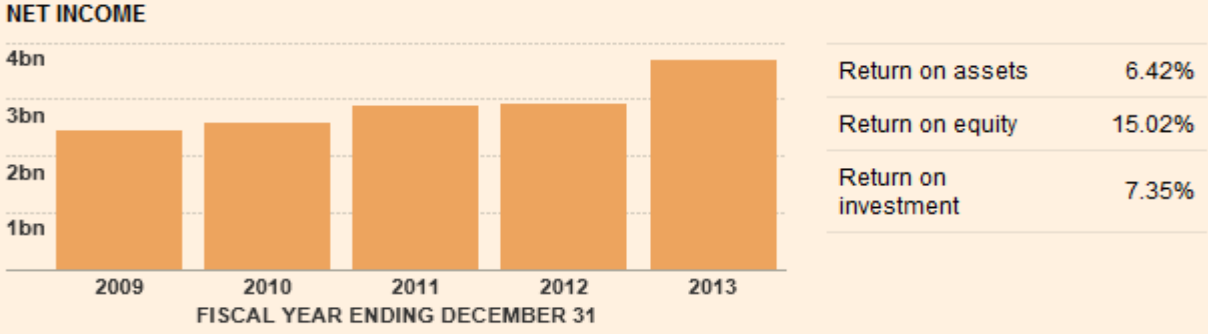

Figure 5: Time Warner Net Income 2009-2013 in Billions of US Dollars

Table 1: Time Warner Revenue & Earnings Per Share

		Revenue*	Earnings Per Share**
FY 2014	Sep '14	6,243.00	1.109
	Jun '14	6,788.00	0.938
	Mar '14	6,803.00	1.516
FY 2013	Dec '13	8,565.00	1.059
	Sep '13	6,042.00	1.016
	Jun '13	6,608.00	0.730
	Mar '13	6,939.00	0.784

*Note: Units in Millions ofU.S. Dollars

**Note: Units in U.S. Dollars

Table 2: Time Warner Consensus Estimates Analysis

SALES (in millions)	# of Estimates	Mean	High	Low	1 Year Ago
Quarter Ending Mar-15	16	7,025.84	7,239.00	6,864.74	7,517.52
Quarter Ending Jun-15	16	7,108.78	7,399.01	6,931.00	7,926.44
Year Ending Dec-15	31	28,809.80	32,530.00	28,142.00	31,946.30

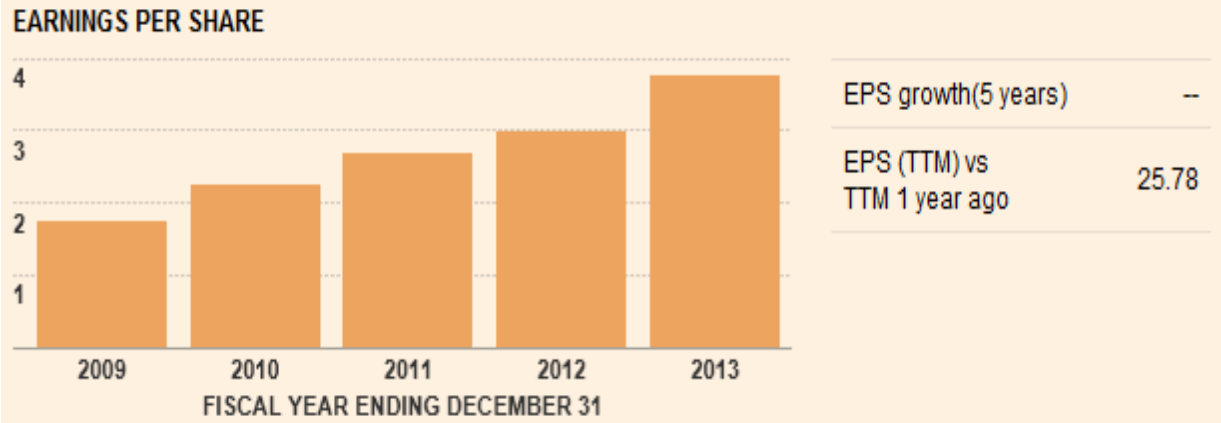

Figure 6: Time Warner Earnings Per Share 2009-2013

Earnings per share increased year on year at 10.58%.

Table 3: Time Warner Sales and Earnings in US Dollars

Earnings (per share)	# of Estimates	Mean	High	Low	1 Year Ago
Quarter Ending Mar-15	19	1.12	1.21	1.07	1.05
Quarter Ending Jun-15	19	1.14	1.21	1.09	1.06
Year Ending Dec-15	33	4.71	5.08	4.26	4.85
LT Growth Rate (%)	4	14.12	19.60	5.10	12.60

Table 4: Time Warner Valuation Ratios

	Company	**Industry**	**Sector**
P/E Ratio (TTM)	17.46	24.25	18.32
P/E High - Last 5 Yrs.	17.81	29.87	28.12
P/E Low - Last 5 Yrs.	12.85	9.55	13.37
Beta	1.19	1.56	1.17

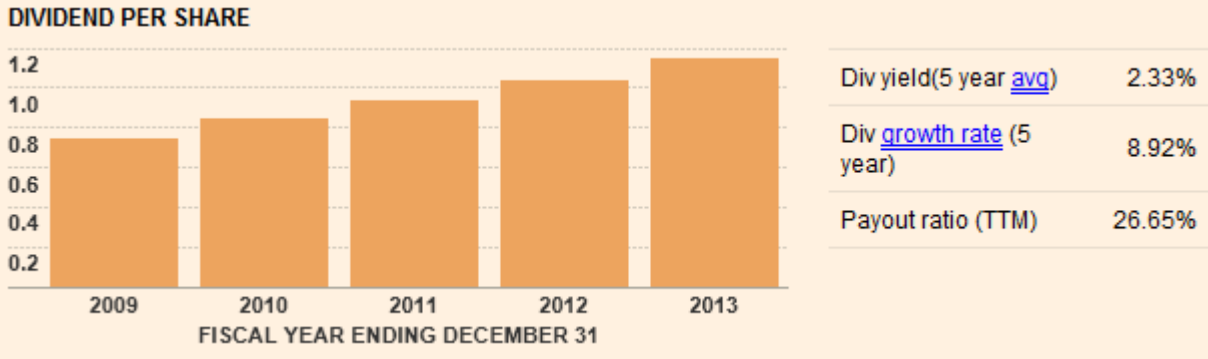

Figure 7: Time Warner Dividend Per Share 2009-2013 in US Dollars

Dividends per share excluding extraordinary items growth year on year increased 26.06%.

Table 5: Time Warner Dividend Ratios

	Company	Industry	Sector
Dividend Yield	1.57	1.97	2.35
Dividend Yield - 5 Year Avg.	2.29	1.81	2.18
Dividend 5 Year Growth Rate	8.92	58.51	21.38
Payout Ratio(TTM)	26.65	2.12	6.94

Table 6: Time Warner Growth Rates

	Company	Industry	Sector
Sales (MRQ) vs Qtr. 1 Yr. Ago	3.33	3.71	3.91
Sales (TTM) vs TTM 1 Yr. Ago	2.33	5.25	8.55
Sales - 5 Yr. Growth Rate	2.42	10.97	12.21
EPS (MRQ) vs Qtr. 1 Yr. Ago	9.12	34.10	13.91
EPS (TTM) vs TTM 1 Yr. Ago	25.78	--	--
EPS - 5 Yr. Growth Rate	--	52.89	20.35
Capital Spending - 5 Yr. Growth Rate	-2.46	17.04	10.11

Table 7: Time Warner Financial Strength Ratios

	Company	**Industry**	**Sector**
Quick Ratio (MRQ)	1.27	3.72	1.27
Current Ratio (MRQ)	1.48	4.39	1.58
LT Debt to Equity (MRQ)	84.78	40.54	36.81
Total Debt to Equity (MRQ)	89.41	43.46	73.03
Interest Coverage (TTM)	4.93	95.51	7.97

Table 8: Time Warner Profitability Ratios

	Company	Industry	Sector
Gross Margin (TTM)	42.84	56.46	23.18

Gross Margin - 5 Yr. Avg.	44.39	51.26	23.06
EBITD Margin (TTM)	26.02	--	--
EBITD - 5 Yr. Avg	24.34	32.74	14.81
Operating Margin (TTM)	22.68	36.96	13.93
Operating Margin - 5 Yr. Avg.	20.19	28.42	11.80
Pre-Tax Margin (TTM)	17.85	35.48	14.27
Pre-Tax Margin - 5 Yr. Avg.	15.21	27.49	13.42
Net Profit Margin (TTM)	14.64	26.17	11.03
Net Profit Margin - 5 Yr. Avg.	10.03	20.54	10.19

In 2013, cash reserves at the company fell by $979 million. However they managed to earn $3.71 billion from various business operations thus establishing a cash flow margin of 12.47%. TimeWarner used $910 million on investing activities and the remaining $3.78 billion in financing cash flows as shown in the figures below.

