

Long-Term Sustainability of Mergers and Acquisitions as a Growth Driver
A Case Study of Hospital Corporation of America

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Abstract

Hospital Corporation of America (HCA) is well-known in the healthcare industry as being a giant in the hospital management sector. HCA's current growth driver, mergers and acquisitions (M&A), was examined in order to determine whether the current growth strategy is sustainable. By measuring various financial metrics related to growth, finding the correlation to metrics relating to M&A activity, and considering qualitative evidence, analysis shows HCA's M&A activity has driven significant business growth for the firm. After calculating a suite of financial ratios intended to measure the financial health and sustainability of firms, it was determined that HCA's current growth strategy cannot be continued indefinitely on a sustainable basis, nor does it maximize shareholder value. Continued reliance on M&A activity for business growth is not sustainable for HCA, as found through the establishment of HCA's current growth strategy, and examination of the effects of this strategy financially.¹

HCA Introduction

Hospital Corporation of America (HCA), a multi-functioning hospital company, has dominated the healthcare industry since their beginning. HCA was founded in 1968 as one of the nation's first hospital companies (Press Kit, n.d.). This was a time in which the United States healthcare system was still being structured in many ways. Just three years prior to the beginnings of HCA, president Lyndon B. Johnson signed into law the Social Security Act of 1965 (Social Security, n.d., para. 2). This bill laid the foundation for what is known today as Medicare and Medicaid. Prior to this bill, the jobless and

¹ All financial data concerning HCA from public 10-K SEC filings unless otherwise stated

elderly struggled to have the necessary healthcare provided. Hospital Corporation of America began as a single hospital called Parkview Hospital in Nashville, Tennessee (Gilpin, 1998, para. 4). From there, HCA began the journey of massive expansion. Merging frequently with other companies and acquiring additional hospitals, HCA quickly became a familiar name amongst communities across the United States and abroad.

HCA had their first initial public offering one short year later in 1969. Doing so brought tremendous growth for the company by opening new avenues for financing that could be used for further mergers and acquisitions (M&A) activity. The growth continued through the '70s and '80s for HCA as they began to use many new and innovating business practices to expand their business and accelerate growth. During 1981, HCA acquired General Care Corporation, General Services, and Hospital Affiliates International. By the end of the year, HCA owned an empire. With 349 hospitals and 49,000 beds under management, operating revenues were up \$2.4 billion (Press Kit, n.d.).

The empire HCA continued to build was one never seen before. In 1994, HCA grew to \$20 billion in revenue, with 285,000 employees, but soon became the subject of a fraud investigation. The investigation concerned the way the company handled Medicare billing, which left millions of dollars in question. After settling in 2002, HCA agreed to pay the United States (U.S.) government \$631 million and \$17.5 million to Medicaid agencies, amongst other expenses, to settle the 1997 dispute (Appleby, 2002, para. 6). From there, HCA rebranded in many ways and restructured their key executives and board members. Another transition occurred for Hospital Corporation of America in 2006. The Frist family and several other investors joined together to take HCA private

again. The deal was completed at \$33 billion, which was the largest LBO in history to be completed at the time (Press Kit, n.d.). A short four years later, HCA decided to once again take the company public. This Initial Public Offering (IPO) included 126.2 million shares sold at \$30 each, anticipating a \$4.6-billion initial public offering. Although this marked the largest private-equity backed IPO in United States history (Baldwin, 2011, para. 2), there were many challenges on the horizon for HCA and the rest of the healthcare industry. HCA began as a newly publicly traded company with debt totaling \$26 billion (Baldwin, 2011, para. 14). Another business challenge stemmed from the newly signed Affordable Care Act in 2011. This legislation required Americans to buy health insurance and required that an online health insurance exchange be available to sell subsidized health insurance (Affordable Care Act, n.d., para. 1). Although this new law presented an opportunity for companies like HCA, it was crucial for the company to develop a strategy to adapt to the ever-changing healthcare landscape in the U.S.

Beginning as one of the first for-profit hospitals in the nation, HCA sought to outperform other hospitals by using scale, financial strategy, and management expertise. Today, HCA is the largest hospital company in the nation; it reached \$43.6 billion in revenue in 2017 alone. HCA's operational and strategic decisions continue to drive massive growth, showing they are a big spender when it comes to merger and acquisition transactions, as I will continue to demonstrate as my research furthers.

Healthcare Industry Introduction

The healthcare industry has been recognized as the leading sector for merger and acquisition activity since 2015. In short, the term merger and acquisition is defined as one

company choosing to merge with another company, or acquiring another company in its entirety. In 2017 alone, 11 reported transactions involved sellers with net revenues \$1 billion or greater (Skokie, 2018, para. 2). During 2018, we saw pivotal deals such as CVS health completing its long-targeted acquisition of Aetna. This deal was completed at roughly \$70 billion, one of the largest deals in healthcare history (Lavito, 2018, para. 3). Ultimately, we are seeing major healthcare giants taking advantage of the optimal market conditions such as low interest rates and tax cuts, to use merger and acquisition activity to carry out their financial and strategic goals to drive growth. Specifically, the hospital sector of the healthcare industry is making most of this time to “give their systems greater scale to reduce costs, offer additional care services, and create a larger foot print in the local market” (RevCycle Intelligence, 2018, para. 5). In addition, hospitals are also acquiring physician practices to increase their market share and “capture more of the healthcare continuum” (RevCycle Intelligence, 2018, para. 15).

Another factor driving the ever-growing healthcare industry in the United States is the rapidly growing old-age population. According to the U.S census website, by 2030, all baby boomers will be over the age of 65. For the first time in U.S. history, older people will outnumber children. This statistic means one in every five residents will be at retirement age. It is questionable if the U.S has the healthcare infrastructure to support such a large number of people over the age of 65 (U.S. Census Bureau, 2018, para. 1). Despite this concern, healthcare companies have many challenges and opportunities ahead. With these challenges and opportunities comes encouragement for companies like Hospital Corporation of America to continue to drive growth from M&A activity.

