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THE EQUITY PERFORMANCE OF COMPANIES THAT EMERGE FROM CHAPTER 11 BANKRUPTCY POST YEAR 2000

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ABSTRACT

The study focuses on determining if companies that emerge from chapter 11 bankruptcy witness positive abnormal returns after they emerge from bankruptcy. The study examines 60 companies that emerge from chapter 11 bankruptcy after 2000 and uses the market model and CAPM to determine expected returns. The paper also aims to find the nominal relative performance, as of 12/31/2014, of emerging companies against the S&P 500 and its respective industry. The study found that companies that emerged from chapter 11 bankruptcy witnessed cumulative negative abnormal returns when using CAPM and the market model 250 days after emerging from bankruptcy. The study also found that total median and average nominal relative performance of the firms were negative compared to the S&P 500 and their respective sectors.

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Chapter 1 : Background on Topic

Introduction

Traditional economic theory suggests that businesses and the economy follow a cycle marked with periods of expansion and periods of contraction. Ever since the formation of the United States, the economy has followed this classic business cycle model of witnessing periods of rapid growth, such as during the Industrial Age, and periods of economic contraction, such as the Great Depression and most recently, the Great Recession. During these lull periods of the economy many businesses witnessed deteriorating financial performance, but they were able to survive and prosper when the economy grew again. However, some companies financially crumbled and defaulted on their payments to creditors. Due to the severity of the economic contraction that the United States witnessed in the Great Recession, the amount of bankruptcies reached record levels. For example, during the Great Recession "265 companies defaulted on a total of $330.0 billion of debt in 2009 and in 2008, 103 defaults were registered where $280.9 billion of debt were defaulted on" (Metz). During this time, the economy also saw various historically profitable and reputable companies such as Lehman Brothers, Chrysler LLC, General Motors, and AIG seeking bankruptcy protection as well. When companies are unable to make payments to their creditors they can file for chapter 7 protection or chapter 11 protection under the Bankruptcy code. Under chapter 7, a business is required to completely liquidate their business and cease operations. On the other hand, chapter 11 requires the business to formulate a

restructuring plan while continuing their operations in hopes of being able to reemerge from bankruptcy. Depending on how sufficient the reorganization plan and success of the execution were, some companies successfully reemerged from Chapter 11 bankruptcy after the Great Recession and traded once again on the public equity markets. The performance of companies that have re-IPOed their shares after bankruptcy has been researched by academia in the past. However, many of the studies have conflicting results.

Bankruptcy and Restructuring Process

The purpose of bankruptcy law can be summarized by the 1934 Supreme Court decision in the Local Loan Co. V. Hunt case where they state the purpose of the Bankruptcy Act is to "relieve the honest debtor from the weight of oppressive indebtedness, and permit him to start afresh free from the obligations and responsibilities consequent upon business misfortunes" (Local Loan Co. v. Hunt 1934). The premise of Bankruptcy Law can be found in the U.S. Code under Title 11 and is divided into eight chapters. Chapters 1, 3, and 5 primarily provide basic definitions and provisions while chapters 7, 9, 11, 12, and 13 discuss the different types of bankruptcy. A corporation can file under two types of bankruptcy; chapter 7 and chapter 11. Chapter 7 bankruptcy is when a company stops all operations and goes completely out of business while a company that files under chapter 11 bankruptcy attempts to reorganize its business and continues its operations (Securities Exchange Commission). The chapter 11 bankruptcy process begins with the filing of a petition with the bankruptcy court serving the area where the debtor, the company that is filing for bankruptcy, has a domicile or residence (United States Courts).

This process is known as an in-court restructuring. The distressed company can either file a voluntary petition or an involuntary petition. A voluntary petition is when the debtor believes that it is in the best interests of company to declare bankruptcy and files the petition itself and an involuntary petition is when three or more creditors force the company into bankruptcy because they are not receiving payments on their claims (Moyer 2005). The majority of the time companies file a voluntary petition. A large consideration for a company that files for chapter 11 bankruptcy is deciding what jurisdiction to file in and the timing of the filing.

Bankruptcy courts are divided into circuits and districts. Some courts are considered to be more debtor-friendly or have a reputation of being more efficient with managing the bankruptcy process. Therefore companies that are planning on filling for chapter 11 conduct extensive due diligence on the various districts and decide which district court will be best suited to handle their reorganization before filing. In most cases, senior management of a distressed company sees the warning signs of their financially instable company a considerable amount of time before having to file for bankruptcy protection. Therefore, management usually begins speaking with their creditors and hires financial advisors at the first signs of distress. The three common types of chapter 11 bankruptcy are prenegotiated, prepackaged, and freefall bankruptcies. These types of bankruptcies are categorized based on how much dialogue and planning was conducted before filing. A prenegotiated bankruptcy is when the company and its creditors workout a preliminary reorganization plan and has it ready to be voted on when the company actually files (Moyer 2005). A prepackaged bankruptcy is when "financial and institutional creditors participated in decisions to file, timing of filing, treatment of creditors, and the complete solicitation of a plan of reorganization in the prepepetition preparation phase of the

case" (Irmis 1). Prepackaged bankruptcy is similar to a prenegotiated bankruptcy, but instead the company actually solicits votes from its creditors for or against the reorganization plan prior to filing. A free fall case is when no consensus has been reached with the company's creditors before filing for chapter 11 (Moyer 2005). When the chapter 11 case is defined as a free fall case the bankruptcy process is usually longer. The average length of chapter 11 bankruptcies from 1982-2002 is around 16 months (Lee). During chapter 11 bankruptcy the debtor begins focusing on stabilizing operations, developing a business plan, and determining the priority of liabilities and the company's new capital structure (Moyer 2005).

After filing for bankruptcy a company's main concern is stabilizing its operations. The moment when the company files for chapter 11, a provision called the automatic stay begins. The automatic stay provision "prevents any claimants from pursuing an action that could have been commenced prepetition against the debtor except with the permission of the bankruptcy court" (Moyer 2005). This serves as a form of breathing room for the company since it prevents creditors from claiming the amount they are owed from the debtor without the permission of the bankruptcy court. Since the debtor's prepetition debt is frozen after filing, the majority of reorganizing companies need a new credit line to cover working capital needs. This new credit facility that is granted to the debtor in possession is called a DIP facility and will have claims over prepetition unsecured liabilities. A debtor in possession is the case where the prefiling management of the distressed company continues to run the company's operations while undergoing a chapter 11 bankruptcy. While the debtor obtains DIP financing for the company, management actively works to create a going forward business plan and the company resumes day to day operations.

When a debtor files for chapter 11 it is the U.S. trustee's duty to appoint the official unsecured creditors' committee. The credit committee is comprised of the seven largest creditors who are willing to serve and represents the interests of all the unsecured creditors (Moyer 2005). The main goal of the committee is to "assist in maximizing the dollar amount paid to all unsecured creditors from the bankruptcy estate" (The Merdian Group). While under chapter 11 the company works with its advisors and the official committee of unsecured creditors to create a new strategy for the firm. This can included actions such as selling noncore assets, reducing costs, and restructuring operations. Another important component of a firm operating in chapter 11 bankruptcy is determining the priority of its liabilities and the new capital structure.

