

“Don’t Blow a Bunch of Cash on Vegas:” An Event Study Analysis of President Obama’s Public Statements on Las Vegas

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Abstract

In February of 2009 and 2010, President Obama made what some in the media and gaming industries construed as negative public statements regarding trips to Las Vegas. Some claimed these statements could easily be interpreted as a suggestion that companies and individuals avoid casino areas, thus doing additional harm to their surrounding economies during already tough times. In this paper, we use event study methodology to examine stock market reactions of U.S. casino-related businesses to the president’s statements. We find that President Obama’s statements were followed by significant *negative* abnormal returns in the segment of companies targeted more towards conventions, trade shows, and tourism, and by significant *positive* abnormal returns for companies with more of a local/regional focus. Our findings suggest that the president’s statements did not adversely affect all casino-related businesses, but they also were not benign.

Keywords: bully pulpit, casinos, cumulative abnormal returns, event studies, gaming, Las Vegas, presidential rhetoric, stock market

Introduction

At a town hall meeting in Elkhart, Indiana, on February 9, 2009, U.S. President Barack Obama commented on companies that received federal “bailout” funds during the financial crisis, “You are not going to be able to give out these big bonuses until you’ve paid taxpayers back, you can’t get corporate jets, you can’t go take a trip to Las Vegas or go down to the Super Bowl on the taxpayer’s dime” (Mayor Goodman Writes, 2009, 9). Businesspeople and individuals associated with the city were concerned that the general public would infer a different message from President Obama’s comments and the subsequent news reports. The mayor of Las Vegas, Oscar Goodman, summed up this concern in an interview with Fox News stating, “...with a rather reckless, cavalier remark on the part of the president, which will not be discerned by the average person in the public to apply to those folks who are receiving money, but as a general proposition, the message was, don’t come to Las Vegas” (CAVUTO, 2009, 12).

Within days following the president’s comment, several companies had already cancelled planned events in Las Vegas, including a three-day Goldman Sachs technology conference and a State Farm agents’ convention estimated at 17,000 attendees (Friess,

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2009). Goldman Sachs relocated its conference to San Francisco despite incurring a \$600,000 cancellation fee (Friess, 2009). It seemed as though corporate trips to casino destination cities would raise eyebrows, a fact that convention and tourism officials in other cities across the U.S. would use to try to steal customers. Mayor Goodman argued, “People are telling me that they’re not coming to Las Vegas because the president doesn’t want them to... There’s an impression out there that somehow if you come to Las Vegas, it’s going to reflect on your business culture, and that’s a bunch of hooley” (Friess, 2009, 11).

On February 2, 2010, President Obama made a similar statement to that of a year prior, but this time the focus was on households rather than corporations. Speaking at a town hall meeting in Nashua, New Hampshire, the president said, “When times are tough, you tighten your belts... You don’t go buying a boat when you can barely pay your mortgage. You don’t blow a bunch of cash on Vegas when you’re trying to save for college” (President Obama Again, 2010, 2). Mayor Goodman again voiced his frustration, calling the President a “real slow learner” and stating that when he comes to town, “I’ll do everything I can to give him the boot” (Ayres, 2010, 2 & 10).

Theodore Roosevelt is credited with first use of the term “bully pulpit” to describe the extraordinary influence attributed to the rhetoric of the President of the United States. President Obama has himself recognized this influence and acknowledged the ability of his spoken words to impact the behavior of his constituents, stating, “When you’re president, you’ve got the bully pulpit” (In Obama’s Words, 2010, 21). This was preceded a few months earlier by Press Secretary Robert Gibbs stating, “I think that the bully pulpit can be a powerful thing” (Clifford, 2009, 18). In this paper, we examine this hypothesis in the context of President Obama’s two statements regarding corporate and individual behavior towards patronizing Las Vegas.

Convention and tourism business was already slumping in Las Vegas by 2009. But did the president’s words carry sufficient weight to further affect individual and corporate behavior? In a perfect world, a researcher would conduct an economic analysis by comparing factors like employment, wages, output, prices, and investment after the president made his statements to the same factors in an otherwise identical setting in which the president did not make his statements. Unfortunately, this procedure is impossible. As a proxy, one could examine these factors before and after each of President Obama’s statements and attempt to compare them to other areas unaffected by said statements. This is an extremely difficult exercise for a variety of reasons, some of which include the difficulty of completely and accurately gathering the necessary data, the difficulty of finding suitable control groups, the time lag associated with changes in employment, wages, prices, and investment due to the statements, and the wide range of confounding factors that could occur during this lag.