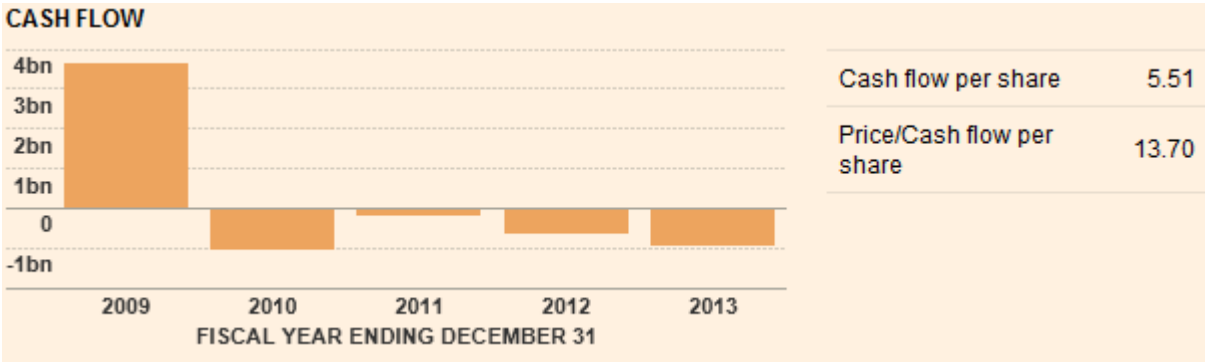

Figure 8: Time Warner Cash Flows 2009-2013 in Billions of US Dollars

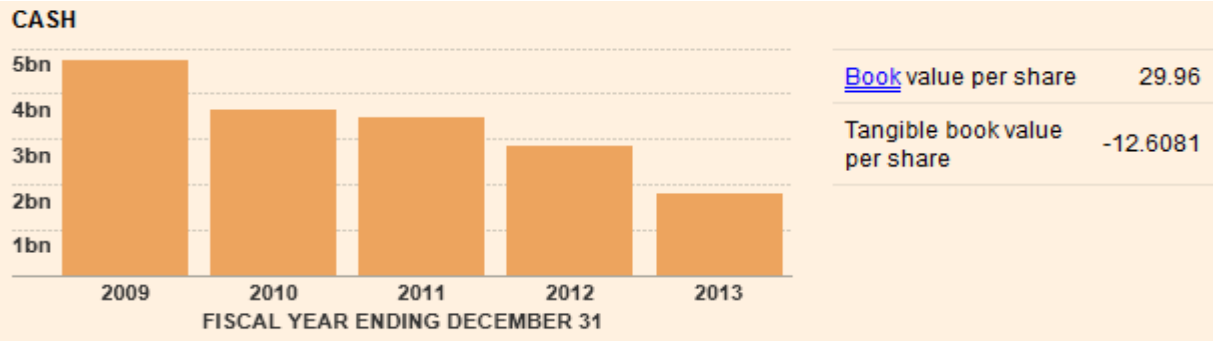

Figure 9: Time Warner Cash Reserves 2009-2013 in Billions of US Dollars

On the company's balance sheet, they show a total capital ratio of 47.20%, much lower than last year's 63.97%.

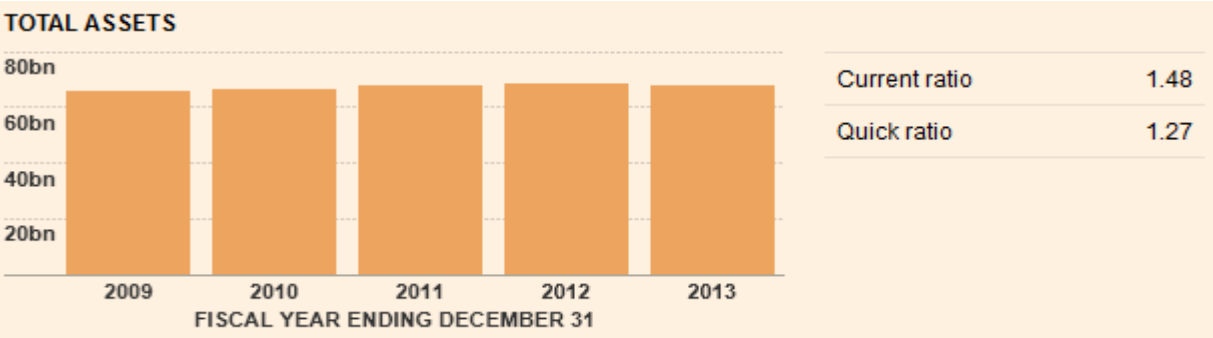

Figure 10: Time Warner Total Assets 2009-2013 in Billions of US Dollars

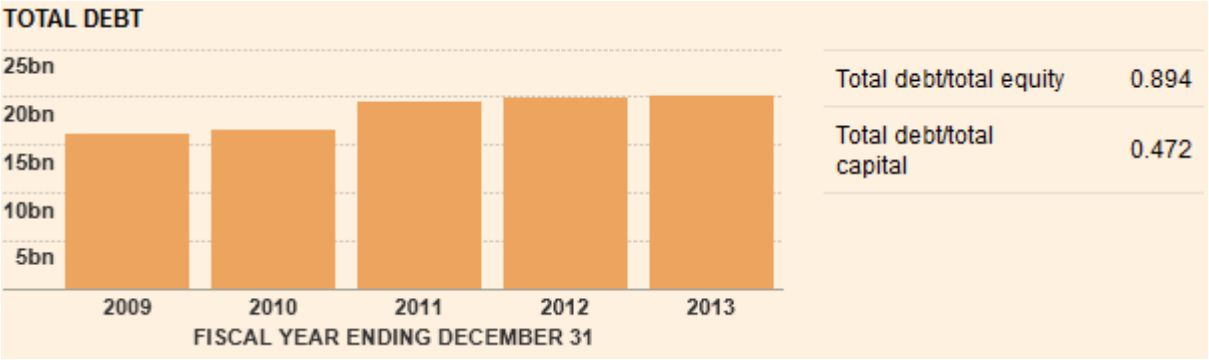

Figure 11: Time Warner Total Debt 2009-2013 in Billions of US Dollars

2. AOL INC.

Similar to Time Warner Inc. AOL is also a US multinational mass media corporation headquartered in New York. It's oriented towards growing, developing and investing in brands and websites. The company's business operations are aimed at consumers, publishers and advertisers offering digital distribution of content, products, and services.

Established in 1983, it was formerly known as Quantum Computer Services and acted as an online services company. It quickly outgrew its short lived venture of GameLine, an online service that allowed subscribers to download games and keep track of high scores for Atari game consoles. It developed Quantum Link software compatible for both IBM and Macintosh computers. AOL tried to position itself as an online service company dedicated to those who were unfamiliar with computers at the time rather than just servicing the technical community.

After breaking off its cooperation with Apple computers in October of 1989, Quantum then changed its name to AOL, otherwise known as America Online. In addition to its range of online gaming products, the company introduced a host of innovative interactive services that included graphical chat platforms, the first ever online interactive fiction series, as well as the first play by email automated game.

In the early 1990s, the company's growth coincided with that of pay based online services, and it quickly surpassed competitors in that field with the help of its groundbreaking multiplayer online gaming that relied on graphics instead of text. As a result, in 1992 America Online had its first public offering as it debuted on the Nasdaq with

an initial share price of $11.50. Its most notable feature was the chatrooms. People suddenly found themselves able to hold real time conversations that ranged from private chat rooms that hold up to 23 people, to conference rooms and auditoriums.

Between 1990 and 1994, AOL flourished in the online educational field having joined forces with reputable education providers the likes of The National Education Association, the American Federation of Teachers, National Geographic, the Smithsonian Institution, the Library of Congress, and the Discovery networks just to name a few. Its collaborations in this field helped give rise to many firsts, like real time homework help services, online services for parents, online courses and the introduction of parental controls which helped the company garner over 1 million active users.

In 1995 AOL Europe was created, and in the following year its number of subscribers quickly rose to 5 million users. That same year, the company changed its hourly fee that it charged its user base to a more user friendly flat monthly rate of $19.95.

It strategically positioned itself as "A brand company, committed to continuously innovating, growing, and investing in brands and experiences that inform, entertain, and connect the world." They pioneered in marketing tools that ultimately set them apart from competitors as in 1997 almost half of all US homes with access to the internet had it through AOL.