When the company files for chapter 11 it is required to "file schedules listing all of its creditors and its shareholders" (Bracwell & Giuliani). Claims and equity interests are grouped together into different classes depending on their priority of claim in the capital structure and the nature behind the claim. According to the Section 101(5)(A) of the Bankruptcy code a claim means any "right to payment, whether or not such right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisptuted, legal, equitable, secured or unsecured." The priority of claims from most senior to most junior is as follows:

1. Secured Claims[1]
2. Superpriority Claims (e.g., Debtor-in-possession financing)
3. Priority Claims
    a. Administrative expenses (including legal and professional fees incurred in the case)
    b. Wages, salaries, or commissions
    c. Employee benefit claims
    d. Claims against facilities that store grain or fish produce[2]
    e. Consumer deposits
    f. Alimony and child support

[1] Includes any type of claim that is backed by collateral.
[2] U.S. Bankrtuptcy Code § 507 (6) (A) & (B)

   g. Tax claims
   h. Unsecured claims based on commitment to a federal depository institution's regulatory agency
4. General Unsecured Claims
5. Preferred Stock
6. Common Stock

**Source: Morgan Stanley "Coming Through in a Crisis"*

In most cases common stock holders essentially get wiped out or don't receive any recoveries. However, there have been some cases where equity committees have been formed and are involved in the restructuring process. According to Glassman "equity committees have been appointed in a minimum of 30 cases in 12 jurisdictions in the US between 2000 and 2005" (2005). For example equity committees were created for a few large restructurings that include Loral Space and Kmart (Glassman 2005). In order to decipher what the proposed capital structure will be an enterprise valuation and a liquidation analysis are performed. An enterprise valuation is deciding what the firm is worth by using a comparable multiples analysis or a discounted cash flow analysis. A common multiple that is used to find the valuation of the debtor is the Enterprise Value / Earnings Before Interest Taxes Depreciation and Amortization multiple. The going concern enterprise valuation is a main concern for creditors because it affects the allocation of recoveries (Moyer 2005). A lot of times the management uses the amount of what the going concern value is to determine the future capital structure of the company. If the valuation is higher then the majority of the creditors can satisfy their claim but if it is lower then less creditor will be able to satisfy their claim.

In order for a company to emerge from the chapter 11 bankruptcy process, the debtor needs to create the plan of reorganization that must be approved by the company's creditors and confirmed by the U.S. bankruptcy court. The reorganization plan is "a legal document that discusses what will happen to the debtor, its assets, and all constituent liabilities upon the

debtor's exit from bankruptcy" (Moyer 2005). When the debtor files for chapter 11 it has the exclusive right to file a plan of reorganization for the first 120 days and must provide disclosure statements to its creditors to vote on the reorganization (Moyer 2005). This time period is known as the "exclusivity period." Before the plan of reorganization can be approved by its creditors, the debtor is required to draft a disclosure statement. A disclosure statement is large document that contains a "summary of significant events in the chapter 11 case, a summary of the proposed chapter 11 plan, a rough estimate of the value of different classes of creditors' and interest holders' recoveries under the plan, cash flow projections, a description of the proposed post-bankruptcy management and board of directors…and interest holders' recoveries under the plan to their recoveries in a hypothetical liquidation of the debtor under chapter 7" (Drain 14). After the disclosure statement is drafted it is then submitted to the court for approval. After the court approves its adequacy, the debtor then mails the disclosure statement along with the preliminary copy of the plan of reorganization for debt and equity holders to vote on. In a prepackaged bankruptcy this process occurs before the company actually files for bankruptcy. For a class of claims to approve the plan of reorganization "more than 50% in number of claims representing at least 66 2/3% in amount must vote in favor" (Moyer 2005). Once the creditors approve the plan it is sent to the U.S. Bankruptcy court that the debtor filed in to be confirmed. For a plan to be approved it must meet 13 confirmation requirements that are listed in section 1129(a) of the Bankruptcy Code. In addition, there are four tests that must be conducted before the plan can be confirmed by the court. The four tests are the best interest of creditors test, the good faith test, the feasibility test, and the consent or cram-down test. The best interest of creditors test states that "if a creditor votes against the plan or reorganization, the proponent of the plan must establish that the dissenting creditor's proposed recovery under the plan must be at

least great as if the debtor liquidated" (Moyer 2005). The good faith test is very vague in the Bankruptcy code and it states that the plan of reorganization needs to be proposed in good faith. The feasibility test is pretty basic requires the court to determine if the debtor can meet its commitments under the plan of reorganization. The reason behind this is to make sure that the debtor won't file again for chapter 11 bankruptcy in the near future. The cram-down provision however is a little bit more complicated to explain. Section 1129(a)(8) of the bankruptcy code at first glance appears to require all impaired classes to accept the plan. However, in Sections 1129(a)(10) and section 1129(b) it allows a dissenting creditor class to be forced to accept the plan or "crammed down." Since the Bankruptcy Code contains the doctrine of absolute priority, an effect of the cram-down provision is to force the debtor to garner the support of all impaired classes if it attempts to provide any type of recover to an out-of-the-money junior class without paying all more senior classes in full" (Moyer 2005). In simpler terms it means that it allows the plan proponent to confirm the plan even though one or more classes reject the plan or receive no distributions.

If the plan of reorganization meets the required criteria and is approved by the Bankruptcy court, then all of the terms and conditions will be binding to both the debtor and its creditors. The debtor will then work to meet its performance obligations that was laid out in the plan of reorganization. In addition, "the assets and operations of the post-confirmation debtor or successor entity will be free of liens and claims of creditors except as provided for under the plan and the ownership and management of the debtor will be governed by the plan" (Spiro).

General Motors Chapter 11 Case Study

General Motors ("GM") chapter 11 bankruptcy is unique in two ways; the size of the bankruptcy, and the government's involvement. During the Great Recession, General Motors was in financial turmoil. The company was losing market share to foreign car companies that featured more affordable cars with greater fuel efficiency and was witnessing large costs because the majority of GM's workforce was part of the United Auto Workers (Bosco 2013). However, General Motors wasn't the only automobile company faltering. According to Bosco and Plante the manufacturing industry "lost 50% of its sales and over 400,000 jobs" (Bosco 2013). On November 5, 2008 the Center for Automotive Research predicted that if one of the three major domestic auto manufactures were to go bankrupt, approximately 3 million jobs would be lost when including the spillover effects on suppliers, the market, and the success of the two other manufactures (Bosco 2013). On the onset of the financial crisis the U.S. government created the Troubled Asset Relief Program ("TARP") which was meant to provide capital to faltering companies. Due to how financially unstable the auto industry was during this time, the government created the Auto Industry Financing Program to set aside funds to help the industry.

At the end of 2008, General Motors reported total assets of $91.047 billion and liabilities of $176.387 billion, clearly showing that that company was in a liquidity crisis and needed help. In December of 2008, General Motors went in front of the U.S. government and asked for $18 billion from the Auto Industry Financing Program to remain viable and presented a viability plan (Bosco 2013). However, the government rejected their proposal and decided to grant the company a treasury prepetition loan of $13.4 billion that would be available in three different installments over the course of the year and required GM to come back with a new restructuring plan. On February 17, 2009, General Motors presented their new restructuring plan to the U.S.

Department of the Treasury. The plan called for numerous changes including, reducing the number of manufacturing plants to 32 from 47 by 2014, cutting the amount of employees to 72,000 from 92,000 by 2012, and shedding unprofitable car brands (Bosco 2013). However, the plan was rejected on March 30, 2009 and the government suggested that they should consider filing for chapter 11 bankruptcy.