Healthcare Industry Drives Nashville Growth

The healthcare industry has provided a huge source of income for Tennessee since the mid 1900s. Companies have consistently taken advantage of the lower cost of real-estate, the large pool of talent coming from major universities around the area, and the upward trajectory Nashville has been on since the early 2000s. Companies like Hospital Corporation of America have helped pave the way for such a boom. To further this impact, the healthcare industry centered in Middle Tennessee contributes to the larger healthcare industry across the United States and globally. According to the Nashville Healthcare Council, Nashville healthcare industry generates more than \$92 billion in revenue and more than 570,000 jobs on a year to year basis. Locally, the Nashville healthcare industry contributes an overall economic benefit of \$46.7 billion and more than 270,000 jobs to the economy annually. Seventeen publicly traded healthcare companies are headquartered in Nashville. Healthcare in Nashville has also proven to provide an industry of innovation. As the Healthcare Council points out, more than \$1.6 billion in venture capital has been invested in Nashville healthcare companies from 2005-2015 (Nashville: The Health Care Industry Capital, n.d., para. 7). As the statistics above demonstrate, the Nashville Scene proves these points further by stating, “because of the presence of the industry is so great, any changes made here are bound to send a ripple through the greater healthcare market” (Haggard, 2018, para. 34). HCA beginning their business in the Nashville area then expanding to other parts of the U.S, and eventually internationally, is a prime example of the ripple sent through the greater healthcare market, but is this sustainable?

Problem Discussion

As demonstrated above, Hospital Corporation of America has played a major role in shaping the healthcare landscape into what it is today. Prior to its start, hospitals were predominately non-profit or religiously affiliated, but HCA was a force of change. Even further, HCA has contributed to the positive economic impact experienced in Nashville over the last decade. Along with these factors, HCA has dominated the healthcare industry, using M&A activity as their primary vehicle of growth. According to filings found on sec.gov, in 2017 HCA spent \$1.21 billion on merger and acquisition transactions. By strategically growing through M&A activity, HCA has grown to a network of 178 hospitals and 119 freestanding surgery centers in 20 states and the United Kingdom (“Who We Are”, n.d.). These transactions have allowed HCA to grow to be a large company with increasing revenues, while showing no signs of changing course and continued completing merger and acquisition deals all through 2018. Clearly, HCA believes that it is in their best interest to spend large quantities of capital each and every year on these transactions. In addition, HCA must also believe it is through M&A transactions that shareholder value will be maximized. It is through analysis that this thesis will test how sustainable this growth is. For research purposes, sustainable growth or sustainability will be defined as being able to grow continually in this way for numerous years into the future while being able to meet all financial obligations and maximize shareholder value in the long haul.

Hypothesis

These merger and acquisition transactions have been a very important factor in relation to HCA's impressive growth. Without these merger and acquisition transactions, HCA would not have been able to grow at the rate or degree in which they have achieved. Through my research, I hope to show that HCA owes its growth to accretive merger and acquisition transactions, as proven by several measures of growth. By choosing to operate as an investment firm first, and healthcare provider second, they have been able to grow at a high rate and to a greater degree than any other major healthcare conglomerate. The factors that have led to this hypothesis are many. HCA has a history of allocating vast amounts of resources to merger and acquisition transactions within the healthcare sector. During this time, HCA has grown both rapidly and steadily. Through the exploration of this hypothesis, I will seek to answer many questions, including the following:

1. How are M&A transactions correlated to HCA's growth?

Financial

- a. What part of HCA's growth is due to M&A transactions?
- b. What correlation is there between market share and amount spent on M&A transactions?
- c. What correlation is there between market share growth and revenue growth?
- d. What correlation is there between the number of hospitals purchased and revenue growth?

Strategic

- e. What have company officers stated about the reasons for certain M&A deals?
 - f. How have company officers justified expenditures for M&A deals?
 - g. How do the backgrounds of company officers and investors influence the overall growth strategy of HCA?
 - h. How does HCA's growth compare to competing firms?
 - i. How has the announcement of M&A activity affected the stock price?
2. What are the strengths, weaknesses, opportunities, and threats of HCA's high-volume M&A activity?
 3. How sustainable is the growth HCA is experiencing due to M&A transaction?
 - a. What is HCA's cash flow coverage ratio?
 - b. What is HCA's debt to equity ratio?
 - c. What is HCA's equity multiplier?
 - d. What is HCA's capital structure?
 - e. What is HCA's interest coverage ratio?

Methodology

Question 1:

In order to support my hypothesis, I plan to examine HCA both quantitatively and qualitatively. For my quantitative research, I will analyze HCA's recent merger and acquisition activity. I will define which indicators will be used to quantify merger and acquisition transactions. Indicators that will be used to quantify merger and acquisition transactions will be number of merger and acquisition transactions, cost of individual

merger and acquisition transactions, total expenditures on merger and acquisition transactions, and number of hospitals and hospital beds acquired. Indicators used to measure growth will be change in revenue, goodwill gained, and change in market share. I will further gather qualitative information in the form of quotes, press releases, news articles, industry journals, excerpts from investor letters, and SEC filings. This information will be found through CapIQ, HCA SEC filings and financial statements, HCA investor documents, news outlets, and reputable industry media outlets. Research will expand further to gauge the sustainability of HCA's M&A activity by calculating the acquisition expenditures to single basis point increase of market share and calculating the ratio of a single basis point increase in market share to revenue growth. After gathering data on HCA's merger and acquisition activity and growth, I will be comparing measures of merger and acquisition activity with HCA's growth in the same years and calculating the correlation between the two. I will be using the correlation coefficient calculation to determine the correlation between the two data sets. This formula is stated below (Figure 1).

$$\text{Correl}(X, Y) = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

Figure 1

After calculating the correlation between the quantitative data sets indicating merger and acquisition activity and business growth, I will examine the qualitative data to further support if merger and acquisition transactions have been the primary growth driver for HCA. After looking at both quantitative and qualitative data for HCA overall, as well as for specific deals, I hope to show that my hypothesis is true, by proving there is not only

correlation between merger and acquisition activity and business growth, but also causation.

Question 2:

To determine the impact on stock price from the announcement of M&A transactions, I will first specify the time of announcement, given from the press release section of HCA's website. The time frame to monitor the change in stock price will be 1 trading day before the announcement, the day of the announcement, and 1 trading day after the announcement. To gain a better understanding of the impact of the announcement, I will compare the performance of HCA's stock against the Healthcare S&P 500 (^HCX). This will help determine if HCA's stock is up or down because of the M&A announcement or if the market as a whole is up or down for that particular time period.

Question 3:

In order to measure whether HCA's current growth strategy through M&A transactions is efficient and sustainable, I will calculate a series of financial ratios and measures to gauge the impact these transactions have on the company's financial health. These ratios and measures can be calculated using information published in SEC filings, among other public sources. By measuring the cash flow coverage ratio (Figure 2), debt-to-equity ratio (Figure 3), the equity multiplier of HCA (Figure 4, understanding their capital structure, and what their interest coverage ratio is (Figure 5), I will be able to determine whether HCA's current growth mechanisms are sustainable for future growth and financial health.