We use an alternative proxy technique which analyzes the U.S. stock market reaction to President Obama’s statements using event study methodology. This type of analysis measures the relationship of an event to the market value of affected businesses. Value is determined by investors who tend to be well-educated in the relevant markets, especially institutional investors, and have a strong financial incentive to act truthfully on their beliefs. The reliability of investor perceptions of value when estimating the incremental effect of a single event on a company is quite different from the reliability of their perceptions over time when Keynesian “animal spirits” and other types of irrational exuberance can set in and cause asset bubbles.

The specific research questions we address are:

Question 1 What is the price response (stock return) associated with President Obama’s statements for U.S. casino-related stocks?

Question 2 How, if at all, does this response differ across casino-related stock segments?

Whether intentional or not, President Obama’s comments were targeted at Las Vegas. However, his comments could also be interpreted more generally towards other U.S.

gaming destinations or any local casino. Thus, the economic impact is not necessarily confined to Las Vegas alone. If there is an impact, casino gaming properties and resorts would be directly affected while other businesses would be affected in an indirect manner. Therefore, we examine casino-related stocks with U.S. brick-and-mortar operations in this paper.

Our findings suggest that President Obama's statements were not benign, but in a manner different than what one may naturally expect. At face value, both of the president's statements tended to encourage a targeted reduction in demand towards casino properties, which should result in negative stock reactions. However, we find a negative stock reaction only for a distinct segment of casino companies, and we observe a positive stock reaction for a separate segment.

We wish to emphasize that the issue of causality can be a tricky one. In empirical research, it is a statistical assumption (the unconfoundedness assumption). We do not make that assumption and are not familiar with event studies that explicitly do so, although results are often discussed with a somewhat causal feel because of the statistical design. Readers, however, should refrain from using this type of causal language when interpreting these results. In that spirit, we avoid direct causal statements, and we also incorporate a discussion specifically addressing the issue of causality as it relates to event studies.

Literature Review

Event Studies

Event study research was developed in the late 1960s. It is based on a foundation of the Efficient Market Hypothesis (EMH), which was formalized by Fama (1970) and is considered a cornerstone of modern finance theory. In its semi-strong form, the EMH states that the market will process all information as soon as it is publicly available and will adjust prices immediately to be in line with the value-relevancy of the information. Considerable research has been done in finance and accounting, providing robust evidence of semi-strong form market efficiency (Fama, 1970; Fama, Fisher, Jensen, & Roll, 1969; Malkiel, 2005). In theory, price responses should be immediate and complete. However, some research has shown that while an initial response is immediate, the complete response may take a few trading days (Atiase, Li, Supattarakul, & Tse, 2005; Beaver, 1968; Grossman & Stiglitz, 1980; May, 1971).

Researchers have taken the idea of the EMH and used it as a basis for determining the economic impact of disseminated information. In seminal studies, Ball and Brown (1968) and Beaver (1968) assessed the impact of accounting information by examining the release of earnings announcements. This started a research track that has taken a wider view to include various types of value-relevant information such as dividends, stock splits, earnings forecasts, changes in accounting processes, and changes in the tax code.

More broadly, any event that has information which is economically-relevant to publicly-traded companies can be examined through the lens of event studies and the EMH. Event studies have been used to investigate a great number of topics including the impact of antitrust filings on companies' competitors (Bittlingmayer & Hazlett, 2000), the effect of macroeconomic news on stock prices (McQueen & Roley, 1993), the impact of a corporate name change on companies with Internet-related dotcom names (Cooper, Dimitrov, & Rau, 2001), and the effect of the Three Mile Island nuclear accident on public utility companies (Hill & Schneeweis, 1983).

Presidential Influence

Prior research provides evidence that the types of presidential administrations may have an influence on the stock market. Niederhoffer, Gibbs, and Bullock (1970), Riley and Luksetich (1980), and Siegel (1998) found that the stock market performs better in

A number of studies have examined the content of State of the Union addresses and found that presidential emphasis on particular issues increases public concern for said issues

the days and weeks following the election of a Republican president as compared to a Democratic president. Stovall (1992) found that stock market returns are greater during entire Democratic administrations than Republican administrations. Johnson, Chittenden, and Jensen (1999) extended this analysis by showing that there is no difference on the returns of large-cap stocks, but there is a substantial difference on small-cap stocks, with significantly higher returns during Democratic administrations.

