

Rob Graham

Healthcare and the Market: An Event Study on the 2012 Reelection
of President Barack Obama

Advised by Dr. Phillip Daves

The University of Tennessee, Knoxville

Abstract

On March 23, 2010, President Barack Obama signed a landmark piece of legislation into law: the Patient Protection and Affordable Care Act. It was an almost complete overhaul of the United States' health care system, designed to maximize the number of health insurance policyholders. In the months preceding and proceeding, debate raged over the effects universal healthcare would have on the country's economy. Some argued the result would be catastrophic while others maintained that the effects would be positive. When President Obama won reelection, it was evident the Affordable Care Act was here to stay. Utilizing cumulative average abnormal returns (CAARs) in an event study framework, the goal of this project is to research the effects President Obama's 2012 reelection had on the health care sector of the US economy.

Literature Review

Before conducting research and running tests, it is important to more fully understand the topic I will be studying. The American health care sector is a large portion of the US economy, making up 17% of GDP expenditures (WorldBank, 2015). This number is slated to rise to 20% of the US economy by the year 2021, or \$4.8 trillion as the “baby-boomers” age and require more medical procedures and treatments and the Affordable Care Act increases the number of insured Americans (Wayne, 2012).

In my research, I hope to find out what the overall implications of the Patient Protection and Affordable Care Act are and what role President Obama’s 2012 reelection had on the US economy’s health care sector.

Fortunately, there has already been a good deal of research done in this area, most notably that of Alex Tang and Musab Ababneh from Morgan State University in their paper, “Market Reaction to Health Care Law: An Event Study” published in a 2013 edition of the *International Journal of Accounting and Financial Reporting*. In this event study, Tang and Ababneh break the health care sector into four economic entities: insurance, hospitals, brand name pharmaceuticals and generic pharmaceuticals. They then utilize Cumulative Average Abnormal Returns or CAARs to measure the impact of the Supreme Court’s 2012 decision to uphold the Affordable Care Act on related firm’s stock prices. These CAARs determine who the 2010 health care reform law helped and who it hurt. Overall, they found that insurance and generic pharmaceuticals were negatively affected and hospitals and brand name pharmaceuticals were positively affected.

I will lean largely on their research as a framework to uncover more about the health care sector of the US economy in regards to health care reform. I will add my

voice to their discussion in regards to President Obama's reelection and its impact on the related firms' stocks as opposed to Tang and Ababneh's research, which utilized the Supreme Court decision. However, through reading their research, it is interesting to note that for each one of their hypothesis's test results, President Obama's signing of the law and the Supreme Courts decision upholding the law trend together (both have positive CAARs in regards to hospitals, but both have negative CAARs in regards to insurance). (Ababneh and Tang, 2013). As an early hypothesis, I believe that the CAARs from the reelection will trend similarly.

By any measure, the Affordable Care Act is one of the most controversial legislative items ever to be passed through Congress. For example, in 2010, while negotiating with democratic members of the legislative branch, the health insurance lobby (American Health Insurance Plans or AHIP) secretly funneled \$86.2 million to the US Chamber of Commerce to be spent on campaigns and advertisements against the health care bill according to tax records and "people familiar with the donation" (Armstrong, 2010). Further, by March of 2014, Republicans had voted 54 times to repeal, tweak, or change the 2010 law (O'Keefe, 2014). Most Republicans, libertarians, and conservatives believe the law is bad for the economy- especially small businesses, hurting the wages they are able to pay their employees (Pipes, 2014). On the opposing side, many think the law will spur economic growth and spending (Britt, 2014).

It is important to understand the implications and changes brought forth from the Affordable Care Act. The Affordable Care Act, officially known as the Patient Protection and Affordable Care Act, consists of ten titles that are or will be implemented almost entirely by the Secretary of Health and Human Services (Amadeo, 2012). The

overarching goals of ACA were to a) provide health care options to those that could previously not afford any and b) improve the benefits of having health care insurance.