Cash Flow Coverage Ratio = Operating Cash Flows / Total Debts

Figure 2

$$\text{Debt/Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Shareholder Equity}}$$

Figure 3

Equity Multiplier = Total Assets / Total Equity

Figure 4

Interest Coverage Ratio = Cash Flow from Operating Activities / Interest Expense

Figure 5

The above formulas will be used to calculate these ratios.

Question 1 Analysis:

While it is clear that HCA has achieved remarkable growth, it is important to examine how the company's growth relates to its M&A activity. HCA has spent billions of dollars to acquire companies and contribute to their growth. In order to discover just how related HCA's business growth and M&A activity is, as well as determining the efficiency of their M&A expenditures, this paper will examine various metrics relating to HCA's M&A activity and their growth. If there is a positive correlation between the various metrics that can be supported by quantitative and qualitative evidence, one can be confident in the causation of M&A activity to HCA's overall growth.

Successful M&A transactions involving medical facilities should increase market share. This is a basic assumption, as there are a finite number of medical facilities in the United States, and the purchase of a number of these facilities should increase the overall market share of a firm unless the opening of new facilities outpaces the acquisitions of said firm. HCA’s market share was measured in relation to the amount spent on M&A transactions (Figure 6). Market Share (Figure 7) was calculated by dividing the total number of hospitals owned by HCA, as listed in their yearly 10-K reports, by the total number of U.S. community hospitals, as reported by the American Hospital Association.

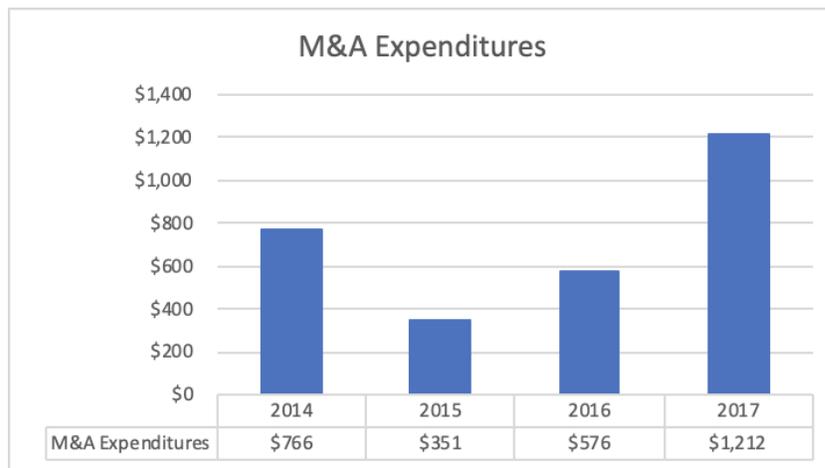


Figure 6

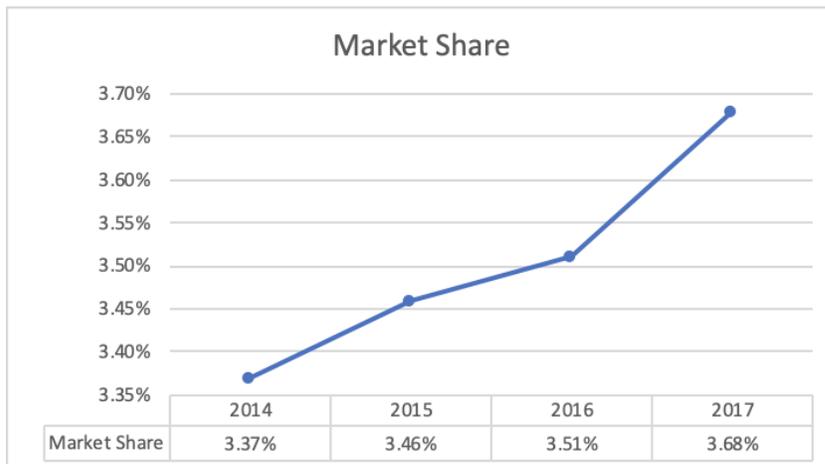


Figure 7

By examining the increase in HCA's market share year-over-year as it relates to its M&A expenditures, it can be determined that from 2014 to 2017, HCA spent an average of \$69 million for each incremental increase of 0.01% in market share. This measure was determined by dividing the dollar amount of HCA's acquisition expenditures by the increase of market share, measured in basis points, from the same period (Table 1). HCA has effectively been buying its market share instead of organically growing and opening up new facilities in new markets. This allows the company to grow quickly, cutting the amount of time spent building facilities, hiring staff, and navigating the regulatory hurdles to opening new facilities. By purchasing medical facilities, HCA also circumvents fighting competition for the service of a certain market. In purchasing medical facilities, HCA is able to begin operations without the competition of the existing facilities. But, for these massive expenditures to be effective, it must be shown that HCA's current rate of \$69 million per basis point of market share can be justified by the return on these expenditures.

Table 1

Year	Market Share		M&A Expenditures	
	Percentage	Increase YOY	Total	Amount spent per 0.01% increase
2014	3.37%	-	\$766	-
2015	3.46%	0.09%	\$351	\$39
2016	3.51%	0.05%	\$576	\$115
2017	3.68%	0.17%	\$1,212	\$71
Total		0.31%	\$2,139	\$69

**in millions*

If HCA's M&A activity is positively correlated to the company's revenue growth, this might be indication of an efficient growth strategy. Through analysis, I found from 2014 to 2017, the correlation coefficient for HCA's revenue and market share is 0.965, which indicates a highly positive correlation between revenue and market share (Figure 8).

There is a strong correlation between the trends in market share increases and revenue increases (Figure 9).