Relying on resources and knowledge from within coupled with those from the outside through mergers, acquisitions and mutual agreements, the firm was able to follow a strategy of diversification both in related and nonrelated businesses. The strategy of broad

differentiation allowed AOL to win over more consumers and marginalize competitors along the way. Its range of products that included online portals, web browsing, instant messaging, online gaming and video streaming attracted individuals and firms alike, and with a revenue generation mechanism dependent on advertising and subscriptions, its stock price peaked at $90 per share in December of 1999, highest to date.

As fast paced hi-tech companies are most of the time, AOL embraced risk taking, innovation and flexibility in its operations. It's highly reactive management instilled a culture of adhocracy, meaning that, support staffs like R&D teams were the most powerful. With the market that they operated in still in its incumbency phase, fast growth and development lay ahead. Highly successful internet startups had no significant physical assets to their name, but instead relied on technological innovation to measure their worth.

The culmination of its work and strategy paid off for AOL. Their stock value grew by 50,000 percent from the IPO, and with 30 million subscribers they became the premier internet service provider in the United States. In a bold move to capitalize on their momentum, AOL announced its plans to merge with Time Warner in January 2000. At the time they were the first in their industry while Time Warner was the second cable provider in the country. As AOL Time Warner Inc. came into existence, it had combined revenues of over $30 billion.

After the decision to demerge, AOL stock price movement can now be traced back from 2009 till present.

The figure below highlights the trend that the stock price has witnessed in the market.

Figure 12: Stock price movement for AOL (AOL:NYQ) 2010-2015.

We can notice how the stock had lost significant ground from the $90 per share peak it enjoyed on the turn of the millennium. The volatility is however more present when compared to the Nasdaq index, as we can see from the second figure that it underperformed the market for the most part.

Figure 13: AOL vs. NADAQ market value change from 2010-2015

Between the years 2009 and 2013, revenues increased 5.85% from $2.19 billion to $2.32 billion, but despite those figures, net income still managed to fall a staggering 91.19% from $1.05 billion to $92.40 million.

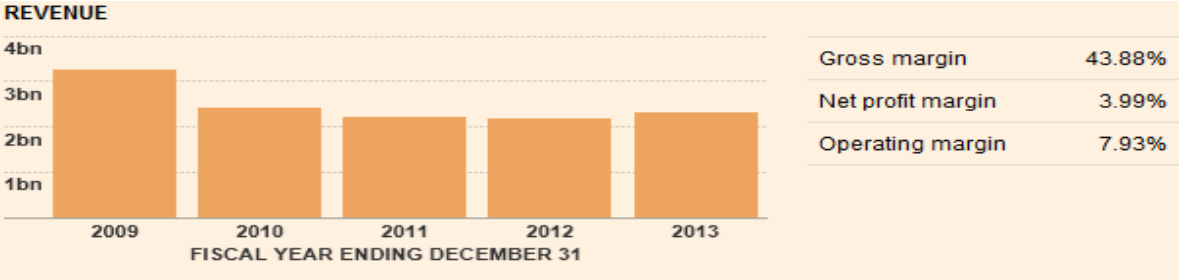

Figure 14: AOL Revenue 2009-2013 in Billions of US Dollars

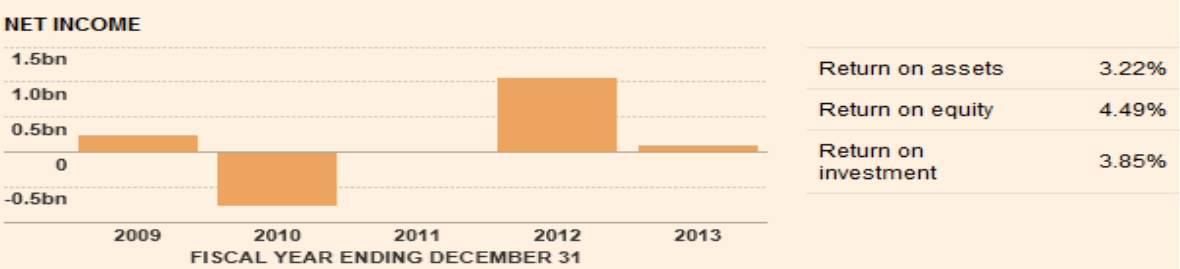

Figure 15: AOL Net Income 2009-2013 in Billions of US Dollars

The below table sales and earnings figures in US Dollars

Table 9: AOL Consensus Estimates Analysis

SALES (in millions)	# of Estimates	Mean	High	Low	1 Year Ago
Quarter Ending Mar-15	10	628.42	654.00	612.30	620.86
Quarter Ending Jun-15	10	651.48	664.00	636.90	638.53
Year Ending Dec-15	19	2,732.37	2,885.10	2,621.00	2,723.19
Earnings (per share)					
Quarter Ending Mar-15	11	0.47	0.53	0.41	0.51
Quarter Ending Jun-15	11	0.58	0.64	0.52	0.53
Year Ending Dec-15	21	2.42	2.91	2.04	2.83
LT Growth Rate (%)	4	11.15	15.00	6.00	11.50

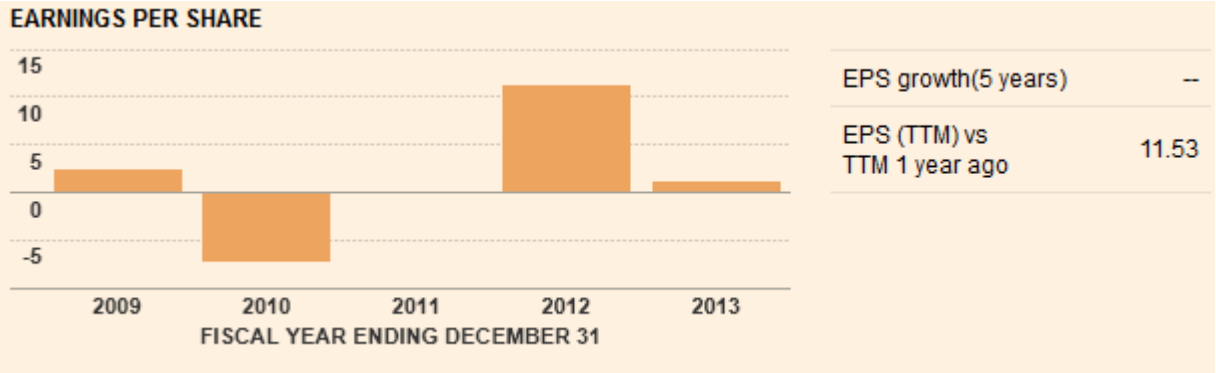

Figure 16: AOL Earnings Per Share 2009-2013

We can notice from the data and the graph above that earnings per share had dropped year on year 98.95%.

Table 10: AOL Valuation Ratios

	Company	Industry	Sector
P/E Ratio (TTM)	39.46	75.46	20.55
P/E High - Last 5 Yrs.	122.19	60.70	33.92
P/E Low - Last 5 Yrs.	2.64	19.57	12.29
Beta	0.92	0.86	0.94

Table 11: AOL Dividend Ratios

	Company	Industry	Sector
Dividend Yield	--	0.63	1.11
Dividend Yield - 5 Year Avg.	--	0.65	1.06
Dividend 5 Year Growth Rate	--	19.93	15.17
Payout Ratio(TTM)	0.00	15.07	19.68

Table 12: AOL Growth Rates

	Company	Industry	Sector
Sales (MRQ) vs Qtr. 1 Yr. Ago	11.67	23.93	-5.79
Sales (TTM) vs TTM 1 Yr. Ago	11.40	18.76	3.39
Sales - 5 Yr. Growth Rate	-10.99	20.15	10.86
EPS (MRQ) vs Qtr. 1 Yr. Ago	1,321.03	43.93	67.30
EPS (TTM) vs TTM 1 Yr. Ago	11.53	--	--
EPS - 5 Yr. Growth Rate	--	12.88	26.87
Capital Spending - 5 Yr. Growth Rate	-17.53	17.81	5.46

Table 13: AOL Financial Strength Ratios

	Company	Industry	Sector
Quick Ratio (MRQ)	--	0.57	1.84
Current Ratio (MRQ)	1.96	2.09	2.31
LT Debt to Equity (MRQ)	16.65	48.85	13.54
Total Debt to Equity (MRQ)	18.96	50.72	21.69
Interest Coverage (TTM)	--	4,650.89	382.37

Table 14: AOL Profitability Ratios

	Company	Industry	Sector
Gross Margin (TTM)	43.88	56.13	39.50

Gross Margin - 5 Yr. Avg.	33.81	67.64	38.97
EBITD Margin (TTM)	36.78	--	--
EBITD - 5 Yr. Avg	24.21	38.45	19.56
Operating Margin (TTM)	7.93	29.38	10.47
Operating Margin - 5 Yr. Avg.	7.42	31.78	11.57
Pre-Tax Margin (TTM)	7.61	31.86	11.90
Pre-Tax Margin - 5 Yr. Avg.	7.49	32.73	12.19
Net Profit Margin (TTM)	3.99	19.59	8.19
Net Profit Margin - 5 Yr. Avg.	4.95	20.68	8.53
Effective Tax Rate (TTM)	47.63	36.16	26.13
Effective Tax Rate - 5 Yr. Avg.	33.97	34.55	28.17

Cash reserves at AOL Inc. dropped in 2013 by some $259.30 million. It used $402.10 million on investment activities while paying $175.40 million in financing cash flows. As a result the company earned $318.90 million from its cash flow operations.