General Motors planned on conducting a prepackaged chapter 11 bankruptcy. This is when a company creates a plan of reorganization and disclosure statement prior to filing for chapter 11 bankruptcy in the U.S. Bankruptcy courts and solicits votes from its creditors for the plan's approval. After the restructuring plan was rejected on March 29, 2009 the U.S. government agreed to provide General Motors with working capital financing for 60 days while General Motors worked on creating another restructuring plan. General Motors proposed that it would utilize subsection 363 of the U.S. bankruptcy code to sell its assets while under chapter 11. The company that would be purchasing the assets would become the restructured General Motors after giving some consideration to their creditors. Essentially they planned on creating a "New GM" and an "Old GM." (Dow Jones DBR High Yield 2009). The Old GM would include the assets that they wanted to whine down and the New GM would be owned by its unsecured creditors, the U.S. and Canadian governments, and the UAW (Dow Jones DBR High Yield 2009). The two largest creditors that General Motors had to negotiate with were the UAW administered independent VEBA trust and the company's general unsecured creditors. General Motors owed $20 billion to the VEBA trust while it owed $27.2 billion to its general unsecured creditors (Bosco 2013). While General Motors was working on its plan of reorganization the United States government provided their promised funding to General Motors and the total amount of financing amounted to $19.4 billion as of May 23, 2009 (Dow Jones DBR High Yield

2009). After numerous negotiations General Motors was able to strike a deal with the UAW. On May 26, 2009 the UAW "agreed to accept 17.5% of the reorganized GM's stock, $6.5 billion in preferred stock, warrants for another 2.5% stake and a $2.5 billion note" (Dow Jones DBR High Yield 2009). Since the UAW agreed to a deal, General Motors turned to focusing on reaching a deal with its general unsecured creditors. On May 26 GM offered to exchange their $27 billion obligation for a 10% stake in the New GM (Dow Jones DBR High Yield 2009). However, the creditors disapproved the plan. In order to appease their creditors they offered the 10% stake in the new reorganized firm but included warrants to purchase an additional 15% of the new company at a discounted price (Bosco 2013). However, the unsecured creditors would not be able to exercise their warrants until General Motors value was at least $15 billion and could not challenge the restructuring plan during the chapter 11 process (Dow Jones DBR High Yield 2009). On May 30, 2009 54% of the unsecured bondholders, which was over the 50% threshold that was required for the deal to be counted as a prepackaged bankruptcy, approved the new deal (Bosco 2013). After securing agreements from their two largest creditors General Motors filed for chapter 11 bankruptcy on June 1, 2009. During the chapter 11 process General Motors would be sold to a purchasing company called Vehicle Acquisition Holdings, LLC under subsection 363 and would have the old General Motors be liquidated and be named Motors Liquidation Company (Bosco 2013). Once General Motors filed for bankruptcy, the U.S. government provided General Motors with another $30 billion in exchange for more than a 60% equity stake and the Canadian and Ontario governments provided general motors with $9.5 billion for a 12.5% stake in the company (Dow Jones DBR High Yield 2009). On July 10, 2009, General Motors acquired substantially all of the assets and assumed certain liabilities of Old GM. After acquiring Old GM's assets, New GM became the restructured General Motors and the Old

GM pursued a plan of liquidation for the next two years (Bosco 2013). On March 31, 2011 the Second Amended Joint Chapter 11 plan became effective (Business Wire 2011).

After completing the 363 sale, "the United States Treasury owned 60.8% of the company, the UAW owned 17.5%, the governments of Canada and Ontario owned 11.7% and the Old General Motors Company owed 10%" (Bosco 2013). On November 17, 2010 General Motors went public and sold 478 million shares of common stock at a price of $33 each. After the IPO the treasury's share in the company went from under 61% to under 33% (Baldwin). Since the company's IPO the company has demonstrated the following adjusted financial performance according the Bloomberg Terminal:

	Fiscal Year Ending December 31,				
	2010	**2011**	**2012**	**2013**	**2014**
Revenue	**$135,592**	**$150,276**	**$152,256**	**$155,427**	**$155,929**
% growth	*NA*	*10.8%*	*1.3%*	*2.1%*	*0.3%*
EBITDA	**$12,858**	**$13,035**	**$15,016**	**$15,588**	**$14,833**
% margin	*9.5%*	*8.7%*	*9.9%*	*10.0%*	*9.5%*
Net Income	**$5,074**	**$7,556**	**$5,419**	**$5,431**	**$6,887**
% growth	*NA*	*48.9%*	*(28.3%)*	*0.2%*	*26.8%*
% margin	*3.7%*	*5.0%*	*3.6%*	*3.5%*	*4.4%*
Current Ratio	**1.13x**	**1.17x**	**1.30x**	**1.31x**	**1.27x**
Quick Ratio	**0.87x**	**0.90x**	**1.02x**	**1.08x**	**1.07x**

Figure 1 Summary of GM's Financials (Source: Bloomberg & FactSet, $ in millions)

As you can see revenue has improved from being $135,592 million in 2010 to $155,929 million in 2014. The company's liquidity has improved as well where both the current ratio and the quick ratio have increased from 2010 to 2014. In terms of the company's stock price it has underperformed significantly relative to the S&P 500 and the S&P 500 Industrials Sector. Since it IPOed the company's stock price has only increased 2.1% while the S&P 500 has increased 72.0% and the Industrials sector has increased 73.5% as of 12/31/2014.