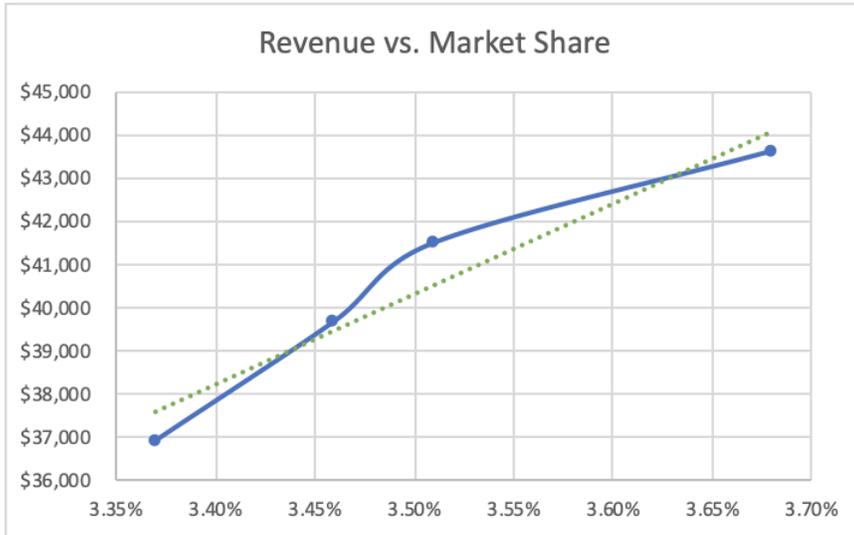


Figure 8

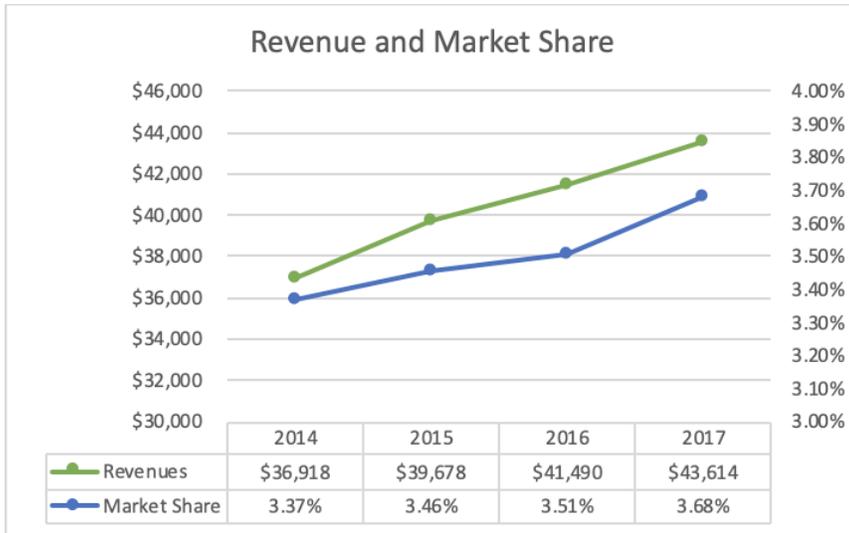


Figure 9

By further examination of this data, it can also be determined that for each 0.01% increase in market share, there was an average year-over-year increase of \$216 million in revenue (Table 2). This measure was determined by dividing the increase in HCA's

Year	Market Share		Revenue		
	Percentage	Increase YOY	Total	Increase YOY	Amount per 0.01% increase
2014	3.37%	-	\$36,918	-	-
2015	3.46%	0.09%	\$39,678	\$2,760	\$307
2016	3.51%	0.05%	\$41,490	\$1,812	\$362
2017	3.68%	0.17%	\$43,614	\$2,124	\$125
Total		0.31%		\$6,696	\$216

**in millions*

Table 2

revenues year-over-year by the increase of market share, measured in basis points, from the same period. This calculation shows just how valuable each basis point of market share is for HCA in terms of revenue to be gained. As HCA has steadily increased its revenues, much of this increase can be attributed to its gains in market share. The strong correlation between market share increases and revenue increases, along with the incremental value (in terms of revenue) of increasing market share, sheds light on HCA's recent growth path.

HCA has been able to leverage the acquisition of new hospital facilities by creating new revenue streams across the country. The company has thus been able to

benefit from economies of scale and from the sheer volume of services being paid. In order to measure this relationship, one can examine the correlation between the number of hospitals owned each year to revenues from the same period. From 2013 to 2018, the correlation coefficient was 0.924, indicating a strong positive correlation. As HCA has been able to acquire more hospitals they have also been able to create efficiencies within the hospitals due to the corporation's technology investments and scale.

When one looks at these three metrics in conjunction, it can be seen that HCA's acquisitions are highly correlated to revenue and market share growth. HCA has been using large amounts of capital to purchase market share, in order to grow without the need to open new facilities and compete with existing facilities. On average, for each dollar spent on M&A transactions, the company's revenues increased by over a factor of three. Along with increase in market share and economies of scale has come value, but does this benefit outweigh the cost? In addition, this analysis will continue to uncover the sustainability of the rapid growth through M&A transactions. As I will discuss later, it is a corporation's responsibility to maximize shareholder value as a publicly traded company. To begin to uncover if HCA is fulfilling their responsibility, I will exam how the executives have justified these transactions, and if the background of the corporate officers play a role in their decisions.

HCA has also publicly justified their M&A expenditures repeatedly. In their 10-K reports, filed each year, HCA states that between 2014 and 2018 goodwill increased by over \$2.2 billion. When making public statements, company officers normally speak about two main benefits of acquisitions in their public press releases, posted on their investor relations webpage. The first is the expansion into new markets and complement

facilities in current markets. These statements underpin the metrics that show the strong relationship between acquisitions and business growth. The second main point that officers often state is how technology acquisitions will help current operations to be more efficient. This displays the priority of company officers to increase the profitability of newly acquired facilities and capitalize on economies of scale.

When examining HCA's growth strategies, it is interesting to note certain events in the company's history as well as noting the past experience of several board members. HCA has been bought out and eventually brought public three times. These transactions were led by experienced investors and advised by well-known private equity funds. Five out of thirteen of HCA's board members are also investors or executives at investment firms. As HCA has chosen a growth path driven by financial transactions, it is interesting to note the company's history and current influence by investors. HCA has been a vehicle for healthcare investments, driven by career investors. It seems many executives have played to their strengths as current and former investors when driving the growth of HCA's M&A activity. To understand if HCA has done the same, I will analyze how the company has played to their strengths, grown through weaknesses, capitalized on opportunities, and defended against threats to further sustain its operations.

When looking at other similar companies in the healthcare sectors, the differences between HCA's acquisition strategy becomes apparent. In order to gain context and perspective on HCA's M&A expenditures, the following competitors were examined: United Health Services, Community Health Systems, and Tenet Health. All three of these companies are healthcare and hospital management companies, and each have revenues over \$10 billion (Figure 10). The competitors have all been active in entering in M&A

transactions, but HCA far outspends the other companies in acquisitions. United Health Systems has quintupled their acquisition expenditures from 2017 to 2018 but is still far from HCA’s level of spending. Tenet Health has slowed their acquisition spending over the same period, while Community Health Systems has not spent any money on acquisitions. The company entered into a \$7 billion deal in 2014 and has been selling assets ever since to decrease its leverage from the transaction. There is just as large of a disparity when looking at the same companies’ acquisition expenditures as a percent of their revenues. In 2017 and 2018, HCA’s acquisitions accounted for 2.8% and 2.7% percent of its revenues (Figure 11). In the same period, the other three companies’ acquisition costs as a percentage of revenue ranged from 0% to 1%. This shows that even when accounting for differences in revenues, HCA still far outspends similar companies on a percentage basis.