The notion of the bully pulpit, i.e., the influence of presidential rhetoric on public opinion and behavior, is not new. President Obama and his staff have spoken openly of it, but this support is only anecdotal. Scientific evidence examining the power of presidential rhetoric is somewhat mixed. A number of studies have examined the content of State of the Union addresses and found that presidential emphasis on particular issues increases public concern for said issues (Cohen, 1995; Hill, 1998; Lawrence, 2002). Young and Perkins (2005) showed that this influence has diminished in recent years due to the changing structure and penetration of cable television. However, Edwards (2003) found little effect of presidential speeches on public opinion.

Wood, Owens, and Durham (2005) found that presidential statements about the economy affect the public's perception of economic news and consumer confidence, and that this may have a meaningful impact on macroeconomic performance variables. They concluded, "The president's words are a powerful instrument of economic leadership that can affect consumer perceptions of current and future economic conditions" (Wood, Owens, & Durham, 2005). Might this also extend to perceptions of future business activity and firm value in a particular industry? This paper adds to the literature on the influence of presidential rhetoric by examining the impact of two well-publicized, gaming-related presidential statements on the value of companies in the casino resort industry.

Method

Study Design

Our analysis uses well-developed event study methodology from modern finance theory. From a research perspective, this structure has many useful features. It is easy to gather complete and accurate data, a control group is not needed (other than controlling for general market movements), stock market reactions occur very quickly as information is disseminated, and investors tend to be well-informed and have their money, or their jobs, on the line. Additionally, event studies that examine clearly-distinguishable events with daily stock returns (as opposed to weekly or monthly returns) have been shown in prior research to be very powerful, straightforward, and trouble-free (Kothari & Warner, 2007).

Every trading day an individual stock has a return, defined as the percent change in the stock price, inclusive of any dividends. The impact of general market movements on a stock's price can be characterized as its normal return. The abnormal return is the impact of company- or industry-specific occurrences on a stock's price. To obtain abnormal returns, we first estimate the market model over a 101-day estimation period for each stock. In this model,

$$R_{it} = \alpha + \beta R_{mt} + \varepsilon_{it}, \quad t = -110, \dots, -10$$

where t represents the number of trading days before (negative number) or after (positive number) the event date of $t = 0$, R_{it} is the return for firm i on day t , R_{mt} is the return on an equally-weighted market portfolio on day t , and α and β are regression parameters estimated as $\hat{\alpha}$ and $\hat{\beta}$ by OLS over days -110 to -10 in event time. The event date is February 9, 2009 for 2009 regressions and February 2, 2010 for 2010 regressions. The market model has been shown in simulations to have superior performance relative to other event study models (Armitage, 1995; Brown & Warner, 1985; Lee & Varela, 1997) and the equally-weighted market index has been shown to have superior performance relative to other market indices (Corrado, 2011).

Abnormal returns (ARs) for firm i are calculated as

$$AR_{it} = R_{it} - (\hat{\alpha} + \hat{\beta}R_{mt}). \quad t = -110, \dots, 4$$

Since the complete price response to new information can potentially take several days, cumulative abnormal returns (CARs) are calculated over multiple trading days known as the event window. In this paper, we construct CARs using a primary event window and two alternate windows

$$CAR_{i3} = AR_{i0} + AR_{i1} + AR_{i2}, \quad (\text{Primary})$$

$$CAR_{i5} = AR_{i0} + AR_{i1} + AR_{i2} + AR_{i3} + AR_{i4}, \quad (\text{Alternate})$$

$$CAR_{i,-3} = AR_{i,-3} + AR_{i,-2} + AR_{i,-1}, \quad (\text{Alternate})$$

where CAR_{i3} uses an asymmetric (around $t=0$) 3-day event window, CAR_{i5} uses an asymmetric 5-day event window, and $CAR_{i,-3}$ uses the 3-day window just prior to the event (the *pre-event window*). We use an asymmetric event window because there is no question as to the timing of President Obama’s statements which, by all accounts, were completely unanticipated, eliminating concern about pre-announcement information leaks.¹ Three days is the most common window length for short-horizon event studies using daily returns (Bartholdy, Olson, & Peare, 2007) and, thus, is our primary window length. We use two alternate event windows to perform sensitivity analyses, the 5-day window and the pre-event window. The additional days in the 5-day window allow for a full trading week of media response.