Figure 17: AOL Cash Flow 2009-2013 in Millions of US Dollars

Figure 18: AOL Cash Reserves 2009-2013 in Billions of US Dollars

Total assets declined from 2009 to 2012 only to rise a little in 2013, while at the same time total debt continued to rise at an almost constant pace, and as a result the company had a total capital ratio of 15.88% as of fiscal year 2013.

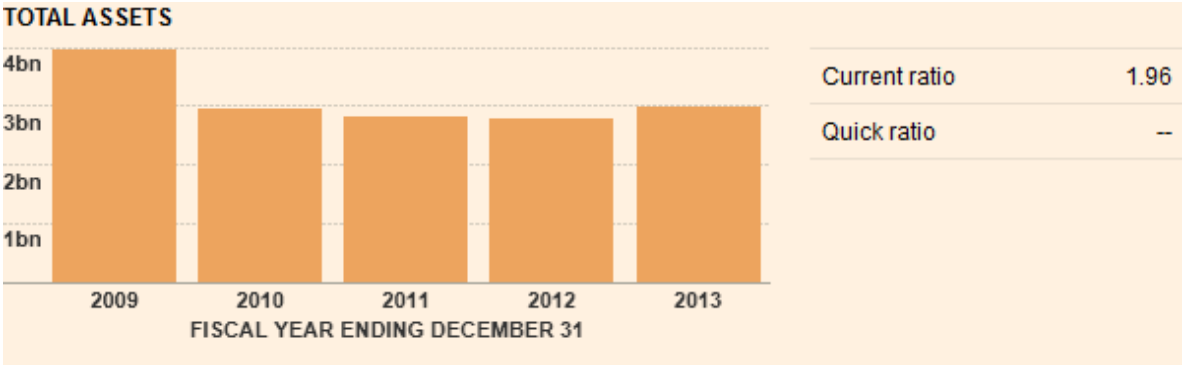

Figure 19: AOL Total Assets 2009-2013 in Billions of US Dollars

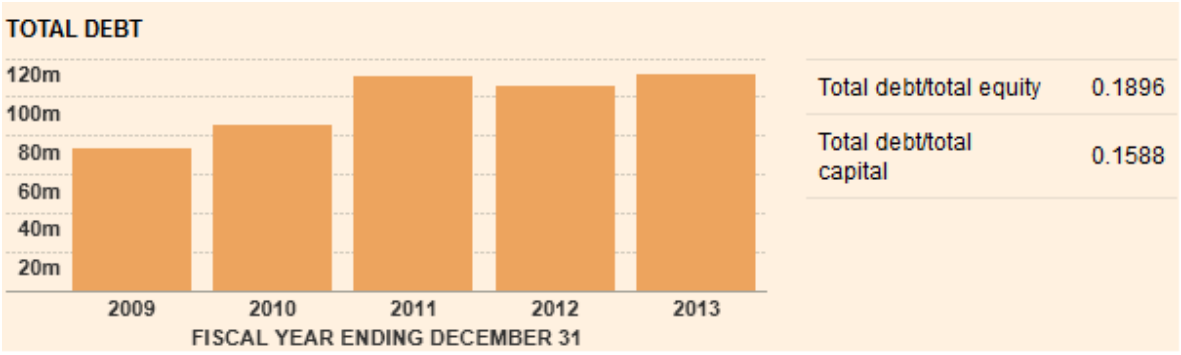

Figure 20: AOL Total Debt 2009-2013 in Millions of US Dollars

CHAPTER IV

THE MERGER

"The biggest mistake in corporate history" is what Jeff Bewkes, chairman and chief executive of Time Warner, used to describe the AOL/Time Warner merger.

Fifteen years ago, the world witnessed the largest merger in American business history. As America Online and Time Warner announced that they would be merging in a deal that cost a staggering $350 billion. In retrospect, the internet craze was ablaze at the time and was predicted to bring about the demise of mainstream media business models as they were. That would be the only logical reason as to why AOL's stock would be worth twice as much as that of Time Warner while at the same time earning less than half of the cash flow.

At the time of the announcement, January 10th, 2000 the deal was hailed as a monumental coming of age for the Internet and a victory for a new world order economy. The immense possibilities that this merger was expected to unleash, in terms of economic growth, creative expression, social understanding and interaction would not have anticipated in any way, shape or form the subsequent job losses, countless eradication of retirement funds and the slough of investigations brought down by the SEC as well as the Justice Department.

In today's dollar terms, the combined value of both companies (which are now demerged) is about one seventh of what they were worth on the day of the merger announcement. Certainly one of the worst business transactions in history, it will go down in infamy, business schools around the world use this case as a cautionary tale of how even the brightest minds in technology and media could make a colossal mistake.

In previous chapters I had introduced both companies and we saw how their operations evolved over time transforming them into industry leaders in their own right. In this chapter we will also learn about the circumstances that paved the way to their merger, the decision making process that followed the deal, as well as the stages leading up to the ultimate decision to demerge. Using data from both companies, I will attempt to analyze and provide solid reasons as to why the merger failed and if there were any warning signs leading up to it. In the process we will come to know and learn how managers value investment opportunities and are able to justify them to their shareholders to convince them of following up with a deal of this substantial size and cost. I will also attempt to infer if there were any other options viable for both companies other than demerger and hopefully shed a light about the process of mergers and acquisitions at the same time.

We need to keep in mind however that this particular case is not all encompassing and does not depict in any way all other merger and acquisition examples out there, but was rather chosen because of its significance on how it has impacted researchers to view and question M&As in the general sense. The golden rule here is that we cannot paint everyone with the same brush as is the case in any economic research, but we should be able to identify broad instances and similarities to be referenced in future project proposals.

The terms of the merger stipulated that AOL pays $183 billion in stock for Time Warner, assuming $17 billion of the latter's debt, and thereby owning 55% of the new combined entity at the same time. They envisioned creating the world's first global, fully integrated media and communications company to go with internet era that was shaping.

The formula behind this strategy meant that they would be able to deliver branded information, entertainment, and communications across converging media platforms and altering technologies. They would be able to better focus their efforts on delivering world class content to customers through a vast array of interactive mediums, capitalizing on the growth of broadband internet.

In order to achieve that mission, they relied on a number of contributing factors. First, the physical and technological resources at hand; both companies has access to unparalleled assets and infrastructure. And with their merger they would be able to take advantage of these resources to the fullest and allow them at the same time to take full control over the entire supply chain for content creation, management and distribution. From AOL's point of view, this would allow them to envelop a wider range of rich content and be able to offer discounts on magazines, books, movies and cable subscriptions for devoted subscribers. They would also be able to take advantage of the many retail stores at Warner's disposal as their popular products placed there could help attract a larger customer base more efficiently. For Time Warner, the merger would help the company speed up its digital revolution in order to cope with the changing times. If we were to add up the 30 million

AOL subscribers with Time Warner's 268 million readers we would have a huge reservoir for generating substantial advertising revenues, and help the newly formed company reach new global heights.

Human resources also played a major role in the decision making process. The two companies enjoyed access to unparalleled human creative talents. They also excelled in management expertise and over the years built a reputation for general organizational skills.

Financial strength was a pivotal reason behind the merger as it opened doors for further exploiting content while at the same time lowering costs. If we take a closer look at the figures, the merger resulted in a combined stock value of $350 billion, combined revenues of $30 billion in the US, and combined revenues of more than 250 million euros in Europe. Their ability to accumulate additional debt if needed was no longer limited as before, which also helped the company pursue a more aggressive acquisition strategy. The opportunity to cut costs was also great, as it included online promotions rather than spending money on more traditional outlets, cutting divisional costs through online mailing systems, cross marketing and digital distribution.