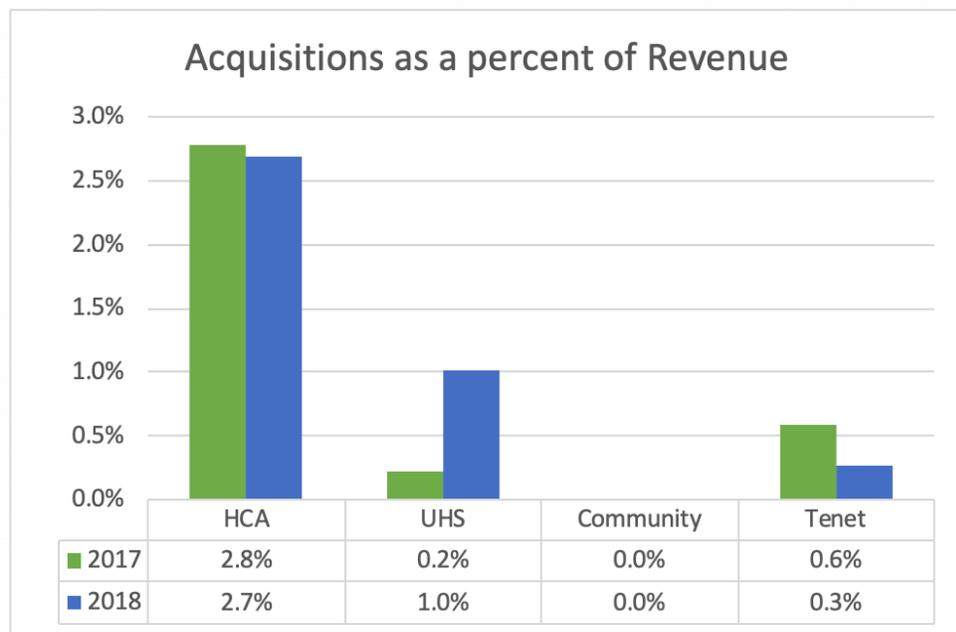


Figure 10

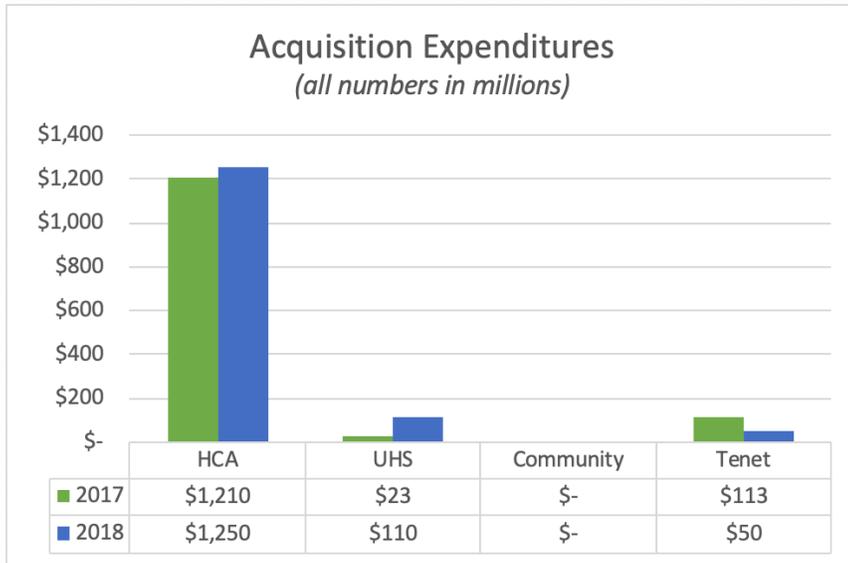


Figure 11

Another financial metric to consider while examining the relationship between HCA's M&A activity and its growth is its stock price in reaction to acquisition announcements. A positive reaction to an acquisition announcement would result in an increase in stock price. A negative reaction to an acquisition announcement would result in a decrease in stock price. The change in HCA's stock price would need to be greater than the average fluctuation of similar healthcare companies to be sure HCA's announcement was the cause of the change in stock price. In order to measure this, HCA's stock price was recorded the trading day before an acquisition announcement, the trading day of the announcement, and the trading day after the acquisition announcement (Figure 12). For comparison, the S&P 500 Healthcare Index was also measured on these

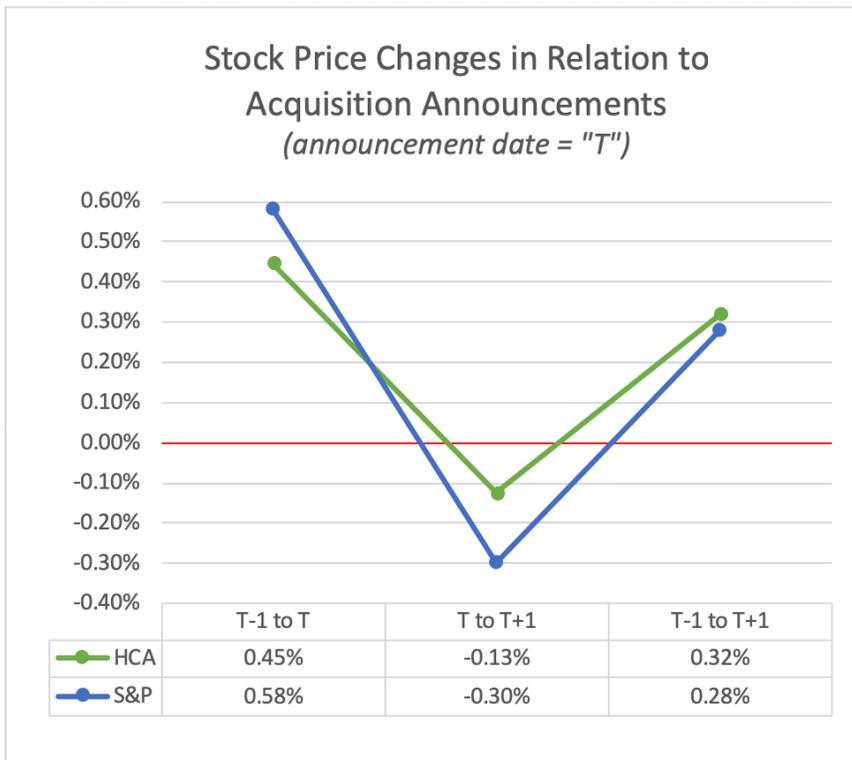


Figure 12

same dates. Upon measuring this information for ten recent acquisition announcements, the data analysis shows that these announcements have no significant effect on the HCA's stock price. The trend of HCA's stock price over the day before, day of, and day after an acquisition announcement was almost identical to that of the S&P healthcare index (^HCX).