The former goal is to be accomplished by the individual mandate. This is a federal requirement to purchase health insurance or face a fine. This fine went into effect in 2014 (Kristof, 2012). Small businesses with over 50 full time employees must also offer health care coverage to their employees (Beeson and Todd, 2012). The latter goal's accomplishments include the ability for an individual to stay on his or her family's health care plan until they are 26, the addition of free preventative care (mammograms, colonoscopies, etc..) and forbidding insurance companies from imposing a dollar limit on one's health expenses (Kavilanz, 2012). Below are additional relevant changes that will affect the selected economic groups developed by Ababneh and Tang (these economic groups were the medical insurance companies, hospitals, brand name pharmaceuticals and generic pharmaceuticals). Table 1 shows the relevant dates Ababneh and Tang utilized in developing their hypotheses and calculating the CAARs for the relevant events. These events will be discussed in greater detail throughout the literature review, but for convenience sake are grouped below to show the legislative timeline.

Table 1: Health care reform major events and dates

Event	Date
President Obama signed the law	3/23/10
Requiring insurers to cover pre-existing conditions	7/1/10
Requiring drug companies to offer senior discounts (Doughnut hole)	1/1/11
Requiring insurers to issue rebates (MLR)	12/7/11
Supreme Court upheld the law	6/28/12
Creating hospital Value-Based Purchasing Program	10/1/12

<http://www.macrothink.org/journal/index.php/ijaf/article/view/3356/2982>

Insurance

Many argue the medical insurance industry will be negatively affected by the changes in law spelled out in the ACA (Jayakumar and Kliff, 2012). One of the most notable aspects that could create a change in the profitability and financial earnings includes the inability for insurers to deny coverage to those with pre-existing conditions. Additionally, insurers are now required to refund portions of customers' premiums if they do not spend 80% -85% on patient health expenses (Kristof, 2012). When the Supreme Court announced the upholding of the Affordable Care Act, many health care insurance companies' (such as Aetna, Cigna, Coventry Health Care and WellPoint) stocks declined in value, ranging from a 2.7% to a 5.2% drop (Kristof, 2012).

Overall, health insurance companies make a profit by paying out less money in claims than they take in as premiums. They only receive premiums and pay claims from individuals that they choose to insure. The ideal customer is someone that will stay in good health while continuing to pay his or her monthly premium. Now that insurance companies won't be able to deny coverage to those that tend to require more medical care (those with preexisting conditions or other determinants that make it more costly to insure), many feel these companies will charge more in premiums in order to stay profitable. In Tennessee, the 2016 average rate will increase by 36% if BlueCross BlueShield's request is approved. (Whitman, 2015). Additionally, the Affordable Care Act would change the way and requirements that individuals and small businesses purchase health insurance (Abelson, 2010). For small businesses, it will be mandatory for all companies with over 50 employees to provide health insurance, which will be purchased on an open health care market exchange. Governmental reports state that these

exchanges will ensure small businesses don't overpay for health care insurance for their employees (HHS, 2012). Individuals must also buy health insurance or face a fine if their employer doesn't offer a plan or they are self-employed (HHS, 2012). Despite these changes in the insurance industry, including the portions of the law that ensures insurance companies spend 80% of premiums on patient care (HHS, 2012), many analysts feel that the industry will continue to see revenue growth. Even though the health insurance companies won't have the ability to discriminate against those that they do and do not choose to cover as freely as they did in the past, some analysts speculate the increase in coverage will lead to a \$778 billion increase in revenues in the industry by 2019 (Jayakumar and Kliff, 2012). Additionally, the insurance companies will not be competing against a government-run public option for health insurance, but will instead have a wave of new customers signing up through the exchanges (Abelson, 2010).

Ababneh and Tang developed four relevant hypotheses in regard to the insurance industry: (H1a) stated CAAR for health insurance companies upon the President's signing of the law is negative; (H1b) stated CAAR for health insurance companies upon the enacting of the pre-existing conditions provision of the health care law is negative; (H1c) stated CAAR for health insurance companies upon the enacting of the MLR provision of the health care law is negative; finally, (H1d) stated CAAR for health insurance companies upon the release of the Supreme Court decision to uphold the law is negative. Table 2 shows the findings of Ababneh and Tang for their health insurance hypotheses:

Table 2: Health insurance firms' CAAR

Event	CAAR %	Significant	Dates
President Obama signed the law	-1.28	*	3/23/10
Requiring insurers to cover pre-existing conditions	-1.16	*	7/1/10
Requiring insurers to issue rebates (MLR)	-1.07		12/7/11
Supreme Court decision	-2.43		6/28/12

(*Significant at 10% level or higher)

Tang's research shows that there was a significant negative reaction to President Obama's signing of the law on the health insurance industry. Additionally, Tang's hypotheses that requiring insurers to cover pre-existing conditions and requiring insurers to refund portions of unused premiums to customers will have a negative effect on health insurance companies' financial positions were also supported. However, the CAARs following the Supreme Court decision were not statistically significant. Tang postulates this could be due to the two year window between the enactment of the law and the Supreme Court's upholding of the law. Within these two years, investors became more accustomed to the Affordable Care Act as businesses adapted and changed over time and reacted in a less negative manner than in 2010.