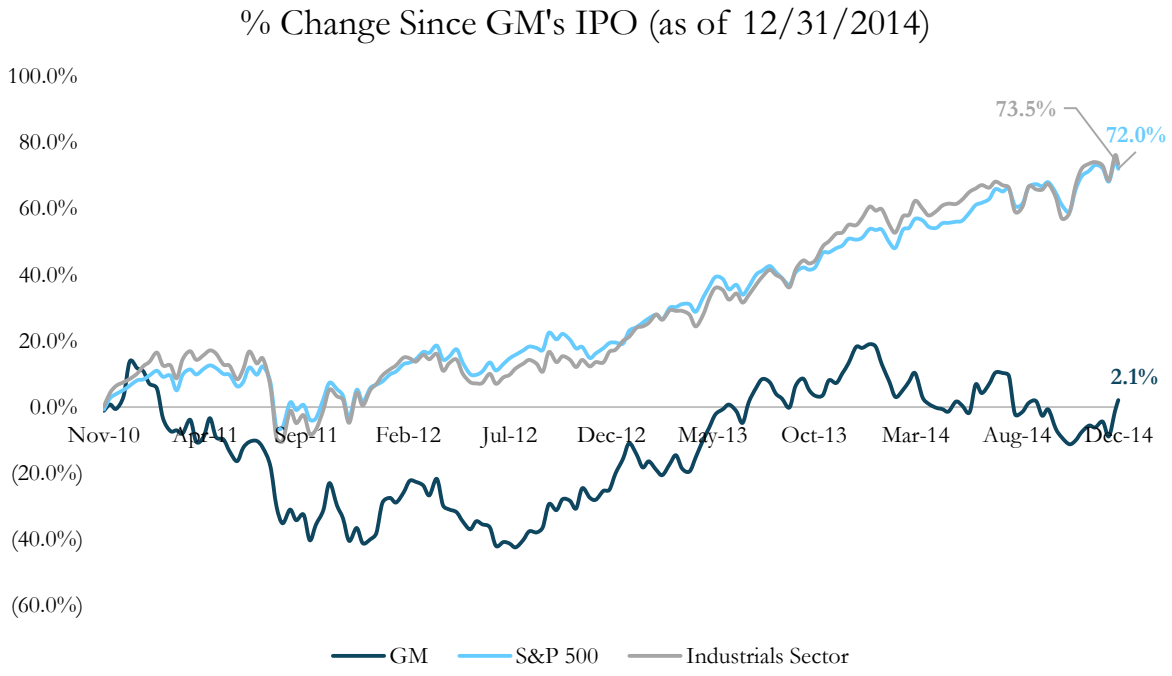


Figure 2 Graph of GM's Stock Price Compared to S&P 500 and Sector

Chapter 2 Literature Review

According to Altman and Hotchkiss, who wrote Corporate Financial Distress & Bankruptcy, only 26-45% (depending on the year) of public firms emerged from bankruptcy over the period of 1990-2002 with their reorganization plans confirmed by the courts. For the firms that had their plans approved, about 44% reemerged as a publicly registered company (Altman 2006). For the firms that don't have their plans approved by their creditors, they continue negotiations and if they end up not reaching some type of agreement the company may file for chapter 7. It is also not uncommon to see firms re-enter chapter 11 bankruptcy. In Altman's paper titled "Avoiding Chapter 22" he found 215 firms refiled for chapter 11 bankruptcy from 1984 to 2009. They also observed a sample of 60 "chapter 22" firms and found that the second filing all occurred within nine years after they first emerged from chapter 11 (Altman 2009). In the paper Altman found that "leverage of firms which failed again was almost three times greater than those that emerged and remained solvent" (Altman 2009). Altman concluded that it's difficult for a reorganized firm to be successful if the balance sheet contains excessive debt. After reading about the difficulty of the restructuring process I wanted to learn more about the performance of reorganized firms. When conducting my literature review I examined academic papers that observed the operating performance and equity performance of firms emerging from chapter 11 bankruptcy.

There is a substantial amount of research that has observed the operating performance of firms emerging from chapter 11 bankruptcy. In 1995 Hotchkiss found that over 40% of the firms

that emerge from chapter 11 bankruptcy as public entities experience operating losses in the first three years. In the study 75% of the sample had lower EBITDA ("Earnings Before Interest Taxes Depreciation and Amortization") margins than that of nonbankrupt firms in the same industry in the first year of emergence (Hotchkiss). Hotchkiss conducted a similar study with Mooradian in 2004. They found that "more than two-thirds of the sample underperform industry peers for up to five years following bankruptcy, and over 18% of the firms have negative operating income in the year following emergence" (Hotchkiss 2004). However, in a 2007 study conducted by Avner Kalay, Rajeev Singhal, and Elizabeth Tashjian they found different results about the operating performance of firms emerging from chapter 11. In this study they observed 113 reorganized firms from 1991 to 1998. They found that firms experience an increase in operating efficiency while in chapter 11 bankruptcy as well as better operating efficiency of firms in a matched portfolio (Kalay 2007). This suggests that firms that filed for chapter 11 experienced net benefits. This academic paper also performed a cross sectional test that found that "firms with higher debt ratios experience greater improvements in operating performance, and the complexity of the renegotiation process negatively affects the improvement" (Kalay 2007). After reading about the intrinsic financial performance of emerged firms I started to focus my attention on reading more about the equity performance of emerged public firms.

There are several prominent academic papers today that have examined the equity performance of the companies that reemerged from bankruptcy, but they have conflicting results. The most well-known research report that documents the equity performance of companies that reemerge from bankruptcy is the academic paper by Alan Eberhart, Edward I. Altman, and Reena Aggarwal titled, "The Equity Performance of Firms Emerging from Bankruptcy." In this report they concluded that companies that reemerge from bankruptcy witness cumulative

abnormal returns. The authors used days 201 through 274 as the estimation window to calculate the abnormal returns. When comparing their sample to the returns of a basket of nonbankrupt firms with the same industry and similar sizes, they found average cumulative abnormal returns to be around 25%. When the paper utilized the market model they found average cumulative abnormal returns to be around 139% and the median cumulative abnormal returns to range from 5% to 7%. However, a paper by Michael Alderson and Brian Betker emerged in 1999 that contradicted their findings. The paper examined a sample of 89 firms that emerged from 1983-1993 and they calculated the 5 year annualized return of both debt and equity holders and found that their sample did not underperform or outperform the returns of their benchmark portfolios (Alderson 1999). Since these two academic reports were relatively outdated and did not include data from either the Great Recession or the tech bubble, I started searching for more recent academic reports. In a study conducted by J. Thomas Lee and John Cunney in 2004 they found that investing in equities from formerly bankrupt companies between 1988 and 2003 outperformed the S&P 500 by ~85.0% (Lee 2004). When looking at the data more closely, the volatility of the returns were extremely high and only 50% of the sample firms outperformed the S&P 500. However, in a working paper produced in 2003 by Goyal, Kahl, and Torrous they found average abnormal returns close to zero using a value-weighted portfolio but extreme negative abnormal returns (-51%) using a size and book-to-market portfolio for firms emerging from bankruptcy (Goyal). In Goyal's paper these returns where calculated over a five year time interval where previous papers examined returns over a one year interval. Even though these research papers contained data from the bursting of the tech bubble that the markets witnessed in the early 2000's, the academic reports still did not included any data from the Great Recession. In January 2014 Abu Shaker wrote an academic research paper that tracked the equity

performance of companies that emerged during the financial crisis. Shaker was able to find that companies that reemerged from bankruptcy during the period of 1994-2006 witnessed abnormal positive returns while the companies that reemerged from 2007-2011 showed both positive and negative abnormal returns (Shaker). Even though Abu Shaker's research is the most recent on the subject, he only compares his control basket to the overall S&P 500 performance. Due to the various research methods that the academic community has used over the years to assess the performance of companies that emerged from bankruptcy, their results have varied drastically. With my data collection and research I am going to simulate the same methods that Eberhart used in his 1999 study to calculate cumulative abnormal returns. In addition, besides Shaker's paper, the academic research on this topic is outdated and does not examine the Great Recession that contained numerous bankruptcies while my research will.

Table 1 Summary of Studies

Study (Date)	Findings
The Equity Performance of Firms Emerging from Bankruptcy (1999)	ACAR over the first 200 days of trading ranges from 24.6% to 138.8% and the MCARs range from 5.1% to 8.4%
Assessing Post-Bankruptcy Performance: An Analysis of Reorganized Companies' Cash Flows (1999)	Examined the return of both debt and equity holders of reorganized firms between 1983 and 1993 and found that at least half of the sample firms generated a return that exceeded the return of available benchmarks
The Chapter After Chapter 11 (2003)	Found that investing in equities from formerly bankrupt companies between 1988 and 2003 outperformed the S&P 500 by ~85.0%.

The Long-Run Stock Performance of Financially Distressed Firms: An Empirical Investigation (2003)	Found average abnormal returns close to zero using a value-weighted portfolio but extreme negative abnormal returns (-51%) using a size and book-to-market portfolio for firms emerging from bankruptcy
The Equity Performance of U.S. Firms Emerging from Chapter 11 Bankruptcy (2014)	Companies that reemerged from bankruptcy during the period of 1994-2006 witnessed abnormal positive returns while the companies that reemerged from 2007-2011 showed both positive and negative abnormal returns