The Sample

Stocks were selected from Hoover’s “Gambling Resorts & Casinos” industry classification, which defines inclusion as “Companies that own, operate, and/or manage casino gaming operations, casino/resort hotel facilities, riverboat casinos, and other gaming properties” (Hoovers, 2011) Selected companies had to be traded on the NYSE, AMEX, or NASDAQ stock exchanges during February of 2009 and 2010 and have U.S. brick-and-mortar gaming operations. Stocks that fit these criteria composed our initial list. For each company, we collected stock price information for days $t = -110, \dots, 4$ using the CRSP daily data set. We also collected data for the equally-weighted market index for use in the market model. We then filtered the initial list by year, excluding stocks that had an earnings announcement, dividend announcement, stock split, or significant company-specific news event within five trading days of February 9, 2009 or February 2, 2010, respectively. This was done to exclude stocks with known noise that would confound the analysis. Our initial stock list and the filtered list for each year can be seen in Table 1. Notable companies for which data were not available are Foxwoods Casino Resort, Harrah’s Entertainment, Station Casinos, and Trump Entertainment Resorts.²

Different businesses cater to and target different types of customers. Although casino-related companies contain a variety of types of properties, information on their target customers and competition is available in their annual 10K reports. We segmented each company in our filtered list into one of two categories: CTT companies focused more towards conventions, trade shows, and tourists and Non-CTT companies generally focused more towards local or regional customers. Segmentation was performed on the basis of statements in their 10K reports regarding their target customers and competition, as well as on information regarding their meeting facilities. With respect

- 1 Symmetric windows are used to analyze events where a portion of the information was reasonably anticipated. Examples include corporate earnings announcements, tax policy changes, and new government regulations. In these cases, there is often extensive discussion, debate, and/or speculation leading up to the event, which is likely to impact stock prices before the actual event occurs
- 2 Foxwoods is privately owned by the Mashantucket Pequot Tribal Nation, Harrah’s was delisted and taken private in January 2008, Station was delisted and taken private in November 2007, and Trump filed Chapter 11 bankruptcy and received a delisting notice in February 2009.

to 10K statements, we looked to see whether conventioners, trade shows, and tourism were a focal point of the discussion of target customers and competition. With respect to meeting facilities, eight properties of CTT companies were ranked in Tradeshow Week's top 101 hotel exhibit halls for 2008, and each company had at least one property on the list. Non-CTT companies did not have any properties on the list. We manually added a few properties to the list by nature of their affiliation to large exhibit halls, even though the exhibit halls of the properties themselves did not make the cut. These properties are still able to target the convention and corporate events customer segments because of these affiliations. Venetian and Palazzo, Las Vegas Sands properties, were added due to their affiliation with the Sands Expo Center. Encore, a Wynn Resorts property, was added due to its affiliation with Wynn Las Vegas. Atlantis Casino Resort, a Monarch Casino & Resort property, was added due to its affiliation with the Reno-Sparks Convention Center (the two are physically connected via an enclosed skybridge). The criteria were applied evenly and consistently to each property of CTT and Non-CTT companies. Our segmented stock list can be seen in Table 1. It is important to remember that companies assigned to the same segment are not necessarily comparable on *every* characteristic, only the select characteristics used to segment.

Table 1
Initial, Filtered, and Segmented List of Stocks Used in Analyses

Initial List	Filtered List 2009	Filtered List 2010
Ameristar Casinos	Boyd Gaming	Boyd Gaming
Boyd Gaming	Century Casinos	Century Casinos
Century Casinos	Full House Resorts	Isle of Capri Casinos
Full House Resorts	Isle of Capri Casinos	Las Vegas Sands
Isle of Capri Casinos	Monarch Casino & Resort	Monarch Casino & Resort
Las Vegas Sands	MGM Mirage	MGM Mirage
Monarch Casino & Resort	Empire Resorts	Nevada Gold & Casinos
MGM Mirage	Nevada Gold & Casinos	Wynn Resorts
Empire Resorts	Wynn Resorts	
Penn National Gaming		
Nevada Gold & Casinos		
Wynn Resorts		

CTT Casino Stocks	Non-CTT Casino Stocks
Las Vegas Sands	Boyd Gaming
Monarch Casino & Resort	Century Casinos
MGM Mirage	Full House Resorts
Wynn Resorts	Isle of Capri Casinos
	Empire Resorts
	Nevada Gold & Casinos

Results

Descriptive Statistics and Histograms

Descriptive statistics of ARs and CARs for all three event windows are shown in Table 2. None of the means is significantly different from zero. Separate histograms of ARs and CARs for all companies using the primary 3-day event window are shown in Figure 1. Both distributions are reasonably symmetric around zero, appearing to support a hypothesis that President Obama's statements were benign. These basic results are relatively trivial and do not support a bully pulpit hypothesis.