Hospitals

The second economic group to be affected by the Affordable Care Act was the for-profit hospital operators referred to as health care management corporations. Examples of these businesses include HCA, Community Health Systems and Tenet Healthcare (Kristof, 2012). These companies primarily operate acute-care hospital facilities, but additionally, many also operate psychiatric facilities, rehabilitative facilities and outpatient care across the United States (CHS, 2015).

Up until the passage and upholding of the Affordable Care Act, hospitals were the entities that “ate” the costs of providing medical treatment to those that could not afford health insurance, often in the form of emergency room visits. Kathy Kristof feels that this group was the clear winner from the Affordable Care Act (Kristof, 2012). It was interesting to note that when the Supreme Court upheld the Affordable Care Act the companies that were most aligned with acute-care facilities, HCA and HMA (which was bought by Community Health Systems in 2013) (de la Merced, 2013) for example, saw the largest increase in stock price, as opposed to other health care management companies that were diluted with other health offerings (Kristof, 2012)

Additionally, an increased customer base due to mandated health insurance will lead to more hospital visits and billable procedures in preventative care measures through outpatient care facilities and medical office buildings owned by the hospital operator. Emergency room visits tend to be the least profitable care provided by the hospital (Tavernise, 2015). Currently, anyone that goes to an emergency room for medical care must be treated, regardless of whether they have insurance. More often than not, these procedures are written off to charity for those that have no insurance. Under the old policy, hospitals were on the losing end of the transaction and would most likely “eat the cost”. By adding more preventative measures (free colonoscopies and mammograms for example), hospitals can catch diseases early and treat them in a manner that saves both themselves and the patients’ money, as opposed to emergency treatments. . Doctors also stand to be positively affected as the number of customers increases, which is why the American Medical Association came out in support of the proposed legislation in 2010 (Abelson, 2010).

One aspect of the new law that could possibly prove to be negative for hospitals is the new, Hospital Value-Based Purchasing Program (Mukherjee, 2012). In an effort to improve these hospitals, funding and monetary incentives will be given to entities that have a high customer satisfaction rate, improved clinical quality, and lower their readmission rates. Some have argued that aligning funding with lowering readmission rates will disproportionately hurt hospitals that treat the chronically ill, most likely to be found in disadvantaged communities (Mukherjee, 2012).

An additional negative outcome is linked to the decrease in Medicare payouts to hospitals and doctors. Physicians' Medicare reimbursements are calculated using a formula. Congress had historically stepped in to artificially prop up the reimbursement rates for procedures performed on patients with Medicare insurance (Abelson, 2010). Despite having more patients under the Affordable Care Act, hospitals and physicians may see a decrease in profitability due to lower reimbursement rates for the majority of their patients, the elderly insured by Medicare.

Tang and Ababneh hypothesized that: (H2a) CAAR for hospitals upon the President's signing of the health care law is positive and (H2b) CAAR for hospitals upon the release of the Supreme Court decision is positive and (H2c) CAAR for hospitals participating in the Value-Based Purchasing Program is positive. Their findings are shown in Table 3.

Table 3: Hospitals' CAAR

Event	CAAR %	Significant	Dates
President Obama signed the law	-3.65		3/23/10
Supreme Court decision	3.06	*	6/28/10
Establishing Value Based System	0.05		10/1/12

(Significant at 10% level or higher)

Tang noted that, interestingly, there was a negative CAAR at the inception of the law, but as time went on, there is a statistically significant positive CAAR at the upholding of the Affordable Care Act by the Supreme Court, meaning the stocks' values rose based solely on this event, and investors that at one time thought the law would be negative for hospitals now felt that it was positive. Tang also tested to see if the new Value Based Program had any effect on health care management corporations. This test returned a result of virtually zero (.05%), which was not statistically significant.