By the time the deal was finalized, market conditions shifted against Time Warner which suffered from high depreciation and increased interest charges. But the opportunities were still ripe. Using AOL's added value, they can now secure their position against competitors in the marketplace and raise the already high entry barriers. For media and cable markets, the consumer had the upper hand, as entertainment expenditures are considered an added luxury and not a necessity, especially in slow economic cycles. As

such the consumer had a higher bargaining power in that market as opposed to the ISP market, were competition was less fierce and a new generation eager to take advantage of what the internet had to offer and invested heaving in e-companies at the time. And with AOL's merger with Time Warner, they are able to secure an added advantage as they created a gap that competitors now had to overcome.

Despite the optimistic outlook that the merger brought forth, there still remained a few hurdles. On one hand, AOL was still suffering from low quality of service as voiced by many subscribers who at most times were unable to log on due to heavy online traffic.

Furthermore, top management on both sides was in the dark about the impending merger deal, which left many with feelings of concern and reluctance. The merger also resulted in having too many big names on the executive management side of things, which at times created problems in decision making with the odds favoring AOL heavily.

Although the two companies were vastly known in the US market, they both didn't have their foot quite set in the global arena. Time warner was seen at times as an old, traditional, slow growth company while AOL's business required time and significant capital investment, making it hard for investors to easily value the company.

In addition, there were some governmental/legal obstacles that posed additional threats. Approval from the FTC, the FCC, and the European commission were all required as the merger raised questions about antitrust issues and cable access. As a result, Time Warner had to drop its joint venture plan with EMI, while AOL scrapped one of its subsidiaries Bertelsmann AG in order to move on with the merger. This time consuming matter only

added on the burden, which was felt by the company's combined value as it dropped to $205 billion shortly after approval of the deal came.

Economic volatility was unfortunately present at the time of the merger, with the dot com bubble that had taken shape finally bursting causing volatile stock prices. These uncontrollable, unexpected economic factors caused a change in the investor base as short term investors wary of the situation withdrew their money while the merger awaited approval.

The economic uncertainty that prevailed at the time affected the markets negatively. We saw advertising revenues, a key source for the company's net income, slowing down in momentum. Technology alternatives also started popping up for internet access, intense competition started brewing as consumers became unwilling to pay extra fees for add-on options, something that AOL was not prepared for.

To further escalate the matter, intellectual property laws meant that AOL Time Warner Inc. had to revise its plan on content availability, while at the same time offering the wide range of information it had promised. They also had a problem delivering on their global expansion plans as they were more expensive than previously anticipated.

In July 2002, the merged company became embroiled in a scandal when the Washington post reported unconventional advertising deals before and after the merger took place. Those unorthodox advertising deals sparked an investigation by the Securities and Exchange Commission while the Justice Department initiated its own criminal probe into the matter. Those investigations revealed that the company had inflated its advertising

deals by almost $190 million. As the company was now faced with the demand to revise its financial results, online unit sales took a hit, and ad revenues were not expected to rebound until 2004.

On January 10th 2003, AOL Time Warner closed at a record low of $15 per share. After a few years of stumbling market performance, numerous layoffs, and subpar results, Time Warner was spun off making AOL an independent company again in 2009.

CHAPTER V

MODEL REGRESSION

The Capital Asset Pricing Model is one that describes the relationship between risk and expected return that is used in the pricing of risky securities. It says that the expected return of a portfolio or a security equals the rate on a risk-free security plus a risk premium. If this expected return does not meet or beat the required return, then the investment should not be undertaken. The security market line plots the results of the CAPM for all different risks (betas).

The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk.

- The time value of money is represented by the risk-free (rf) rate in the formula and compensates the investors for placing money in any investment over a period of time.
- The other half of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated a risk measure (beta) that compares the returns of the asset to the market over a period of time and to the market premium (Rm-rf).

When pricing assets most investors commonly use CAPM, which operates under a few assumptions:

- Perfect capital markets (long term assets) i.e. no transaction costs or taxes (brokerage fees, dividend income tax, investment tax etc.). It is informational efficient (in terms of processing information) and investors receive info at low cost (balance sheets, income statements, dividend news). There is also perfect competition among investors (no single investor dictates the price of a security/asset). The price is set however in the market based on forces of supply and demand. Investors are rational utility maximizers.
- Homogeneous expectations among investors, (all investors have homogenous expectations about the joint distribution of asset return) they have a clear idea how assets and returns will be distributed.
- Existence of risk free assets (such as treasury bills and treasury bonds)
- Complete financial markets (all assets are tradable, divisible, and priced)
- Utility function is quadratic in nature reflecting normal distribution of asset returns.

The main idea behind CAPM is that the higher the risk associated to a portfolio, the higher the required return on that portfolio, so there is a positive association between risk and return.

In our case study we started by gathering data about the daily adjusted closing prices for TWX stock for the period between January 1st 1995 to January 1st 2015 (total of 4905 observations after adjustments). We then proceeded with calculating the return on TWX stock by dividing today's closing price over yesterday's closing price – 1.

The same technique was applied on both the NASDAQ market index prices and the US 3 month treasury bills.

In order to run the CAPM model and see if it holds we first need to identify our dependent and independent variables.

- Dependent variable Y= R(TWX)-Rf
- Independent variable X= R(NASDAQ)-Rf

We know that the use of OLS to estimate a regression model leads us to BLUE estimates of the parameters only when the assumptions of the CLRM are satisfied. For that reason I wish to examine the existence of a few violations that might lead to spurious regression results.

Homoscedasticity means equal spread, and in econometrics the common measure of spread used is the variance, so having equal variance suggests that the disturbances are homoscedastic. While heteroskedasticity is more likely to occur in a cross-sectional framework, its existence in time series analysis is not uncommon.

The regression equation estimated is:

$$Y= b0 + b1X + u$$

The results of which are presented in the below table:

Table 15: Initial regression output

Dependent Variable: Y
Method: Least Squares
Date: 01/31/15 Time: 18:47
Sample (adjusted): 1/20/1995 12/30/2014
Included observations: 4905 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.53E-05	0.000351	-0.243188	0.8079
X	0.999447	0.000547	1827.381	0.0000

R-squared	0.998534	Mean dependent var	-0.014019
Adjusted R-squared	0.998534	S.D. dependent var	0.641202
S.E. of regression	0.024554	Akaike info criterion	-4.575477
Sum squared resid	2.956012	Schwarz criterion	-4.572827
Log likelihood	11223.36	Hannan-Quinn criter.	-4.574547
F-statistic	3339321.	Durbin-Watson stat	1.924556
Prob(F-statistic)	0.000000		

The residuals of this regression model are then obtained and squared, something that we will need in calculating the auxiliary regression:

Utsq= a1 + a2X + v

Table 16: Auxiliary regression output

Dependent Variable: UTSQ
Method: Least Squares
Date: 01/31/15 Time: 14:20
Sample (adjusted): 1/20/1995 12/30/2014
Included observations: 4905 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000603	2.71E-05	22.22474	0.0000
X	-6.79E-07	4.23E-05	-0.016060	0.9872

R-squared	0.000000	Mean dependent var	0.000603
Adjusted R-squared	-0.000204	S.D. dependent var	0.001898
S.E. of regression	0.001899	Akaike info criterion	-9.694960
Sum squared resid	0.017674	Schwarz criterion	-9.692310
Log likelihood	23778.89	Hannan-Quinn criter.	-9.694030
F-statistic	0.000258	Durbin-Watson stat	1.491415
Prob(F-statistic)	0.987188		

Using the results of the auxiliary regression of the residuals squared onto X we test for the existence of heteroskedasticity using the Breusch-Pagan-Godfrey method.

Table 17: Heteroskedasticity test output

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.032454	Prob. F(1,4903)	0.8570
Obs*R-squared	0.032467	Prob. Chi-Square(1)	0.8570
Scaled explained SS	3.431138	Prob. Chi-Square(1)	0.0640

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/31/15 Time: 20:09
Sample: 1/20/1995 12/30/2014
Included observations: 4905

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.60E-06	7.49E-07	4.809352	0.0000
X	-2.10E-07	1.17E-06	-0.180150	0.8570

R-squared	0.000007	Mean dependent var	3.60E-06
Adjusted R-squared	-0.000197	S.D. dependent var	5.24E-05
S.E. of regression	5.24E-05	Akaike info criterion	-16.87424
Sum squared resid	1.35E-05	Schwarz criterion	-16.87159
Log likelihood	41386.06	Hannan-Quinn criter.	-16.87331
F-statistic	0.032454	Durbin-Watson stat	1.386676
Prob(F-statistic)	0.857042		

We formulate our null hypothesis of homoscedasticity as H0: a1=a2=…=ap=0 while the alternative is that at least one of the *a*s is different from zero and that at least one of the coefficients of the squared residuals affects the variance of the residuals.