Table 2
Descriptive Statistics of Abnormal Returns

	Mean	S.D.	N
3-Day Event Window			
<u>Daily Abnormal Returns</u>			
2009	.0036	.0345	27
2010	-.0027	.0255	24
Both Years	.0006	.0305	51
<u>Cumulative Abnormal Returns</u>			
2009	.0108	.0530	9
2010	-.0082	.0232	8
Both Years	.0019	.0416	17
5-Day Event Window			
<u>Daily Abnormal Returns</u>			
2009	.0010	.0371	45
2010	.0022	.0238	40
Both Years	.0016	.0314	85
<u>Cumulative Abnormal Returns</u>			
2009	.0051	.0828	9
2010	.0111	.0363	8
Both Years	.0079	.0634	17
3-Day Pre-Event Window			
<u>Daily Abnormal Returns</u>			
2009	-.0089	.0458	27
2010	.0044	.0315	24
Both Years	-.0026	.0399	51
<u>Cumulative Abnormal Returns</u>			
2009	-.0266	.0676	9
2010	.0133	.0380	8
Both Years	-.0078	.0578	17

Note. None of the means is significantly different from zero for $\alpha = .01$.

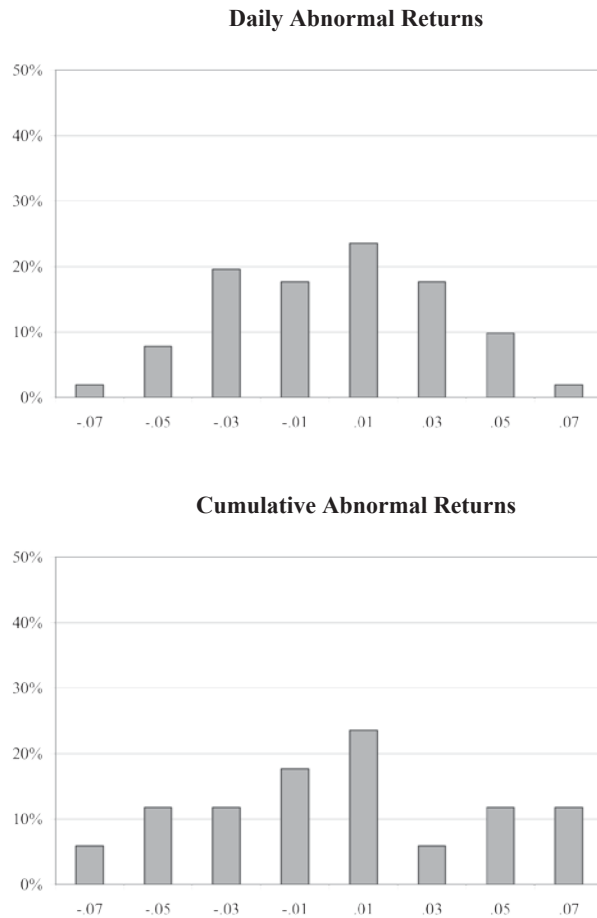
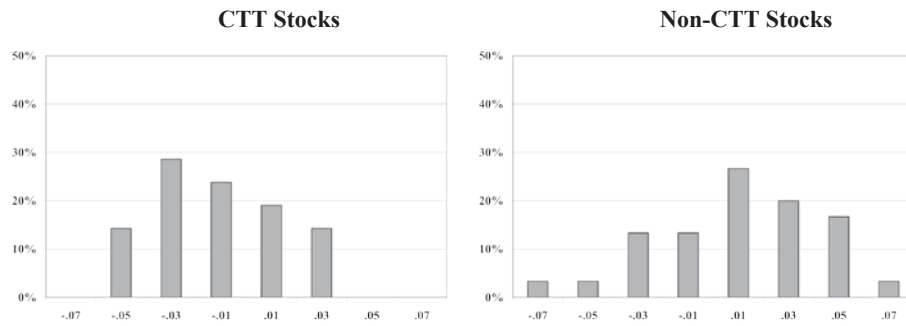


Figure 1. Frequency histograms of daily abnormal returns and cumulative abnormal returns. Abnormal return bins are on the x-axis. Returns are over a 3-day event window for all stocks for 2009 and 2010 combined.