Brand Name Pharmaceuticals

Brand name pharmaceutical companies such as Johnson and Johnson, Pfizer, Merck, AstraZeneca and Novartis (Staton, 2015) are also some of the major winners under the Affordable Care Act, as they will see large increases in their revenue and profits as the 30 million newly insured patients go to get their prescriptions filled (Abelson, 2010). The signing of the law and upholding by the Supreme Court not only brought clarity and consistency for pharmaceutical companies to plan their futures but also many benefits such as increased customer base and less government restriction (Ignjatovic, 2010).

One negative aspect to the brand name pharmaceuticals, however, is the law's attempt to "fill in" the "doughnut hole" in Part D Medicare coverage for the elderly, who are more likely to permanently be on a prescription medication (Abelson, 2010). The doughnut hole is a coverage gap for prescription medication. It is the difference between the dollar amount the Medicare plan will cover and the amount a monthly prescription costs to the customer. In 2006, Medicare would cover prescription medication cost below \$2250 and above \$5100, thus creating a hole that roughly 7 percent of enrollees fell into

(Drew and Burt, 2011). If one's prescriptions cost more than the bottom limit, but less than the top limit, the individual was responsible for covering all of their medication costs between the two limits. Prior to the Affordable Care Act, if a brand named prescription fell into the doughnut hole, the Medicare patient might either switch to a generic brand or stop taking their medication all together if they couldn't afford it. Under the new law, brand name drug makers are mandated to "fill" the gap by offering seniors that fall in the doughnut hole discounts and rebates (Abelson, 2010). This discount is set at 50% off the selling price (Sebelius, 2010). The roll out was set at 50% on Jan. 1st, 2011, which is why the authors chose it for their event date in Eventus (MedicareRights). The government will also try to help close the doughnut hole, but on a gradually increasing basis working its way up to 25% by 2020. Between the 50% discount offered by brand name drug makers and the 25% discount offered by the government, an elderly individual will be able to afford their prescribed medication. These discounts offered to seniors would have a negative financial effect on brand-name pharmaceutical companies.

On the positive side, the brand name pharmaceutical industry will "...avoid any of the issues that were particularly of concern — price control or more regulation by the federal government," said Barbara Ryan, an analyst with Deutsche Bank. (Abelson, 2010). Decreased regulation will be helpful as more baby boomers reach their senior years and will need medication. Additionally, brand name pharmaceuticals will now have exclusive rights for 12 years on certain type of drugs called biologics. These complex drugs are considered cutting edge in the pharmaceutical community (FDA, 2009). This 12 years of exclusivity is different than the normal 5 years of exclusivity granted to Big Pharma for small molecule drugs (Ignjatovic, 2010).

The brand name pharmaceuticals have been largely in favor of this health reform, spending \$100 million in marketing and advertising promoting reform in the health care industry. This diverges from the stance taken by Big Pharma in the 1990's when Hillary Clinton tried to reform health care (Abelson, 2010). Johnson and Johnson stated in a New Jersey news article, "We believe this law has the potential to help more patients gain access to high-quality, affordable care and innovative treatments." (Beeson and Todd, 2012).

Tang and Ababneh hypothesized that: (H3a) CAAR for brand-name pharmaceutical companies upon the President's signing of the law is positive, (H3b) CAAR for brand-name pharmaceutical companies upon the enacting of the donut hole provision of the health care law is negative and (H3c) CAAR for brand-name pharmaceutical companies upon the release of the Supreme Court decision is positive. Their findings are shown in Table 4.

Table 4: Brand-name drug makers' CAAR

Event	CAAR %	Significant	Dates
President Obama signed the law	0.41		3/23/10
Offering seniors discounts to close doughnut hole	-0.66	*	1/1/11
Supreme Court decision	1.39	*	6/28/12

(Significant at 10% level or higher)

Tang and Ababneh found in their research an overall positive outcome for brand-name pharmaceuticals in the Supreme Court's decision to uphold the Affordable Care Act, but there was also a statistically significant negative CAAR for the law's attempt to close the doughnut hole by mandating the brand-name pharmaceuticals offer seniors in the doughnut hole a 50% discount.

Generic Pharmaceuticals

Generic pharmaceutical companies do not have as positive of an outlook as their brand name counter-parts under the new health care law. Brand name pharmaceuticals have exclusive rights to the manufacturing of certain drugs for a set number of years once they are approved by the FDA. When this time frame runs out, many companies will lose their monopoly on the medication and a generic will be created. As discussed earlier, an example of generic pharmaceuticals “losing” in the Affordable Care Act is biologics being granted a 12 year exclusivity right to the brand name pharmaceutical companies (Ignjatovic, 2010).