Question 2 SWOT Analysis

To get a full picture of HCA, one must consider its strengths, weaknesses, opportunities and threats. Although HCA has become a giant in the healthcare industry, it would be a mistake to consider the company invincible. However, it would also be a

mistake to discount the potential for continued success. In order to succeed in continuing growth, HCA must focus on managing threats that could harm their future sustainability as a profitable company.

Strengths:

HCA has many strengths that have allowed it to succeed in becoming the largest for-profit hospital company in the United States. It has a large network of hospitals that are able to benefit from being in such a network. Each facility is able to benefit from shared data and information that can help to increase efficiencies. This benefit, along with access to technology unique to HCA, allows each individual hospital unit to operate more efficiently within HCA's network of hospitals than alone. This large network of hospitals has allowed HCA to create trusted brands both nationally and locally. This brand allows HCA facilities to become trusted hospitals in whatever locality in which they find themselves, providing a competitive edge. HCA also benefits from being such a large company at a corporate level. This size allows the company to have more bargaining power with suppliers, as they are easily able to display the large demand and purchasing potential they bring to suppliers. HCA also enjoys the luxury of being a company with vast financial resources. This wealth has allowed the company the chance to enter into M&A transactions on a regular basis. Many other companies are not in a position to consider purchasing other businesses as HCA can. The company has also been able to make efficient operations standard across the nation by implementing software solutions that they have acquired.

Weaknesses:

Although HCA has been able to cement itself as a giant in the healthcare industry, its weaknesses have proven to be a limiting factor in its financial health and current operations. Economic conditions over the last ten years have lightened the burden of these limitations but have remained issues that could make future growth very difficult, especially in times of uncertainty. One of the most pressing weaknesses is HCA's massive amounts of debt. Being as leveraged as HCA makes several aspects of running such a large business very difficult. More specifically, it hampers HCA's ability to continue growing the company using their current strategy, making it difficult to complete M&A transactions in the future. The extreme amount of debt, as always, comes with a costly price of interest payments. This requires HCA to use more of its operating cash flow to pay off debts, rather than other more efficient uses of cash flow. If the economic conditions turn to become less favorable, HCA risks being strained to pay its debts and maintain profits. The same would be true if there are regulatory changes in the future.

As Medicare and Medicaid programs represents large amounts of HCA's income, any changes to these programs would have massive repercussion for the company as a whole. If any laws are enacted that ease or tighten regulations or funding to public health initiatives, HCA would have to work to recover these lost profits. Any one of these things happening would be harmful to the company's equity value as they could become less attractive to investors.

HCA also relies too heavily on specific markets. The states that contribute the most revenue in proportion to others are Texas and Florida. Relying on specific markets

means that if there are any changes in that specific market, the company as a whole would suffer disproportionately to the same situation happening in other states. In order to remain a primary and sustainable player in the healthcare industry, HCA must address these weaknesses.

Opportunities:

There are many opportunities for continued growth at HCA. Although they have risen to the top hospital company, they still only control a small portion of the entire market. This fact presents vast amounts of profitable opportunities for growth. HCA has many markets within the U.S. that it could enter in order to grow. Furthermore, HCA also has opportunities to expand into different areas of the healthcare industry.

Healthcare technology and data are extremely valuable and profitable and can be used to innovate and erupt emerging markets. With access to large amounts of data, HCA could leverage this resource to create new business opportunities. HCA could also develop technology that could be used both to make their own operations more efficient and further diversify their streams of revenue. HCA has many opportunities to sell data to companies that are not competitors, but value certain aspects of HCA's data for research and decision making (pharmaceutical companies and medical equipment suppliers).

The aging population of the United States ages, this provides opportunities for HCA as well. An aging population inherently means more people who will need more medical care, causing an increasing demand for HCA to meet in the near future. HCA can take advantage of demographic trends to maintain strong revenue. Furthermore, capitalizing on their opportunity to innovate through technology could ensure the

company is ready for such high demand. Having the proper technology in place will allow HCA to have smoother operations and maintain their edge against competitors.

Threats:

HCA faces many threats that could be approaching on the horizon. To begin, one of the biggest threats to HCA is changes in federal policies. These changes could cause potential to make operations more difficult and more costly for HCA. An example would be if the company needs to change policies in order to maintain compliance; such policies are hard to implement across such a large organization, requiring many dollars spent in updated training. It is essential HCA stay ahead of such factors to plan effectively for their future operations. The same risks apply for state government as this threat could harm HCA in the very near future. The repercussions of changing healthcare policy on a governmental level means that profit margins would decrease. More specifically, there are risks of Medicare or Medicaid programs receiving less funding in the future. With HCA currently receiving large portions of their revenues through these programs, on behalf of patients who otherwise are uninsured or unable to pay, losing funding in this area would result in a depletion of a major revenue stream. If the payment of medical bills shifts more on to the shoulders of private insurance companies, this would also pose a threat to HCA, as these private insurers would receive even more bargaining power, as they would hold a large portion of HCA's revenues.

The last ten years have held a huge economic upswing, bringing prosperous times for many. Nonetheless, markets are cyclical, and anticipation of the downturns are a major part of a sustainable business. This cyclicity signals economic changes that could restrict the flow of capital and make it more difficult for HCA to operate like it has in

recent years. This downturn, paired with HCA's high level of debt, could cause the company difficulties meeting financial obligations and using large amounts of capital to purchase other companies to maintain on their current path of growth.

Despite having enjoyed growth throughout its history, HCA has just as many weaknesses and threats as it does strengths and opportunities. The company, being highly leveraged, has many weaknesses that could make them unprepared and exposed to threats that could be arriving in the near future. HCA is extremely susceptible to changes in federal healthcare policy, and the slowing economy specifically. However, the company does have many opportunities to expand geographically, as well as diversifying sources of revenue by entering different areas of the healthcare industry, such as data and technology. In order to be a company that can safely and reliably operate while also being attractive to investors, HCA must address its weaknesses before future threats become present issues.