In Figure 2, we plot separate histograms of ARs and CARs for CTT and Non-CTT companies. For the AR histograms, a majority of the mass is on the negative return side in the CTT category and on the positive return side in the Non-CTT category. This gives rise to the question, could President Obama’s statements have been beneficial to some casino-related companies while detrimental to others? The picture becomes clearer with the examination of cumulative abnormal returns. There is a stark difference in the distributions of CARs across segments. All CTT stocks have negative CARs, while all but one of the Non-CTT stocks have positive CARs. While daily abnormal returns are a bit noisier, the cumulative effect over three trading days is abundantly clear. This evidence is visually striking and quite interesting in its implications. However, it is not rigorous and runs the risk of leading to faulty inferences if, in fact, randomness was the true underlying cause.

Daily Abnormal Returns



Cumulative Abnormal Returns

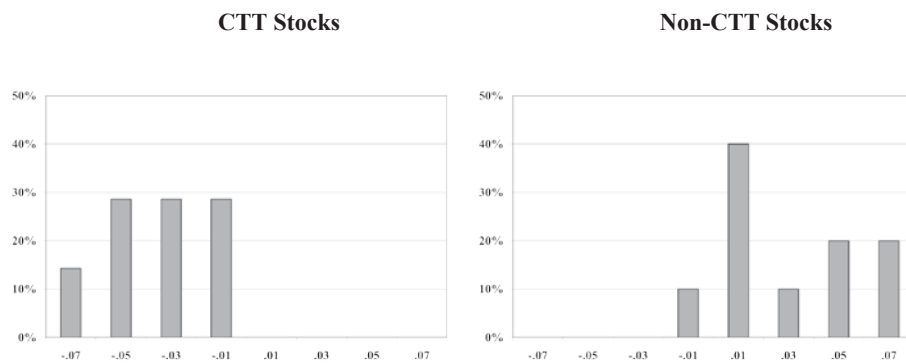


Figure 2. Frequency histograms of daily abnormal returns and cumulative abnormal returns by type of stock. Abnormal return bins are on the x-axis. Returns are over a 3-day event window for all stocks for 2009 and 2010 combined. CTT is convention, trade show, and tourist companies.

Statistical Tests

We test the following hypotheses:

Hypothesis 1 $E(CAR) = 0$ for CTT stocks and all event windows

Hypothesis 2 $E(CAR) = 0$ for Non-CTT stocks and all event windows

Hypothesis 3 $E(CAR) = 0$ for all stocks and all event windows.

When performing statistical analyses, the strength of the findings are enhanced if it can be shown that the researcher’s assumptions are not driving the results. Sensitivity analysis is useful in this regard. We conduct sensitivity analyses using four different types of tests, detailed below, on three different event windows and three different stock categories. All test results were qualitatively similar when using a value-weighted market index rather than an equally-weighted one.

Potential hazards. The nature of this endeavor leads to small sample sizes due to the relatively small number of U.S. publicly-traded, casino-related stocks. Applying the requisite filtering criteria makes sample sizes even smaller. Out of nine filtered stocks in 2009, three are in the CTT segment and six are in the Non-CTT segment. Out of eight filtered stocks in 2010, four are in the CTT segment and four are in the Non-CTT segment. If we combine both years together and define the event as the 2009 or 2010

public statement towards Las Vegas by President Obama, then out of 17 filtered stocks, seven are in the CTT segment and ten are in the Non-CTT segment. These small samples lead to two primary concerns when running statistical tests: the power of the test and the applicability of the asymptotic properties of the estimators.

These small samples lead to two primary concerns when running statistical tests: the power of the test and the applicability of the asymptotic properties of the estimators.

When performing statistical tests from event studies, there are generally three major concerns: misspecification, event-induced volatility, and event-time clustering. Misspecification occurs when the assumptions of a parametric model are incorrect. Event-induced volatility occurs when stock return variance increases or decreases as a result of the event taking place. Controlling for this in an efficient manner will lead to proper Type I and II error rates. Event-time clustering occurs when a single event on a specific date impacts multiple companies or multiple industries at the same time. Examples include the 2010 financial reform act, interest rate announcements by the Federal Reserve, and the September 11th terrorist attacks. Event-time clustering, including the presidential statements in the present study, can cause stock return cross-correlation which can lead to erroneously high rejection rates of hypothesis tests if not properly controlled. Researchers have developed parametric and nonparametric estimators to effectively control for these potential hazards (Boehmer, Musumeci, & Poulsen, 1991; Corrado, 1989; Corrado & Zivney, 1992; Cowan, 1992; Cowan & Sergeant, 1996; Jaffe, 1974; Kolari & Pynnonen, 2010a; Kolari & Pynnonen, 2010b; Wilcoxon, 1945).