Chapter 3 Methodology

Background on Event Studies

According to Simon Benninga, an event study aims to determine whether a particular event or announcement caused an abnormal return in a company's stock price (Benninga 2008). Event studies were first popularized by two notable working papers; Ball and Brown (1968) and Fama (1969). Some events that are commonly examined in event studies are earnings announcements, stock splits, and spinoffs. Event studies are divided into three time frames; the estimation window, the event window, and the postevent window. The estimation window is used to determine the normal behavior of the stock market factors before the event window. The typical length of an estimation window is 252 days (Benninga 2008). The event window is usually a few days before the particular event you are examining. For example, if you are observing the effects of earnings announcements on companies, the estimation window would be a few days before announcing earnings. Establishing an event window allows a researcher to investigate whether the event announcement was expected or leaked (Benninga 2008). The postevent window begins the day after the event occurs and allows one to see the long term affects the event has on the company's performance. This study uses the event study method to find the performance of companies that emerged from chapter 11. In an event study the abnormal return is calculated by taking the actual return and comparing it to its expected return. The stock's expected return is usually calculated using the market model. The market model

works by taking a stock's daily return for a given time period and an index's daily return during the estimation window and finding the correlation and the intercept of the data points. The variables calculated in the estimation window are then used to predict what the price should be during the event window. The equation for finding the abnormal return of a stock is:

$$AR_{i,t} = R_{i,t} - (a_i + \beta_i R_{m,t})$$

Where $R_{i,t}$ is the actual daily return and $\alpha_i+\beta_i R_{m,t}$ is the daily expected return. Event studies are mainly concerned with cumulative abnormal returns. This is simply "the sum of all the abnormal returns from the beginning of the event window t_1 until a particular day t in the window" (Benninga 2008):

$$CAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{i,t}$$

This study was concerned with finding the cumulative average abnormal returns overtime. Average abnormal returns are calculated by using the following equation:

$$AAR = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t}$$

In order to calculate the cumulative average returns the study first calculated all the daily abnormal returns for each company on a given day. Then I averaged the 60 different abnormal returns on T day to arrive at the average abnormal return on t day. The cumulative average abnormal returns were then calculated.

Estimating Expected Returns

This study used two different methods of calculating the expected return of the stock; the standard market model and a daily CAPM. The first method of finding the expected return was using the standard market model. However, this study is different from a typical event study due to how it selected its estimation window. Since the event that I wanted to observe was the re-issue date, I was unable to establish an estimation window prior to the re-issue date since price data did not exist. In Eberhart's paper titled "Equity Performance of Firms Emerging from Chapter 11 Bankruptcy," he establishes the estimation window to be from the daily trading interval of (201,274). To replicate a similar methodology our study's estimation window was (251,324). In order to predict the expected returns for the first 250 trading days, I calculated alpha and beta coefficients during the (251,324) interval and utilized it to predict the expected returns for various event windows from return 1 to return 250. These coefficients were calculated using the ordinary least squares estimates. Since this event study had to resort to using a future estimation window to predict past expected returns, I decided to use the capital asset pricing model to predict the daily expected return. The second method to finding the daily return was using a daily CAPM which was found by the following equation:

$$CAPM = R_f + \beta(r_m - r_f)$$

The theory behind the capital asset pricing model is that the minimum return on an equity investment should equal to the risk free plus the stock's beta times the implied equity risk premium. I believed that taking the levered industry beta, un-levering it based off the industry's average book debt / equity ratio, and re-levering based on the company's book debt / equity ratio

at time *T* was a comprehensive way of capturing the risk of the firm. The equation to un-lever beta is:

$$\beta U = \frac{\beta L}{1 + (1 - t)\frac{D}{E}}$$

To re-lever beta, the equation is:

$$\beta L = \beta U \left[1 + (1 - t)\frac{D}{E}\right]$$

Since many reemerged corporations very high debt / equity ratios when they initially emerge out of bankruptcy, re-levering the industry beta to the firm's debt / equity ratio captures the risk of the highly leveraged firm. Usually when one un-levers and re-levers beta they use market value of equity. However, FactSet did not have the capability to provide debt / market value of equity ratios for the industry and the company. Therefore, the study uses debt / book value of equity ratios when levering and unlevering betas. In addition, I kept the tax rate at 35% to reflect the average long term corporate tax rate. When companies reemerge from bankruptcy they usually have significant NOLs that are carried forward from their weak operating performance to the post bankruptcy period. Therefore I decided to keep the tax rate at 35% to avoid factoring in the large distribution of tax rates across my sample.

Data Collection Procedure

The data collection process was arduous. I contacted New Generation Research, a leading company that focuses on bankruptcy research, in order to obtain a starting list of all the

companies that have emerged from chapter 11 bankruptcy in their database. I decided to use New Generation Research because it was the same company that Lee used in his research report and the company is well known for their bankruptcy research. The list originally contained 944 companies and descriptive data such as the emergence date, the filing location, the company's industry, bankruptcy outcome, and more. After consulting with New Generation Research they believed that companies emerging from the year 2000 to present contained the most comprehensive data, so the study focused on companies emerging from chapter 11 after 2000. In addition, the original list only included firms that emerged and traded on a U.S. stock exchange. From there I then selected the companies that emerged from chapter 11 and went public and the list was narrowed down to 304 companies. The study wanted to focus on companies that had market caps greater than $600 million on the day of their emergence. The reason behind this rationale was that companies with larger market values generally have higher trading volumes and a lower illiquidity risk. In order to find market values greater than $600 million, I created a spread sheet that calculated the monthly market value of each company using FactSet excel codes from the company's effective date to 5 years after emerging. This allowed me to focus on finding the exact reissue date for the companies that reemerged and had market values greater than $600 million. While conducting the study and narrowing down the list, I realized that in most cases reemerged companies reissued their shares at a later date from when they emerged from bankruptcy. Two databases, ProQuest and Factiva, were used to search for articles that provided the exact date of when the selected companies emerged. In addition, some attractive candidates were removed from the list due to an insufficient amount of trading days. This resulted in producing a final list of 60 companies.

To obtain the daily price data of the companies and the S&P 500 the study utilized FactSet excel codes. The generated prices were adjusted by FactSet for any stock splits or spinoffs that may have occurred over any given span. FactSet and Bloomberg Excel codes were used extensively to find the daily expected return using CAPM. I then classified each company into one of the ten S&P 500 sectors based on reading the company's description. After assigning an industry to a given company, the study used FactSet industry excel codes to obtain the industry's book debt to equity rate for a given quarter. Then I used Bloomberg excel codes to find the daily raw 3 year historical beta of the given industry against the S&P 500 for the 250 days. To obtain the daily 10 year risk free rate and the company's individual debt to equity ratio the study also used FactSet excel codes. In some cases FactSet was unable to provide a book debt to equity ratio for the first quarter after the company emerged because the company didn't file a 10-Q about their results. When this happened, I used the levered industry beta to calculate my daily CAPM. I also used Aswath Damodaran's annual historical risk premiums in my daily CAPM calculations.

When trying to track the total nominal performance of purchasing a reemerged stock to present day, some of the companies were acquired. To find out the acquisition completion date of the companies that were acquired, I used a Bloomberg terminal. Then I was able to find what the total nominal performance was of purchasing the emerged company when it reissued its shares and holding it up to the acquisition completion date.

Chapter 4 Research

Expected Returns using the Market Model Results

In this study the market model used data from event window starting at day (251,324) to calculate alpha and beta coefficients which were used to calculate the expected returns for a series of event windows from day 1 to day 250. When using the market model to find the cumulative average abnormal returns of my sample for 250 trading days, the cumulative average abnormal returns were approximately -16.30%. The median cumulative average abnormal returns for the sample was -19.19%. When analyzing different event windows using the market model the following results were found:

Table 2 Cumulative Abnormal Returns using the Market Model

Event Window	Cumulative Abnormal Average Return	Cumulative Median Abnormal Returns
1 to 10	(0.39%)	(1.67%)
1 to 50	(1.13%)	(5.14%)
1 to 150	(4.69%)	(9.69%)
1 to 200	(10.33%)	(12.63%)
1 to 250	(16.30%)	(19.19%)
50 to 150	(3.19%)	(4.73%)

Expected Returns using the daily CAPM Equation

When calculating expected returns using the CAPM equation, the study used the daily historical 10 year treasury rates and the annual historical equity risk premium that were adjusted daily and a re-levered industry beta to calculate daily expected returns. When calculating the expected returns using a daily CAPM for the first 250 trading days after emergence, the cumulative average abnormal returns were approximately -4.97%. The median cumulative abnormal returns were -11.41%. When analyzing different event windows using a daily CAPM the following results were found:

Table 3 Cumulative Abnormal Returns when using CAPM

Event Window	Cumulative Abnormal Average Return	Cumulative Median Abnormal Returns
1 to 10	0.27%	(0.86%)
1 to 50	3.41%	(2.35%)
1 to 150	3.73%	(4.85%)
1 to 200	(4.03%)	(8.27%)
1 to 250	(4.97%)	(11.41%)
50 to 150	0.67%	(2.53%)

Calculating Total Nominal Outperformance Relative to S&P 500 and the Sector

The average outperformance relative to the S&P 500 of my sample when purchasing equities on the reissue date holding them to 12/31/2014, or if the company was acquired and you held the equity up until the completion date, was 59.9%. However, the median outperformance relative to the S&P 500 of my sample was -5.2%. When examining the relative outperformance relative to the sector the average outperformance as of 12/31/2014 was 54.0%. The median outperformance was -8.8%. ~52% of the sample witnessed positive outperformance when compared to the S&P 500 and ~53% witnessed positive outperformance when compared to their Bloomberg sector.

Chapter 5 Conclusion

This study used two different methods to calculate expected returns; the market model and CAPM for 60 companies that emerged from chapter 11 bankruptcy after the year 2000. When using the market model the study found that companies that emerged from chapter 11 bankruptcy witnessed cumulative average abnormal returns for a 250 day window of -16.94%. When using the daily CAPM the cumulative average abnormal returns for the same event window was -4.97%. When using CAPM the results may have been skewed for companies that took a longer time to issue its first 10-Q. When FactSet was unable to pull the company's quarterly book debt to equity ratio, I resorted to using the industry beta to calculate the expected returns until FactSet pulled a quarterly debt to equity ratio. Therefore, for companies that had a large debt to equity ratio for their first reported quarter, and there was a significant amount of time between re-issuing their shares and when they reported their 10-Q, the company's leverage risk was not factored into calculating the expected returns between the reissue date and when they reported their first quarterly results. These negative cumulative average abnormal return results are consistent with what Shaker and Goyal found in their papers when calculating the cumulative abnormal returns of companies emerging from bankruptcy. My results however contradict Eberhart's comprehensive study on the subject matter where he and the coauthors found positive abnormal returns of re-emerged public companies. When calculating the average nominal performance relative to the S&P 500 of my sample, I found a total relative average performance as 12/31/2014 of 59.9%. However the median relative performance of the sample compared to the S&P 500 was -5.2%. Finding a large relative average outperformance was consistent with Lee's 2004 findings. However when Lee conducted his research he only calculated the 12 month relative return where in my paper I calculated the total return as of

12/31/2014. In addition, I noticed that there was a lot of volatility with the nominal returns since half of the sample relatively outperformed while the other half relatively underperformed. This is also consistent with what Lee and Cunney found in their study.

Appendix A

List of Observed Companies ($ in MM)

Company Name	Ticker	Emergence Date	Assets
WorldCom, Inc.	MCIP	4/20/2004	$103,914
General Motors Corporation	GM	3/31/2011	$91,047
CIT Group Inc.	CIT	12/10/2009	$80,449
Conseco, Inc.	CNO	9/10/2003	$61,392
Pacific Gas and Electric Company	PCG	4/12/2004	$36,152
Global Crossing, Ltd.	GLBC	12/9/2003	$30,185
General Growth Properties, Inc.	GGP	11/9/2010	$29,557
Lyondell Chemical Company	LYB	4/30/2010	$27,392
Calpine Corporation	CPN	1/31/2008	$27,216
UAL Corporation	UAUA	2/1/2006	$25,197
AMR Corporation	AAL	12/9/2013	$25,088
Delta Air Lines, Inc.	DAL	4/30/2007	$21,801
Mirant Corporation	MIR	1/3/2006	$19,415
Ambac Financial Group, Inc.	AMBC	4/29/2013	$18,886
Kmart Corporation	KMRT	5/5/2003	$14,630
Northwest Airlines Corporation	NWA	5/31/2007	$14,042
Charter Communications, Inc.	CHTR	12/1/2009	$13,882
Dex One Corporation	DEXO	2/20/2010	$11,881
AmTrust Financial Corporation	AFSI	11/30/2011	$11,700
NRG Energy, Inc.	NRG	12/5/2003	$10,884
Federal-Mogul Corporation	FEMO	12/27/2007	$10,150
Dynegy Holdings, LLC / Dynegy Inc.	DYN	10/1/2012	$9,949
Dana Corporation	DAN	2/1/2008	$9,047
US Airways Group, Inc. (2004)	LCC	9/27/2005	$8,349
AbitibiBowater Inc.	ABH	12/9/2010	$8,072
Lear Corporation	LEA	11/9/2009	$6,873
Owens Corning	OC	10/31/2006	$6,494
Eastman Kodak Company	KODK	9/3/2013	$6,239
SemGroup, L.P.	SEMG	12/1/2009	$6,140
Visteon Corporation	VC	10/1/2010	$5,248
Petroleum Geo-Services ASA	PGS	11/5/2003	$4,303
Armstrong World Industries, Inc.	AWI	10/4/2006	$4,165
Laidlaw, Inc.	LI	6/23/2003	$4,000
Pilgrim's Pride Corporation	PPC	12/28/2009	$3,874
Spansion Inc.	CODE	5/10/2010	$3,816
AMERCO	UHAL	3/15/2004	$3,773
Kaiser Aluminum Corporation	KALU	7/6/2006	$3,343
Solutia Inc.	SOA	2/28/2008	$3,342
FairPoint Communications, Inc.	FRP	1/24/2011	$3,334
USG Corporation (2001)	USG	6/20/2006	$3,214
Chemtura Corporation	CHMT	11/9/2010	$3,064
Six Flags, Inc.	SIX	5/3/2010	$3,031
Harnischfeger Industries, Inc.	JOYG	7/13/2001	$2,787
Loral Space & Communications Ltd.	LORL	11/22/2005	$2,693
Northwestern Corporation	NWEC	11/2/2004	$2,673
Winn-Dixie Stores, Inc.	WINNV	11/21/2006	$2,619
W.R. Grace & Co.	GRA	2/3/2014	$2,585
RCN Corporation	RCNI	12/22/2004	$2,346
Warnaco Group, Inc.	WRNC	2/4/2003	$2,343
Spectrum Brands, Inc.	SPB	8/28/2009	$2,247
Leap Wireless International, Inc.	LEAP	8/16/2004	$2,164
Atlas Air Worldwide Holdings, Inc.	AAWW	7/27/2004	$2,085
Cooper-Standard Holdings, Inc.	COSH	5/27/2010	$1,818
Idearc Inc. (2009)	SPMD	12/31/2009	$1,815
Tronox Incorporated	TROX	2/14/2011	$1,732
Vencor, Inc.	KIND	4/20/2001	$1,718
Dade Behring Holdings, Inc.	DADE	10/3/2002	$1,142
Magellan Health Services, Inc. (2003)	MGLN	1/5/2004	$1,004
Chiquita Brands International, Inc.	CQB	3/19/2002	$811
Carmike Cinemas, Inc.	CKEC	2/7/2002	$807

Appendix B

Calculated Cumulative Abnormal Returns Sample Template using CAPM

Company Name	WorldCom, Inc.
Ticker:	MCIP
Interval:	1
Currency:	USD
Index:	SP50
FactSet Sector:	SP793
Bloomberg Sector:	S5TELS
Re-Issue Date:	7/14/2004
Year	2004