Question 3 Analysis

Cash Flow Coverage Ratio:

In the analysis of HCA, it is important to gauge the liquidity position of the company to help determine how sustainable their M&A activity actually is. One metric commonly used is the cash flow coverage ratio (Table 3). The formula is as follows:

Cash flow from Operating Activities / Total Debt. This ratio is used amongst investors and stakeholders to give a big

Table 3

Year	2018	2017	2016	2015	2014
Cash Flow From Op. Activities	\$2,175	\$1,734	\$1,699	\$1,558	\$1,627
Total Debt	\$32,821	\$33,058	\$31,376	\$30,448	\$29,645
Cash Flow Coverage Ratio	0.07	0.05	0.05	0.05	0.05

picture idea of the current liquidity position of a company. It is important to note this ratio is reflected as a multiple, meaning the ratio shows how many times over a company's earnings can cover its current obligations. As shown from previous analysis, one can be confident HCA is experiencing high volumes of growth, but how is this affecting its liquidity position? As one can see from the table, from years 2014 to 2017, HCA has been operating at a cash flow coverage ratio of .05x. In 2018, the ratio increased slightly from .05x to .07x. Having a strong cash flow coverage ratio is essential to maintaining a viable company. For a numerous number of factors, HCA could take a hit in earnings for a period of time as most companies do. If this were to happen, HCA would only be able to meet their current obligations .05x to .07x over. With this low coverage ratio in mind, it is not a far stretch to say HCA would be on the brink of defaulting on their payments, which could in turn lead to bankruptcy. This low ratio also puts into question if HCA is maximizing shareholder value (Valim and Borad, 2019, para. 2). Common shareholders are always last to receive payment in liquidation, should a company go bankrupt. With its current cashflow coverage ratio, HCA would have nothing to give shareholders. Furthermore, HCA does not have much to give shareholders at the moment, as can be also reflected in this ratio. HCA's last IPO was in March of 2011 and it was not until February of 2018 that HCA gave dividends to shareholders.

Even now, the dividends are relatively low at \$.40 per share quarterly (NASDAQ, n.d.). It seems the amount of debt HCA has taken on is largely controlling their margin of operating cash flows, and it does not seem to be for the better.

Debt to Equity Ratio:

The debt to equity (D/E) ratio is another metric used in this analysis to point to how sustainable HCA’s growth through M&A activity is (Table 4). Despite the common misconceptions, a balanced amount of debt is an essential part of a thriving business. As the Harvard Business Review points out in their article titled *A Refresher on Debt-To-Equity Ratio* (2017), relying heavily on equity to finance a business can be “costly and inefficient” (Gallo, 2015, para. 7). The debt to equity ratio shows for each dollar of equity, how much debt has been taken on

Table 4

Year	2018	2017	2016	2015	2014
Total Debt	\$32,821	\$33,058	\$31,376	\$30,448	\$29,645
Total Shareholders Defecit	(\$4,950)	(\$6,806)	(\$7,302)	(\$7,599)	(\$7,894)
Debt to Equity Ratio	-6.63	-4.86	-4.30	-4.01	-3.76

as well. The formula for this ratio is as follows: *Total Liabilities / Shareholder’s Equity*.

As one can see from the chart above, HCA has had a negative D/E ratio in which it has increasingly gotten more negative as time goes on. The chart also supports HCA has more liabilities than it does assets. Therefore, this ratio being negative concludes the value of HCA is negative. This negative number should lead one to wonder just how negative of a value HCA is. The Wall Street Journal valued HCA at a tangible book value

of \$-37.63 per share. This calculation should be deeply concerning to shareholders and investors for obvious reasons. HCA has been forced to take on immense amount of debt to fund their M&A transactions. These ratios should serve as a warning sign to HCA that further expansion through M&A activity, funded by debt, cannot be supported by their current capital structure. If HCA was to continue taking on more debt, shareholders could be at a major risk for loss.

Equity Multiplier:

Calculating a firm's equity multiplier gives another picture of how leveraged a company is, but through a different lens. The equity multiplier shows how much equity is being used to pay for the assets of the company. More specifically, this ratio shows how much shareholders actually own of the company. The formula for calculating a firm's equity multiplier is as follows: *Total Assets / Total Shareholder's Equity*. From 2014 to 2018, HCA has maintained a negative equity multiplier, increasingly getting more negative as the years progress (Table 5). This fact should raise some questions for existing shareholders of HCA. In the example of common stock, a

Table 5

Year	2018	2017	2016	2015	2014
Total Assets	\$39,207	\$36,593	\$33,758	\$32,744	\$31,199
Total Shareholders Defecit	(\$4,950)	(\$6,806)	(\$7,302)	(\$7,599)	(\$7,894)
Equity Multiplier	-7.92	-5.38	-4.62	-4.31	-3.95

shareholder has paid to own a portion of the company, yet the current capital structure HCA has in place does not provide much book value of equity. As the ratio shows, HCA

does not have any book value of equity in its capital structure. Furthermore, HCA should see this concerning fact as a potential threat as it continues to plan for future operations. According to the Corporate Finance Institute, creditors and other investors commonly consider the equity multiplier as a gauge for financial health. Most investors would be reluctant to continue to lend money to HCA, and if they do, HCA should readily expect high debt service charges and new ways to increase their operating cash flows (Equity Multiplier, n.d., para. 2). In the worst case, HCA's market reach expansion will have to be put on hold until they lower their debts due to potential investors reluctance.

Capital Structure:

To further demonstrate just how leveraged HCA is, calculating the company's current capital structure shows how much weight both debt and equity have. The formula used to calculate the equity weight is as follows: $(\text{Shareholder's Equity} / \text{Shareholder's Equity} + \text{Total Debt})$. In support of previous analysis, HCA has a negative weight of equity in its capital structure (Table 6). For the first time in this analysis, HCA started out with negative debt in 2014, but has steadily decreased since then. In 2014, HCA had negative equity of -36.29%. In 2018, HCA ended the year at -17.76%. Although this is still a sign of being over-leveraged, it is a positive sign that HCA has slowly began to take steps toward rebalancing its capital structure. To consider the amount of weight HCA's debt is in their capital structure, the formula as follows was used: $1 - \text{Equity Weight}$. HCA's 2018 equity weight is at 117.76%. This fact continues to be a major threat for HCA when considering the future of its operations. As interest rates continue to rise, HCA's debt is going to become more and more expensive. There are actions to hedge against this risk such

Table 6

Year	2018	2017	2016	2015	2014
Total Debt	\$32,821	\$33,058	\$31,376	\$30,448	\$29,645
Total Shareholders Defecit	(\$4,950)	(\$6,806)	(\$7,302)	(\$7,599)	(\$7,894)
Equity Weight	-17.76%	-25.93%	-30.33%	-33.26%	-36.29%
Debt Weight	117.76%	125.93%	130.33%	133.26%	136.29%

as interest rate swaps, which would be a prudent step. Nonetheless, being overleveraged and allowing its capital structure to consist only of debt is a major risk for the future of the company and the shareholders as well (Ross, 2019, para. 6).