Parametric tests. We use adjusted versions of the BMP test and the portfolio test for parametric analysis. The BMP test statistic, developed by Boehmer et al. (1991), accounts for possible event-induced volatility in stock returns. Return volatility may increase (variance inflation) or decrease (variance deflation) due to an event. The BMP test, one of the most commonly used parametric tests for event studies, controls for either of these scenarios. It has also been shown to be efficient and have a high level of power (Kolari & Pynnonen, 2010a). The portfolio test was developed by Jaffe (1974). It is frequently used when returns are potentially cross-correlated (Kolari & Pynnonen, 2010a), such as in our current study with event-time clustering due to the common event date for each of the president's statements.³

Each test is "adjusted" to control for *both* potential cross-correlation and event-induced volatility. In terms of their general construction, the BMP test assesses whether sums of standardized CARs are sufficiently far from zero and the Portfolio test performs a similar procedure, but on an equally-weighted portfolio of the stocks in the sample (see references for more detailed information). The results of these tests are shown in Table 3.⁴

Table 3

Parametric Test Statistics of Cumulative Abnormal Returns by Stock Type

Adjusted BMP Test	2009	2010	Both Years
<u>3-Day Window</u>			
CTT	-2.55**	-3.19***	-5.00***
Non-CTT	2.90***	3.29***	3.77***
All	.40	-.71	-.19

³ The portfolio test cannot be performed on data for both years combined due to the manner in which it is constructed.

⁴ The adjusted BMP test statistics are asymptotically standard normal. Small sample size is not a significant concern because the test statistic is derived from a standardized sum of a small number of t-statistics with 99 degrees of freedom. Thus, each t-statistic is very close to standard normal. Therefore, a large sample size of stocks is not critical to achieve Central Limit Theorem convergence from t-stat to z-stat. The adjusted portfolio test statistic is a t-statistic with 99 degrees of freedom.

<u>5-Day Window</u>			
CTT	-4.07 ^{***}	-1.25	-2.38 ^{**}
Non-CTT	1.97 ^{**}	1.64	2.72 ^{***}
All	.01	.56	.44
<u>3-Day Pre-Event Window</u>			
CTT	-1.49	.91	.27
Non-CTT	-.3	-.19	-.39
All	-.83	.68	.00
<u>Adjusted Portfolio Test</u>		2009	2010
<u>3-Day Window</u>			
CTT	-2.63 ^{***}	-3.13 ^{***}	
Non-CTT	2.48 ^{**}	3.15 ^{***}	
All	.39	-.65	
<u>5-Day Window</u>			
CTT	-4.03 ^{***}	-1.23	
Non-CTT	1.82 [*]	1.44	
All	.13	.50	
<u>3-Day Pre-Event Window</u>			
CTT	-1.49	.85	
Non-CTT	-.34	-.22	
All	-.79	.59	

Note. All tests are two-tailed. ^{***}, ^{**}, and ^{*} indicate significance at $\alpha = .01$, $.05$, and $.10$, respectively.

The results are noteworthy within each test and are consistent across the tests. There is a significantly negative return effect on CTT stocks and a significantly positive return effect on Non-CTT stocks for the 3-day and 5-day event windows. The lone exception is for the 5-day event window in 2010. In this case, the statistics are of the same sign as those of the 3-day window and are close to the significance threshold. This weakness likely results from the additional noise of adding two superfluous days to the event window. When we combine CTT and Non-CTT stocks and examine them all together, there is no significant effect. Finally, we test each sample using a control period where there was no event (the pre-event window). As expected, we obtain weak, insignificant results all around. The totality of these test results provides robust support for a negative impact of President Obama’s statements on CTT company returns and a positive impact

on Non-CTT company returns.

Nonparametric tests. Nonparametric tests have an added layer of specification flexibility, but this comes at the cost of a potential loss of efficiency. However, they are useful ways of checking results and examining the sensitivity of assumptions. We use the generalized sign test of Cowan (1992) and the generalized rank test of Kolari & Pynnonen (2010b). Both control for event-induced volatility and cross-correlation and have been shown to have a high level of power among common alternative estimators (Cowan, 1992; Kolari & Pynnonen, 2010b). The generalized sign test examines the proportion of positive CARs in the event window and tests whether it is significantly different from the proportion of positive abnormal returns observed during the estimation period. The generalized rank test ranks all abnormal returns from highest to lowest. It then tests whether the ranking of event window CARs is significantly higher or lower than the average abnormal return rank of the estimation period (i.e., 50%). The results of these tests are shown in Table 4.