The LM-statistic calculated in the above illustration is distributed under a chi-square distribution with degrees of freedom equal to the number of slope coefficients

included in the auxiliary regression (K-1), which is in our case 1. The chi-square critical calculated is 3.841459.

Because the LM-stat<chi-square critical value we can conclude that the null is not rejected, and therefore there is no evidence of heteroskedasticity.

Our second set of assumptions revolves around autocorrelation. Assumption 6 of the CLRM tells us that covariances and correlations between different disturbances are all zero. If these disturbances however are autocorrelated it means that an error occurring at period *t* may be correlated with one at period *s*, something that is more likely to occur in a time series framework.

Detecting autocorrelation using the graphical method can be done by observing the residuals plot against time and the scatter plot of the residuals against the residuals at t-1. Both patterns exhibited below show no sign of positive or negative serial correlation, suggesting that there is no serial correlation.

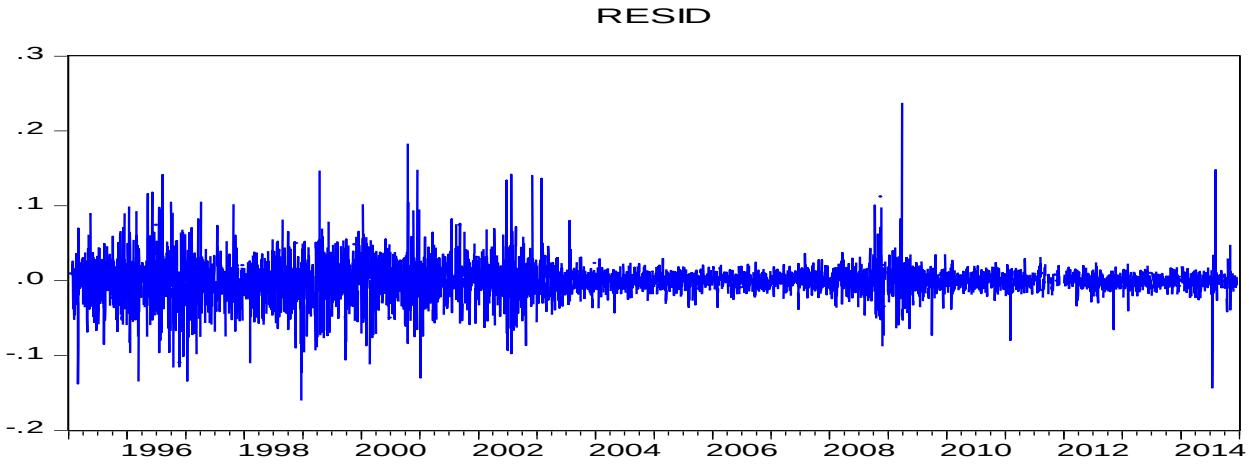

Figure 21: Residuals plot against time

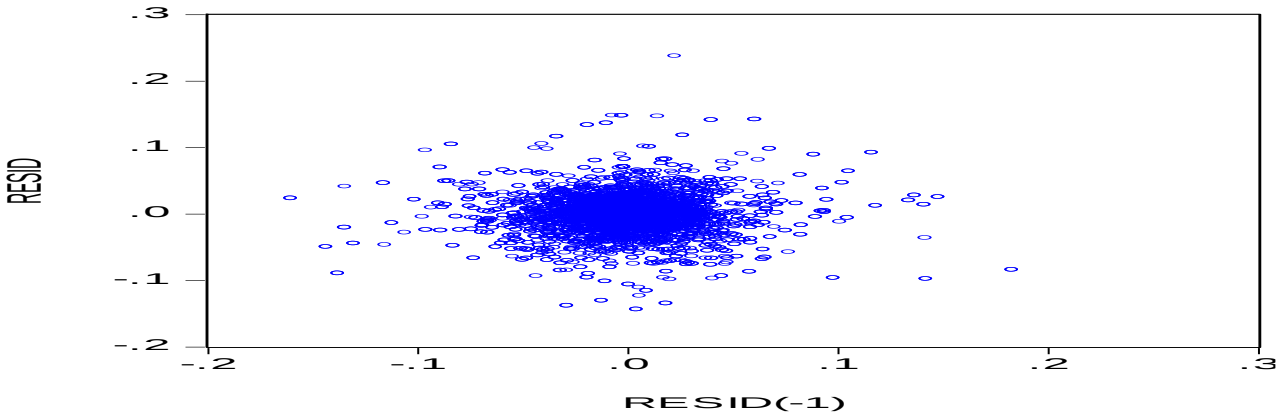

Figure 22: Residuals plot against Residuals (-1)

Continuing with our same set of variables X and Y, we proceed by testing for second order serial correlation using the Breusch-Godfrey LM test.

Table 18: Serial Correlation test output

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.654658	Prob. F(2,4901)	0.5197
Obs*R-squared	1.310034	Prob. Chi-Square(2)	0.5194

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/31/15 Time: 21:18
Sample: 1/20/1995 12/30/2014
Included observations: 4905
Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.11E-06	0.000351	0.003167	0.9975
X	-5.02E-06	0.000547	-0.009174	0.9927
RESID(-1)	0.010611	0.016630	0.638076	0.5235
RESID(-2)	-0.005749	0.018657	-0.308136	0.7580

R-squared	0.000267	Mean dependent var	-5.39E-17
Adjusted R-squared	-0.000345	S.D. dependent var	0.024551
S.E. of regression	0.024556	Akaike info criterion	-4.574928
Sum squared resid	2.955222	Schwarz criterion	-4.569629
Log likelihood	11224.01	Hannan-Quinn criter.	-4.573069
F-statistic	0.436439	Durbin-Watson stat	1.944111
Prob(F-statistic)	0.726932		

From the estimated regression results we were able to apply the residual tests for serial correlation and seeing from the first columns that the values of both the LM-statistic and the F-statistic are quite low, suggesting that we cannot reject the null of no serial correlation. It is also clear that this is because the p-values are large (greater than 0.05 for a 95% confidence interval). Observing the regression results, we see that the first and second lagged residual terms are both statistically insignificant, offering another indication of no serial correlation. Therefore, we conclude that autocorrelation is definitely not present in our regression analysis.

It is important to differentiate between stationary and non-stationary time series.

- In stationary time series, shocks will be temporary, and over time their effects will be eliminated as the series revert back to their long-run mean values.
- On the other hand, non-stationary time series will necessarily contain permanent components

The problem that arises with non-stationary time series is that often its mean and or variance will depend on time, which leads to cases where:

- The series has no long-run mean to which it returns
- The variance will depend on time and will approach infinity as time goes to infinity

An initial plot of the dependent variable reveals that the data has a constant mean and a constant variance which are the first two characteristics of a stationary series.

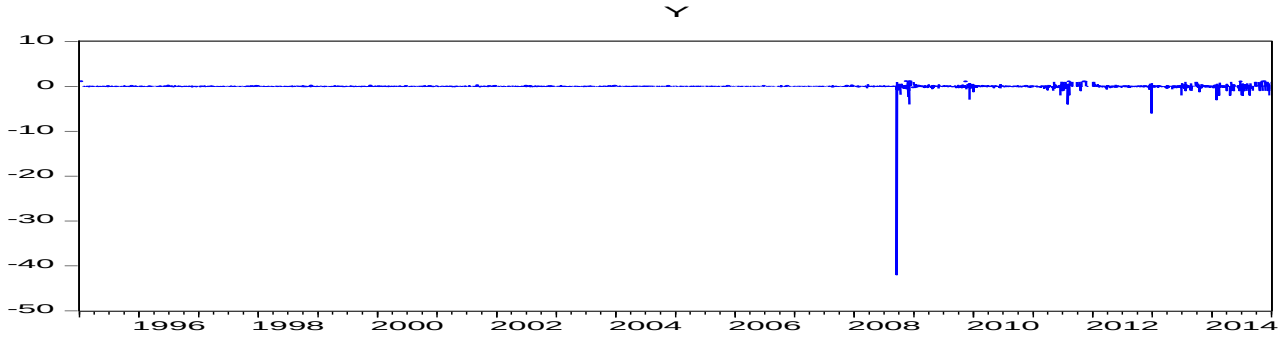

Figure 23: Dependent variable plot

A second plot of the independent variable gives the same results.