Leaders in the generic pharmaceutical community felt that the law would have had a larger positive impact if Congress had expanded affordable medical care to the “patients in need” as opposed to benefiting brand name pharmaceuticals (Abelson, 2010). From these comments, I assume the generic community feels that government wrote in more protectionist language for the branded pharmaceuticals instead of encouraging competition. Abelson (2010) went on to report that the chairman of the Federal Trade Commission, Jon Leibowitz, felt that the American consumer would suffer because of the anti-competitive nature of the Affordable Care Act in regard to pharmaceuticals.

Overall, it seems that the largest disservice for generics is the little assistance they will receive as compared to some of the provisions that will benefit the branded pharmaceuticals (Reuters, 2010). On a positive note, had the government chosen to pay to fix the doughnut hole immediately from a public fund, as opposed to small incremental changes also utilizing private, brand name pharmaceutical companies, there would have been a decrease in customers that chose to utilize generics (Reuters, 2010).

One aspect of the bill that would have heavily benefitted the generic pharmaceutical community was language that would have ended the “pay-for-delay” clause. “Pay-for-delay” allows brand name pharmaceuticals to pay generics in exchange for delaying the production of their competing medications that bring about the same result at a fraction of the cost (Trager, 2010). It was thought that this would be part of the reform measures to provide lower priced, quality care to the American public, but it was ultimately ignored in the final bill.

Tang and Ababneh hypothesized that: (H4a) CAAR for generic pharmaceutical companies upon the President’s signing of the law is negative, (H4b) CAAR for generic pharmaceutical companies upon the enacting of the donut hole provision of the health care law is negative and (H4c) CAAR for generic pharmaceutical companies upon the release of the Supreme Court decision is negative. Their findings are illustrated in Table 5.

Table 5: Generic drug makers' CAAR

Event	CAAR %	Significant	Dates
President Obama signed the law	-1.59	*	3/23/10
Offering seniors discounts to close doughnut hole	-0.82		1/1/11
Supreme Court decision	0.14		6/28/12

(Significant at 10% level or higher)

Overall, Tang and Ababneh’s research indicates that the generic pharmaceutical industry was negatively affected by the Affordable Care Act at a significant level. Additionally, there was not a significant CAAR in regards to generics and the doughnut hole when the rebates and discounts began for branded pharmaceuticals on Jan. 1, 2011.. Interestingly, the main topic of his paper, the Supreme Courts upholding of the law, had no statistical result on CAARs for generics pharmaceuticals.

Hypotheses

In light of my review of literature concerning the Affordable Care Act and event studies, I would offer these four hypotheses:

H1: The cumulative average abnormal return (CAAR) for insurance companies upon the President's reelection is negative.

H2: The cumulative average abnormal return (CAAR) for hospitals upon the President's reelection is positive.

H3: The cumulative average abnormal return (CAAR) for brand-name pharmaceuticals upon the President's reelection is positive.

H4: The cumulative average abnormal return (CAAR) for generic pharmaceuticals upon the President's reelection is negative.

Methodology

Like Ababneh and Tang, I will also utilize the event study methodology to determine the impact of Pres. Obama's reelection on the health care industry. Event studies are beneficial when trying to measure the impact one event had on related firms' performances. History has shown that political outcomes do affect the capital markets (Shell, 2012), with the market dipping one percent on average when a Democrat wins and jumping four percent when a Republican wins. Ababneh and Tang note that it is important to assert that the market operates efficiently and is able to process new information, as researched in Ball & Brown, 1968 and Fama, 1970. An event study works best when there are a defined number of stocks that share a common trait affected by an event, based on a determinant (the firm's industry for example). One difficulty in my study will be controlling for the movement in health care stocks compared to the movement by all the other firms in the market place in wake of the President's reelection in order to calculate the CAAR. That being said, the 2012 election made health care such a central issue throughout the election process, and the Affordable Care Act was such a hot button issue in the first term of President Obama, I hypothesize there will be statistically significant data.