Dates	Price	Price Return	Risk Free Rate	Raw Industry Beta	Industry D/E ratio	Effective Tax Rate	Company D/E ratio	Un-Levered Industry Beta	Re-Levered Industry Beta	Implied ERP	CAPM	Abnormal Return
7/14/2004	$16.93	NA	4.48%	0.70	97.4%	35.0%	74.5%	0.43	0.64	0.01%	0.03%	NA
7/15/2004	$16.95	0.12%	4.49%	0.70	97.4%	35.0%	74.5%	0.43	0.64	0.01%	0.03%	0.09%
7/16/2004	$17.21	1.53%	4.36%	0.70	97.4%	35.0%	74.5%	0.43	0.64	0.01%	0.03%	1.51%

Appendix C

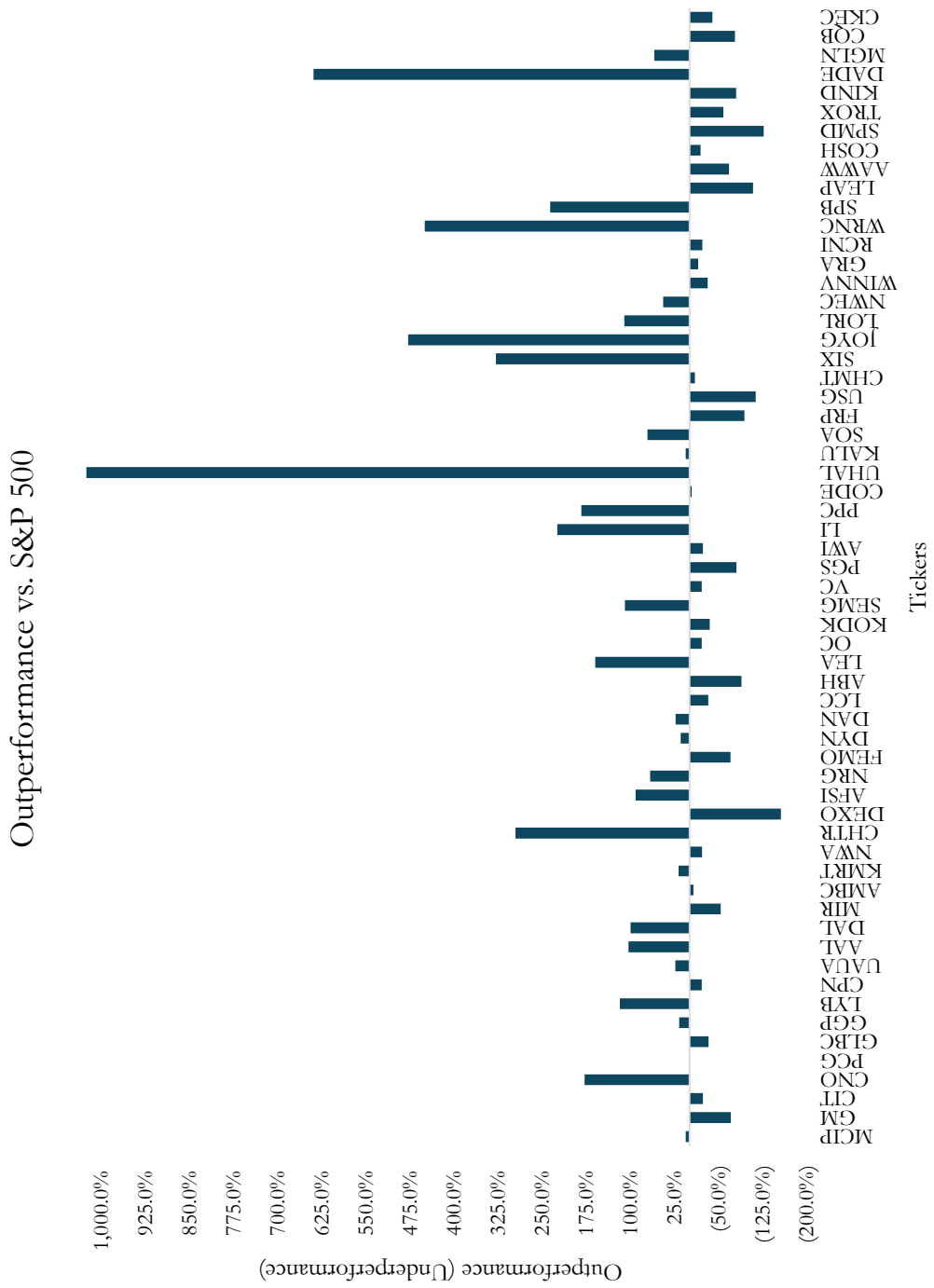
Calculated Cumulative Abnormal Returns Sample Template using Market Model

Company Name	WorldCom, Inc.
Ticker:	MCIP
Interval:	1
Currency:	USD
Index:	SP50
FactSet Sector	SP793
Bloomberg Sector	S5TELS
Re-Issue Date:	7/14/2004
Year	2004
Intercept	(0.0001)
Slope	0.0945
R-squared	0.0259
Steyx	0.0034

Dates	Price	Price Return	Index Price	Index Return	Abnormal Return	AR t-test	AR Significant?	Cumulative AR
7/14/2004	$16.93	NA	1,111.47	NA	NA	NA	NA	0.00%
7/15/2004	$16.95	0.12%	1,106.69	(0.43%)	0.17%	0.50	no	0.17%
7/16/2004	$17.21	1.53%	1,101.39	(0.48%)	1.59%	4.69	yes	1.76%