Interest Coverage Ratio:

The interest coverage ratio shows how many times a company can cover its current interest payments with the available earnings it has. This ratio is important to consider in gauging how sustainable HCA's M&A activity is by showing us the amount of interest it is paying on its debt, as this interest is the most expensive aspect of funding a company's operations with debt (Table 7). The formula for the interest coverage ratio is as follows: *Operating Cash Flow / Interest Expense*. This ratio also

Table 7

Year	2018	2017	2016	2015	2014
Cash Flow From Op. Activities	\$2,175	\$1,734	\$1,699	\$1,558	\$1,627
Interest Expense	\$1,755	\$1,690	\$1,707	\$1,665	\$1,743
Interest Coverage Ratio	1.24	1.03	1.00	0.94	0.93

gives insight into how efficiently a company is managing its cash flows. Proper cash flow management is important as it ensures a company has enough money to reinvest in the business, fund future operations, and pay shareholders. As can be seen from the table above, HCA started with an interest coverage ratio of .93 in 2014. Moving forward, HCA was able to increase its ratio over the next five years to 1.24 in 2018. In financial analysis, an interest coverage ratio is typically considered bad if it is below 1 (Kenton, 2019, para. 15). HCA's ratios in 2014 and 2015 point to a high risk of bankruptcy to occur. Although HCA has managed to increase its interest coverage ratio to 1 and over 1 from 2016 – 2018, this ratio is still not ideal. An interest coverage ratio of 1.5 is seen as the minimum ratio necessary to continue sustainably in the future. Although HCA has managed to increase their ratio to 1.24, this fact still highlights too much cash flow is going to pay for the interest on the debt used to fund M&A activity.

Conclusion:

Hospital Corporation of America has a winding road of history leading to becoming the major healthcare giant the company is today. The company was founded on innovation in 1968, becoming the first for profit hospital in the United States. HCA continued to innovate by adopting ground-breaking business practices that pushed them down the road of success. It was not soon after their beginning that HCA began to merge and acquire other companies, allowing the company to become a well-known name throughout many different communities all over the country. Despite three leveraged buyouts followed by IPO's, Hospital Corporation of America has kept its focus on opportunities for M&A transactions in hopes of increasing its market share and revenue.

Today, HCA is seen as a leader in the healthcare industry. With revenues in the billions and continually spending the same amount on M&A transactions a year, it is questionable whether HCA's growth strategy is promoting sustainable growth and maximizing shareholder value. This thesis set out to analyze many different sides of HCA, gathering quantitative and qualitative data to determine the sustainability over the long run for Hospital Corporation of America.

It can be safely confirmed HCA has experienced growth over its history through a steady pace of large acquisitions. The company also shows no sign of decreasing the frequency or scale of its acquisitions. After analyzing data relating to the growth of HCA and its M&A activity, a strong positive correlation was observed. Although correlation is not synonymous with causation, observance of multiple correlations between multiple quantitative data sets, accompanied by qualitative data gives reason to be confident in M&A activity being the lead driver of HCA's growth. This success has led HCA to use acquisitions to purchase market share at a rate that was much lower than the value of increased market share in terms of revenue. For each dollar invested in acquisitions, HCA received three dollars in increased revenues. These decisions are also being driven by business leaders who are experienced investors, working for and with firms that make money by investing in, acquiring and selling companies. Although these findings support the idea that HCA's current growth strategy has been driven by M&A activity, the findings have not proven that this strategy is sustainable long term. HCA has outpaced other firms in the healthcare industry in acquisition spending, allocating close to 3% of its revenues to purchasing new companies (and taking on more debt). This growth has drastically increased the company's risk despite its current strengths and expertise.

With the many years of experience behind Hospital Corporation of America, it is no surprise the company has maintained a few areas of expertise. Many times, companies that have been around as long as HCA face the challenge of being able to adapt to trends over time, maintain their market share, and continually find new ways to advance in the industry. HCA has done this well as the analysis of its strengths proved. Most notable of HCA's strengths is its financial resources that made their major M&A activity possible. HCA over the years has used their financial resources to capitalize on opportunities that have pushed the company to be what it is today. Despite these strengths and the continuous opportunities HCA has taken advantage of, the company has many weaknesses and threats that should be addressed. Its heavy reliance on concentrated markets along with the immense cost being incurred on debt leaves HCA exposed to threats on the horizon. As commonly noted, major upswings are followed by downturns in our economy. Even with slight downturns, revenue and company's loss in operations can leave HCA susceptible to financial ruin. The most concerning factor is HCA might not be in a position to address these opportunities and threats on the horizon, as it has major issues to deal with now.

When noticing the immense amount of debt HCA has on the balance sheets, it is naturally for the first question to be about the strength of their cash flows. In using the cash flow coverage ratio, one is able to see the liquidity position HCA is maintaining and how the company could meet their financial obligations should their earnings take a hit. As stated in previous analysis, HCA has consistently been operating at a .05x to .07x multiple for the last five years. This calculation shows an extremely weak position of cash flows and suggest the company is not far from bankruptcy should an unexpected

downswing occur. Ultimately, continuing to take on more debt to fund M&A activity is unsustainable with the company's current cash flow position.

To further understand the financial health of Hospital Corporation of America, analysis of the company's debt to equity ratio provided insight to the current capital structure of the company and if the company is taking on too much debt. The most concerning aspect of this analysis is seeing the negative equity HCA currently has. The result of this negative equity is also a negative debt to equity ratio as well. With HCA's debt to equity ratio being negative, it also means the total value of the company is negative also. This fact in many ways shows the current strategy growth HCA has used has come at a cost of shareholder value.

The interest coverage ratio in this analysis served as another disheartening reminder that HCA is on an unsustainable track of growth in many ways. As previous analysis demonstrates, HCA's interest coverage ratio shows their debt is too expensive. These ratios are largely under what is considered ideal or financially responsible. Not only is this debt too expensive, it also makes up far too much of the company's capital structure, as it makes up all of the capital structure.

The purpose of this thesis was to analyze how HCA has chosen to use M&A activity to drive their growth since the humble beginnings of the corporation. The belief was held that HCA used these transactions in such a way that was sustainable in the long-run allowing it to meet its financial obligations and to maximize shareholder value. Through quantitative and qualitative analysis of the healthcare industry, the company's market share and revenue growth, effects on stock price, and financial analysis, my analysis shows the data shows the contrary. HCA has proven to pursue M&A activity at

the cost of their financial health and shareholder value. Based on their past history and common trends in the market today, I predict Hospital Corporation of America will go through another leverage buyout to manage its debt, sell off many aspects of the business to remain financially viable, or worst of all, default on their debt and enter bankruptcy. Any of these events would affect the local Middle Tennessee area and the U.S. healthcare industry as whole considering the enormous role Hospital Corporation of America plays.

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