I will obtain stock return data from Wharton Research Data Services and use Eventus to perform statistical tests. The day of the election will serve as 0, and the day after will serve as +1. Ababneh and Tang discuss the importance of setting the window's parameters narrow enough as to capture the effect of the event without the static from normal market trading. Not only is it critical to set this narrow window in which the event affects the related firm's stock performance, but the authors also discuss the difficulty in

defining the timeframe leading up to the event. Ababneh and Tang used a timeframe from 100 days before the verdict to 20 days before the verdict (-100, -20). I will look at the 10 day lead up (-10,-1) to see if statistically significant abnormal returns “tipped off” the events that would occur on the 2 days following the election day (0, +1)

I will utilize Zacks investment services to group firms into related industries. Zacks is an investment research website that offers many financial and investment services. Utilizing the health care sectors they have pre-assembled, I will be able to find the affect of President Obama’s reelection on a related set of firms. Additionally, this is the process that Ababneh utilized in their research and will aid my ability to compare my results to the previous study. Aiding the industry segments defined by Zacks, I utilized 6-digit NAICS codes to confirm the industry was as specific as possible and all comparisons were being made between similar firms.

Once I have my four groups (insurance, hospitals, branded and generic), I will use the respective PERMNOS for each firm, upload the lists and election date into the Eventus model and examine the results from the tests, looking for statistically significant abnormal returns.

Results

The Efficient Market Hypothesis states that any given firm is fairly valued- there is no under or overvalued company in a free market. We can easily determine if the capital markets felt that the reelection of President Obama was a positive or negative event for the health care industry using a variety of event frameworks (market-model abnormal returns, market-adjusted abnormal returns, or mean-adjusted abnormal returns). Eventus utilizes the market-model to find the expected return of a given stock based on the market's overall performance and that specific company's beta (its risk). The market model uses the CAPM Security Characteristic Line regression and can be expressed as $R_{it} = \alpha_i + \beta_i R_{mt} + e_{it}$ where R_{it} is the firm's (i) daily stock return on the specific day (t), α_i is the regression model intercept for the firm, β_i is the market model parameter for the firm, R_{mt} is the market return on the day (t) represented by the CRSP equally-weighted index return, and e_{it} is the error term for the firm on day (t). Eventus also calculates expected and actual returns; the difference is the abnormal return.

Table 6 below represents the results from my event testing on the effect of President Obama's reelection and the stock market. The results are presented with Cumulative Average Abnormal Returns (CAARs) and their significance, as well as the CAAR Percentage in the ten day lead up to the day after the election.

Table 6: Results

Hypothesis	CAAR %	Significant	10-Day Lead %
H1: Health Insurance	-1.04	*	4.07
H2: Hospitals	4.64	*	-0.14
H3: Branded Pharmaceuticals	3.37		-1.06
H4: Generic Pharmaceuticals	-2.44		-4.28

(Significant at 10% level or higher)

My first hypothesis (The cumulative average abnormal return (CAAR) for insurance companies upon the President's reelection is negative) is supported and statistically significant with a p value of .029. This means that President Obama's reelection had a negative effect on the health insurance industry. This further lends support as to why the health insurance industry continues to raise premiums, as there is a negative impact on their financial and stock performance whenever there is a continuation of the health care law.

My second hypothesis (The CAAR for hospitals upon the President's reelection is positive) is also statistically significant and confirmed by my results. In the nine days prior and on the Election Day, hospital stocks had a negative CAAR percentage, although not statistically significant. On the first two days of trading after the election, the average abnormal return was positive 4.64% with a p-value of less than .001. This is by far the most overwhelmingly visible result of my research. Further, even as recent as the 2015 Supreme Court session, headlines such as "Back in Business: Hospitals Soar as Supreme Court Upholds Obamacare" (Levisohn, 2015) lend credit to the idea that the Affordable Care Act is a positive for the hospital sector of the health care industry. An interesting note: in Ababneh and Tang's initial research, there was a negative abnormal reaction to the health care law initially; when the Supreme Court upheld the law two years later, there was a positive abnormal reaction from the market; now, it is the largest positive reaction in my research. This demonstrates the ability of the market to assimilate information over time and make more accurate stock transactions.

My third hypothesis (The CAAR for brand-name pharmaceuticals upon the President's reelection is positive) was supported but not statistically significant. In the ten

day lead up, branded pharmaceuticals had a negative CAAR of 1.06% and upon the President's reelection, moved to a positive 3.37%. I cautiously postulate that the attempt to close the doughnut hole had a larger negative impact than originally thought in prior event studies, outweighing the positive aspects of the law for these corporations. It is also possible that the pharmaceutical industry is more diverse than insurance or hospitals, leading to inconclusive data.