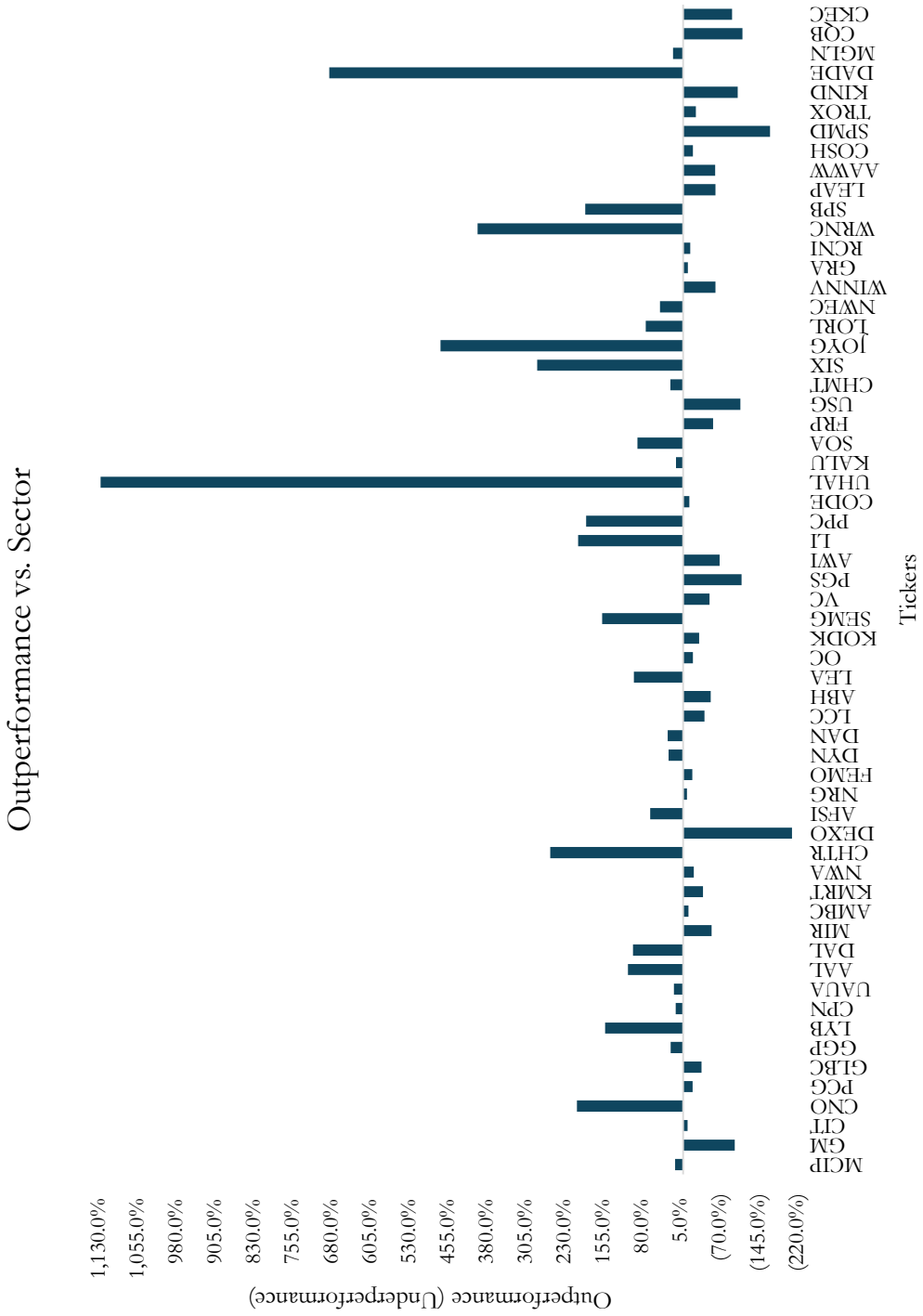
Appendix D

Relative Performance Graph vs. S&P 500



Appendix E

Relative Performance Graph vs. Bloomberg Industry Index



Appendix F

Calculated Cumulative Abnormal Returns Using CAPM and Market Model

Ticker	CAPM CAAR	Market Model CAAR
MCIP	37.6%	47.1%
GM	(37.3%)	(25.0%)
CIT	19.9%	29.3%
CNO	19.4%	15.0%
PCG	10.8%	(7.1%)
GLBC	(23.4%)	39.4%
GGP	(24.0%)	(46.0%)
LYB	(0.5%)	(59.5%)
CPN	(63.1%)	(47.1%)
UAUA	29.2%	169.7%
AAL	40.5%	5.8%
DAL	(76.5%)	(148.6%)
MIR	20.3%	(90.5%)
AMBC	(24.2%)	111.0%
KMRT	104.5%	(94.0%)
NWA	(81.1%)	(300.6%)
CHTR	4.3%	11.0%
DEXO	(157.9%)	102.3%
AFSI	5.3%	(38.0%)
NRG	50.3%	53.7%
FEMO	(17.4%)	(2.5%)
DYN	1.3%	(16.0%)
DAN	(198.7%)	(273.9%)
LCC	82.7%	40.0%
ABH	(43.4%)	(5.9%)
LEA	36.4%	(14.9%)
OC	(17.7%)	15.4%
KODK	(38.1%)	(16.4%)
SEMG	13.9%	40.8%
VC	(42.4%)	7.1%
PGS	34.3%	(96.2%)
AWI	(4.0%)	9.4%
LI	28.2%	(68.4%)
PPC	(14.4%)	(17.8%)
CODE	0.6%	(1.0%)
UHAL	64.3%	(19.8%)
KALU	53.3%	43.2%
SOA	(92.5%)	(75.2%)
FRP	(129.9%)	(143.5%)
USG	(9.6%)	79.4%
CHMT	(15.9%)	(48.9%)
SIX	76.2%	111.9%
JOYG	(10.4%)	147.8%
LORL	0.9%	(146.6%)
NWEC	10.4%	5.4%
WINNV	37.3%	(11.3%)
GRA	(10.6%)	(40.3%)
RCNI	17.2%	14.2%
WRNC	32.7%	(45.0%)
SPB	10.2%	(72.8%)
LEAP	14.7%	(39.6%)
AAWW	8.4%	50.4%
COSH	34.2%	59.9%
SPMD	(170.9%)	(63.0%)
TROX	19.4%	(30.8%)
KIND	(110.7%)	(158.5%)
DADE	66.5%	(45.8%)
MGLN	26.4%	11.6%
CQB	(44.6%)	(166.1%)
CKEC	47.0%	78.6%

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ACADEMIC VITA

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Education: The Pennsylvania State University, Schreyer Honors College, Bachelor of Science in Finance, Minor in Economics
Honors: Spring 2015 Finance Department Student Marshal, Sam Wherry Honors Scholarship, 2014 CFA Institute Research Challenge – Pittsburgh Regional winner, The Evan Pugh Scholar Award, President Sparks Award, President's Freshman Award

PROFESSIONAL EXPERIENCE

Perella Weinberg Partners **New York, NY**
Investment Banking Summer Analyst June 2014 – August 2014

- Worked on a variety of sell-side M&A deals; completed standalone operating models, various valuation analyses, and client presentations
- Served on a fairness opinion of a potential $32.0 billion TMT merger, and helped prepare internal presentations, various valuation analyses, and conducted industry research
- Assisted with creating a client presentation for a $10.0+ billion retail company that discussed potential strategic actions that included a DCF analysis, a LBO analysis, and a precedent transactions analysis

Bryant Park Capital **New York, NY / Philadelphia, PA**
Investment Banking Summer Analyst May 2013 – August 2013

- Worked on a variety of deals primarily including buy-side and sell-side M&A; completed standalone operating models, various valuation analyses, information memorandums and client presentations
- Selected Transaction Experience:
  - $5.9 million sale of CBC Settlement Funding, LLC to Asta Funding, Inc. (NASDAQ: ASFI)
    - Analyzed and created a detailed analysis of the company's historical financial statements that ultimately led to an increase in the company's valuation

Nittany Lion Fund, LLC **University Park, PA**
Executive Board Treasurer / Lead Portfolio Manager, Information Technology Sector November 2013 – December 2014

- Selected to be on the Executive Board of the $6.1 million Nittany Lion Fund for the 2014 calendar year term
- Chosen to manage the $1.0 million IT portfolio for the 2014 fiscal year, the largest sector within the Nittany Lion Fund

Lead Portfolio Manager, Materials Sector January 2013 – December 2013

- Managed a materials sector portfolio that nominally returned 34.1%, a relative outperformance of 9.5% when compared to the materials benchmark, in 2013
- Utilized public comparables, discounted cash flows, and financial statement analysis to value materials sector equities for investment and presented the findings to fund managers

Associate Portfolio Manager, Utilities Sector September 2012 – December 2012

- Assisted the lead analyst by developing stock pitches using Bloomberg, SEC Filings, and FactSet

Morgan Stanley Smith Barney **Allentown, PA**
Summer Intern, Global Wealth Management June 2012 – August 2012

- Analyzed portfolios and recommended strategic asset allocations to meet the clients' personal financial goals
- Contacted and updated selected clients on their account status with Morgan Stanley and was held responsible for organizing client events that hosted approximately 30 people

Center for the Study of Mergers and Acquisitions **University Park, PA**
Research Assistant January 2013 – May 2014

- Worked in the Dickinson School of Law by supporting Prof. Thompson's research in the Mergers & Acquisitions field by compiling various financial periodicals such as Bloomberg Businessweek, Harvard Law School Forum, and the Wall Street Journal that discussed corporate governance and M&A trends