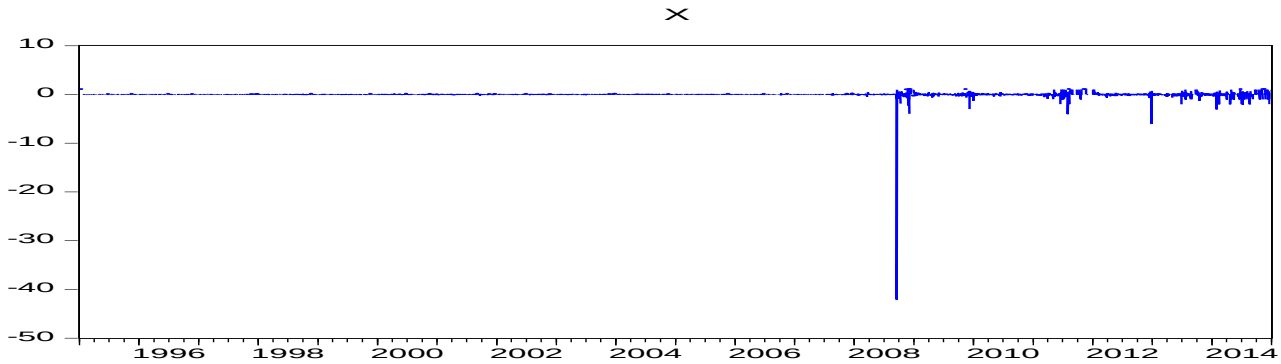

Figure 24: Independent variable plot

Using the Augmented Dickey-Fuller test we examine the existence of a unit root on both the dependent and independent variables.

The problem with spurious regressions that is a result of non-stationary or trended data is that standard OLS regressions can lead to incorrect conclusions. Most common with macroeconomic time series, they can give rise to high values of R2 and t-ratios while the variables used in the analysis have no interrelationships. Performing a regression with non-stationary time series, we would find either a significant positive relationship if they are going in the same direction, or a significant negative one if they are going in opposite

directions, even though both are unrelated, the essence here is that the results have no economic meaning at all.

Table 19: ADF Unit Root test output for variable X

Null Hypothesis: X has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-38.07541	0.0000
Test critical values:	1% level	-3.432507	
	5% level	-2.862379	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(X)
Method: Least Squares
Date: 01/31/15 Time: 18:41
Sample (adjusted): 1/25/1995 12/24/2014
Included observations: 2784 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X(-1)	-1.026650	0.026964	-38.07541	0.0000
D(X(-1))	0.005112	0.018906	0.270372	0.7869
C	-0.040478	0.015515	-2.608956	0.0091

R-squared	0.513980	Mean dependent var	-0.004532
Adjusted R-squared	0.513631	S.D. dependent var	1.172610
S.E. of regression	0.817780	Akaike info criterion	2.436630
Sum squared resid	1859.832	Schwarz criterion	2.443022
Log likelihood	-3388.789	Hannan-Quinn criter.	2.438938
F-statistic	1470.496	Durbin-Watson stat	1.533730
Prob(F-statistic)	0.000000		

Our null hypothesis suggests the existence of a unit root for the independent variable X. looking at the ADF-statistic we notice that it is less than (lies to the left of) the

critical values at the 1%, 5% and 10% levels of significance, thereby rejecting the null and concluding that the series is stationary and that the market is not weak form efficient.

Carrying out the same test for the dependent variable Y, we arrive at the same result. The null hypothesis of a unit root is rejected since the ADF-statistic is less than (lies to the left of) the critical values at the 1%, 5% and 10% levels of significance, so the series is stationary and the market is not weak form efficient.

Table 20: ADF Unit Root test output for variable Y

Null Hypothesis: Y has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-38.06572	0.0000
Test critical values:	1% level	-3.432507	
	5% level	-2.862379	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(Y)
Method: Least Squares
Date: 01/31/15 Time: 18:45
Sample (adjusted): 1/25/1995 12/24/2014
Included observations: 2784 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-1)	-1.026206	0.026959	-38.06572	0.0000
D(Y(-1))	0.005258	0.018910	0.278064	0.7810
C	-0.040699	0.015514	-2.623408	0.0088

R-squared	0.513575	Mean dependent var	-0.004307
Adjusted R-squared	0.513226	S.D. dependent var	1.171981
S.E. of regression	0.817682	Akaike info criterion	2.436390
Sum squared resid	1859.386	Schwarz criterion	2.442782
Log likelihood	-3388.454	Hannan-Quinn criter.	2.438698
F-statistic	1468.114	Durbin-Watson stat	1.535043
Prob(F-statistic)	0.000000		

This can be attributed to the fact that we used the returns for the market index and the company rather than the stock price movement, which helped secure the series to follow a linear trend and is integrated at the same time.

We know that the distribution theory that supports the ADF test is built on the assumption that the error terms are statistically independent and have constant variance. So by relying on the ADF methodology we needed to make sure that the errors terms are uncorrelated and they do have a constant variance, something that was tested for successfully earlier.

However Phillips and Perron developed a more generalized procedure that allows for somewhat mild assumptions when referring to the distribution of errors. So we also tested for unit root using their method to make sure that we had consistent results.

Table 21: PP Unit Root test output for variable X

Null Hypothesis: X has a unit root
Exogenous: Constant
Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-63.30183	0.0001
Test critical values:	1% level	-3.431877	
	5% level	-2.862100	
	10% level	-2.567111	

*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.508637
HAC corrected variance (Bartlett kernel)	0.498753

Phillips-Perron Test Equation
Dependent Variable: D(X)
Method: Least Squares
Date: 04/10/15 Time: 19:09
Sample (adjusted): 1/24/1995 12/30/2014
Included observations: 3819 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X(-1)	-1.023961	0.016180	-63.28399	0.0000
C	-0.033625	0.011546	-2.912380	0.0036

R-squared	0.512009	Mean dependent var	-0.019948
Adjusted R-squared	0.511881	S.D. dependent var	1.021069
S.E. of regression	0.713375	Akaike info criterion	2.162904
Sum squared resid	1942.485	Schwarz criterion	2.166176
Log likelihood	-4128.065	Hannan-Quinn criter.	2.164067
F-statistic	4004.864	Durbin-Watson stat	2.636838
Prob(F-statistic)	0.000000		

Table 22: PP Unit Root test output for variable Y

Null Hypothesis: Y has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-63.26206	0.0001
Test critical values:	1% level	-3.431877	
	5% level	-2.862100	
	10% level	-2.567111	

*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.508653
HAC corrected variance (Bartlett kernel)	0.495627

Phillips-Perron Test Equation
Dependent Variable: D(Y)
Method: Least Squares
Date: 04/10/15 Time: 19:14
Sample (adjusted): 1/24/1995 12/30/2014
Included observations: 3819 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-1)	-1.023456	0.016184	-63.23797	0.0000

C	-0.033869	0.011546	-2.933413	0.0034
R-squared	0.511645	Mean dependent var		-0.019962
Adjusted R-squared	0.511517	S.D. dependent var		1.020704
S.E. of regression	0.713386	Akaike info criterion		2.162935
Sum squared resid	1942.545	Schwarz criterion		2.166207
Log likelihood	-4128.124	Hannan-Quinn criter.		2.164098
F-statistic	3999.041	Durbin-Watson stat		2.635324
Prob(F-statistic)	0.000000			

The PP test was thus conducted on the X and Y and relying on the results reported above, we are able to once again reject the null hypothesis of a unit root against the one sided alternative since the PP-statistic is less than (lies to the left of) the critical values.

The problem that we seem to notice however is that they describe the US marketplace to be not weak form efficient, something that is uncharacteristic of the most capitalist economy in the world. So what do these results mean? Well perhaps this unexpected result can be justified by a number of theories that come to mind. For one, the absence of sufficient data in convenient form might be a contributing factor. The stock market returns used only included one side of the two companies merged, since we are dealing with a case that doesn't involve dual listed companies, causing disruption in the share price index which covers the whole stages of pre and post-merger. Another theory can be the fact that company information was released and circulated before annual reports with revised numbers were officially available. AOL was involved in a scandal whereby it had inflated ad revues by over $190 million and was later ordered by the authorities to republish corrected figures. Finally we could say that the market moved dramatically over a large period of time that it became a speculation market and later on a gamble market. That means that the market movement trend reflected the fact that most of the investors became

speculators, something that would be a direct result of the dot com and housing bubble bursts for the time of our study.