My final hypothesis (The CAAR for generic pharmaceuticals upon the President's reelection is negative) was also supported but not statistically significant, as the CAAR percentage was a negative 2.44%. Ababneh and Tang had difficulty drawing conclusions from their non-statistically significant results for generics as well. If anything, it is possible that political events have a diluted effect on generic drugs as opposed to insurance, hospitals, and branded pharmaceuticals, which are more heavily regulated and dependent upon government policy to dictate their business decisions.

Were the study to be repeated, I would have utilized the 2015 Supreme Court decision to re-perform Ababneh and Tang's research, as it provides a definitive event that affects only the health care industry as opposed to the entire stock market. Additionally, leading up to the election, there were polls that showed President Obama with a large lead. It is possible that investors acted on this information prior to the election where results of the Supreme Court decision had a more immediate reaction.

Overall, the results all trended in the same direction as hypothesized (negative for insurance and generics, and positive for hospitals and branded pharmaceuticals), as well as trended the same as Ababneh and Tang's research. This leads me to feel confidently

that overall the Affordable Care Act has mixed results for the health care industry, depending on which sector is being viewed.

Sources

Kristof:

<http://www.kiplinger.com/article/investing/T052-C008-S001-what-the-supreme-court-s-ruling-means-for-health-c.html>

Kavilanz:

<http://money.cnn.com/2012/06/28/pf/health-care-reform-insurance/index.htm>

Jayakumar and Kliff:

http://www.washingtonpost.com/business/economy/stocks-dip-then-recover-on-supreme-courts-health-care-decision/2012/06/28/gJQAn0wFAW_story.html

Whitman, Rates:

<http://www.ibtimes.com/health-insurance-costs-2016-rates-could-rise-some-insurers-requesting-double-digit-1956490>

CHS

<http://www.sec.gov/Archives/edgar/data/1108109/000119312515062634/d878245d10k.htm>

Mukherjee:

<http://thinkprogress.org/health/2012/10/01/932201/two-new-obamacare-/>

de la Merced:

http://dealbook.nytimes.com/2013/07/30/h-m-a-to-be-sold-to-community-health-for-3-6-billion/?_r=0

Abelson

http://www.nytimes.com/2010/03/22/business/22bizhealth.html?pagewanted=all&_r=0

Statonx

<http://www.fiercepharma.com/special-reports/top-15-pharma-companies-2014-revenue>

Beeson and Todd

http://www.nj.com/business/index.ssf/2012/06/health_care_ruling_brings_disa.html

Drew and Burt

http://www.healthcapital.com/hcc/newsletter/12_11/hole.pdf

Ignjatovic

http://www.biospace.com/news_story.aspx?StoryID=174792&full=1

FDA

<http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CBER/ucm133077.htm>

Reuters

<http://www.reuters.com/article/2010/03/22/us-usa-healthcare-industry-factbox-idUSTRE62K1IV20100322>

Trager

<http://www.rsc.org/chemistryworld/News/2010/March/25031003.asp>

Wayne

<http://www.bloomberg.com/news/articles/2012-06-13/health-care-spending-to-reach-20-of-u-s-economy-by-2021>

WorldBank

<http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS>

O'Keefe

<http://www.washingtonpost.com/blogs/the-fix/wp/2014/03/21/the-house-has-voted-54-times-in-four-years-on-obamacare-heres-the-full-list/>

Armstrong

<http://www.bloomberg.com/news/articles/2010-11-17/insurers-gave-u-s-chamber-86-million-used-to-oppose-obama-s-health-law>

Pipes

<http://www.forbes.com/sites/sallypipes/2014/10/06/obamacare-bad-for-employers-bad-for-employees/>

Britt

<http://blogs.marketwatch.com/health-exchange/2014/05/12/obamacare-is-good-for-the-economy-goldman-sachs-researcher-says/>

Levisohn

<http://blogs.barrons.com/stockstowatchtoday/2015/06/25/supreme-court-upholds-obamacare-hospital-stocks-fly/>

MedicareRights

<http://www.medicarerights.org/pdf/Closing-the-Doughnut-Hole-Chart.pdf>