Having completed the necessary tests to make sure our work provides reasonable economic analysis, we proceed with our regression analysis and type in the following command on E-views:

LS Y C X

The estimation output is presented below:

Table 23: Final regression output

Dependent Variable: Y
Method: Least Squares
Date: 01/31/15 Time: 18:47
Sample (adjusted): 1/20/1995 12/30/2014
Included observations: 4905 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.53E-05	0.000351	-0.243188	0.8079
X	0.999447	0.000547	1827.381	0.0000

R-squared	0.998534	Mean dependent var	-0.014019
Adjusted R-squared	0.998534	S.D. dependent var	0.641202
S.E. of regression	0.024554	Akaike info criterion	-4.575477
Sum squared resid	2.956012	Schwarz criterion	-4.572827
Log likelihood	11223.36	Hannan-Quinn criter.	-4.574547
F-statistic	3339321.	Durbin-Watson stat	1.924556
Prob(F-statistic)	0.000000		

The regression equation is: Y= -0.853E-05 + 0.999447X

- Beta (non-diversifiable/systematic risk)=0.999447

- The relationship is positive indicating that the required return on Time Warner stock moves in conjunction with the market.
- The p-value for the test of significance is 0.000 (the null hypothesis that X=0 is rejected) and thus it is a significant determinant of Y at the 5% level.
- The R2 and adjusted R2 of the regression are extremely high meaning goodness of fit, or that the variation in our dependent variable is captured by X to a degree of 99.8%
- A lower AIF is better because it's a better estimate of goodness of fit since it penalizes increasing the number of estimated parameters therefore discouraging over fitting.
- Durbin watson test of 1.9 suggests no autocorrelation (it's between 0 and 4, closer to zero indicates positive autocorrelation and closer to 4 indicates negative autocorrelation).

The results show that the CAPM holds for Time Warner, and that it has a level of risk that is almost identical to the market, as the two moves in a near parallel fashion. This conclusion was established using a total of 4905 observations after adjustments for a period between January 1st 1995 and January 1st 2015 for the return on TWX and that of NASDAQ taking into consideration the risk free rate of 3 month US treasury rates.

CHAPTER VI

CONCLUSION

On December 9th, 2009 we saw an end to what was dubbed as the worst deal in history, when AOL finally spun out of Time Warner. What the two companies had envisioned as the start of a new era where traditional media companies would cooperate with their internet rivals never actually materialized as the deal went sour even before regulatory approval was received. The main issue behind the failure is that the deal was not motivated by logic or strategy but more by egos of men at the helm.

What seemed to be the perfect opportunity for a merger made in heaven, AOL was once dominant of the dot-com players but lacked the foundation to justify record breaking stock market valuations. Time Warner on the other hand was failing to establish online presence, and so the decision to merge seemed to make perfect sense. This so called transformative move promised AOL better online content at Time Warner's disposal while helping the latter establish a footing in the online business and reach the homes of tens of millions of new customers through AOL's subscription reservoir.

Within just a short period of time, the calamity of the deal was evident, as the burst of the dot-com bubble forced AOL to announce a goodwill write off of $99 billion, the highest loss any company had witnessed to that date, and made even the most devoted investors in

the deal wary as AOL stock value dropped from $226 billion to $20 billion. So what went wrong?

One factor that posed a threat to the deal was the prolonged approval process ahead of the merger. Antitrust concerns by the FTC, FCC and European Commission made the merger a lengthy and expensive process to begin with.

Social factors added to the mix included questions on how to tackle intellectual property rights on the internet while at the same time being able to deliver expansive content to justify add on subscription fees that customers were unwilling to pay for.

Economic volatility was unexpected at the time the deal was struck. The economy entering a recession at the heels of the dot-com bubble burst resulted in volatile stock prices as the investor base shifted. Short term investors quickly exited the market adding on to the devaluation problems for AOL while it waited for approval.

From a technical point of view, AOL struggled with its last mile problem of expanding its business globally, as these expansion efforts proved to be expensive. AOL was never able to establish the competitive advantage it had hoped for. Despite it being the number one provider of dial up internet in the country, an impending shift in technology gave rise to consumer demand for high speed broadband internet connection that allows free access, something AOL was not about to give up. Their business model was about to implode on them. Where would the world be if you had to pay access fees for using Google or Yahoo or any other browsing portals for that matter?

The cultural aspect of the merger was what finally clinched the failure of the deal. Management ignored the importance of a proper organizational structure to ensure the longevity of any business. They failed to acknowledge the cultural differences of two companies that lay on the opposite sides of the business spectrum, despite unparalleled resources at hand, whether they are human, technological, or physical. Having too many big names on the management side of things only added to the confusion and resulted in conflict between employees, especially when adhering to management decisions about daily operations.

Factoring in all these problems, the inevitable divorce between the two businesses in 2009 was considered by some investors to be long overdue.

In the short years that followed, Time Warner was able to report a few numbers that indicate it's on the path of recovery. 2010 they had revenues of $26.9 billion, the highest growth rate since 2004 and a 6% rise compared to 2009. Later in 2012 they reported $29 billion in revenues, the highest growth rate in nearly a decade. AOL's future on the other hand is still a little blurry. Theymaintain a company mission that focuses on content creation and increasing online advertising revenues, but are faced with an even bigger problem of not only proving to the outside world that AOL still exists, but what it actually stands for.

The purpose behind referencing these cases is to draw attention to the fact that there is no exact science when dealing with mergers or acquisitions. We can notice certain similarities and differences in corporate approaches, but ultimately it boils down to the

simple idea of how to create value. As with every case study, there are certain limitations that cannot be overtaken. In the case of the AOL and Time Warner merger, stock price movement for AOL during the period of the merger could not be found thereby preventing further analysis as to how the whole process of merger and demerger has had an effect on the beta levels for AOL, and for how long will the effects last. It is also unclear that despite staggering losses in value and market position for Time Warner, they still garnered a beta level that is compatible with market risk, a sign thatusually encourages cautious investors to place a bet on. Thus the intended aim is to provoke others into digging deeper as to why the company does not have a higher than average risk level, could it possibly be because they still deliver on product quality like no one else, especially in the print media? Although they were unsuccessful at merging the worlds of print and electronic, the value in that still exists if handled properly, so can there be another attempt at it in Time Warner's future?

The question that remains is whether or not this project has served its purpose. It is in my opinion that it has in more ways than one. From what has been gathered before, we can now look at cases of mergers and be able to identify what motivates them, we are able to assess the drivers behind these decisions and identify their characteristics. Not only that, but from an investor point of view, we will be able to question the validity of the argument presented to support a merger and infer if there is synergy to be made. It has provided us with enough insight to move past the attention grabbing headlines and investigate the reasoning offered by merging parties as to how this move will affect the investor's bottom line. We will be more aware that despite the best intentions and fact based research, we will also have to pay close attention to the implementation process, how will the firms be able to

maneuver the many challenges or obstacles that lay ahead, as they are key to any successful merger case. The methodology used in this project was a combination of archiving financial and accounting data related to both parties, with emphasis on testing the CAPM theory for one of the merging parties. One weakness that presents itself is the fact that the CAPM failed to capture the gravity of the losses that the two parties fell victim to during the whole merging and demerging period. Perhaps this is because the test was one sided and was missing the stock level fluctuations that AOL suffered from at the time, and thus translated into better than expected results. A complication that could not have otherwise been averted, it leads me to question whether there could be another way of quantifying the impact that the merger had on the financial standing for Time Warner and AOL. One approach to tackling this issue would be through comparing the beta level generated in the above test to that of competitors to Time Warner that could possibly allow us to draw conclusions about the merger effect. I would also recommend a different methodology by looking at the effects of the merger from the bookkeeping and financial ratios angle. Using the above gathered data, we can establish comparison tables for key financial indicators for both AOL and Time Warner pre and post-merger, and calculate the percentage change in those figures to illustrate the negative ripple effect that swept both companies. Not only that, we can go a step further in future projects and make the same comparisons with a third party that operates in the same market, which in my opinion would further highlight the negative consequences and positive, if they exist, that the whole process of merging and demerging had.

Investor frenzy is all too common, especially when there is hope for hitching your wagon onto the next big thing. The combination of overzealous investors and new business ground can often spell out disaster; that is why before contemplating the prospects of any new business combination we need to be on the lookout for a few things:

- Misinterpreting assumptions as hard given facts
- Management that is set in its ground and refuses to make compromises
- Large sums of upfront investment, and not enough emphasis or testing on sequential cash flows
- Great deal of uncertainty and a time crunch factor.

Investors need to take into consideration these factors before diving in any deal, especially when there is money to gamble with in the hundreds of billions of dollars.

AOL Time Warner COO Bob Pittman was quoted on January 2000 saying "The value of this merger lies not only in what it is today, but in what it will be in the future."

In the end he was right, but little did he know that the value he was talking about would never be able to materialize.

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