Table 4

Non-Parametric Test Statistics of Cumulative Abnormal Returns by Stock Type for 2009 and 2010 Combined

	Generalized Sign Test	Generalized Rank Test
<u>3-Day Window</u>		
CTT	-2.10**	-3.36***
Non-CTT	2.37**	3.45***
All	.23	-.04
<u>5-Day Window</u>		
CTT	-1.35	-2.36**
Non-CTT	1.74*	2.71***
All	.23	.28
<u>3-Day Pre-Event Window</u>		
CTT	.17	.16
Non-CTT	-.79	-.70
All	-.74	.04

Note. Results were qualitatively similar for a sign test using the actual binomial distribution instead of the standard normal approximation with the Central Limit Theorem. All tests are two-tailed. ***, **, and * indicate significance at $\alpha = .01, .05, \text{ and } .10$, respectively.

Given the construction of the nonparametric tests, small sample size is more of a concern. We do not have enough data to possibly obtain meaningful results from the nonparametric tests when examining each year separately. When we examine both years combined, we find similar statistical results to the parametric tests: significantly negative returns to CTT stocks and significantly positive returns to Non-CTT stocks using the primary 3-day window, results of the same magnitude but with mixed significance using the alternate 5-day window, insignificant results when examining all stocks together, and insignificant results for all categories when using the pre-event window. The

nonparametric tests reinforce the findings of the parametric tests under a less restrictive set of assumptions.

Economic significance. Statistical significance supports the notion that President Obama’s statements had a non-zero effect on different types of casino-related businesses. Economic significance examines if the non-zero effect is meaningful. We find that the statements of the president were associated with a 2-7% reduction in market capitalization for CTT companies and a 1-6% increase in market capitalization for Non-CTT companies.

The evidence is consistent with a theory that the president’s statements discouraged a sizeable number of individuals and businesses from travel to CTT casino areas, but did not discourage individuals from gambling at and frequenting all casinos.

Discussion and Conclusions

Our analysis supports the hypothesis that presidential rhetoric can have a real impact on public behavior towards a particular industry with President Obama’s statements adversely affecting CTT companies and positively affecting Non-CTT companies in our sample. While one cannot statistically prove that a particular theory is true, the evidence is consistent with a theory that the president’s statements discouraged a sizeable number of individuals and businesses from travel to CTT casino areas, but did not discourage individuals from gambling at and frequenting all casinos. In this case, his comments might have merely shifted the behavior to other locations and venues.

By definition, it is unlikely that conventions and corporate events would shift from CTT casinos to Non-CTT casinos, so the reduction in these events was likely shifted to other CTT locations without gaming (e.g., San Francisco) or eliminated altogether. So what is driving the positive effect on Non-CTT casino companies? Our results support the notion that while individuals may have taken fewer overall gambling trips or downsized/downgraded their gambling trips, they continued to frequent Non-CTT casinos and *marginally shifted* some gambling activities to such properties; e.g., downgrading trips from CTT properties to Non-CTT properties or substituting local/regional Non-CTT gambling for more expensive CTT trips. Ariely (2008) and Thaler and Sunstein (2008) discuss interesting economic research about how incentives, expectations, and verbal cues can affect individual behavior.

There are a few caveats to our analysis. First, a few notable companies were not included because their stock was not publicly-traded. This does not diminish the relevance or significance of our analysis of publicly-traded companies, but it does mean that external validity is not certain and care should be taken when forming out-of-sample conclusions. Second, some casino-related companies are composed of a variety of types of subsidiaries. The process of segmenting companies into CTT and Non-CTT segments is not simple and unambiguous. While it can be tempting to be guided by anecdotal evidence or opinion, we instead employed dispassionate criteria in an attempt to segment different types of casino-related companies on the basis of specific characteristics. Finally, we do not perform an analysis of underlying economic data such as output and employment. This type of analysis is extremely difficult to *credibly* perform and is fraught with complications. Instead, we examine how the stock prices of casino-related companies behaved before and immediately after President Obama’s statements, using the directional change in market value as a proxy for economic impact.

Did President Obama’s statements cause the change in investor perceptions of future business activity and therefore the change in market value? Rigorous event studies attempt to address questions of this type through a classic pre-test/post-test design. The market model is calibrated to the period before the event in order to analyze the period after the event, while the market portfolio serves as a quasi-control group. Firm- and industry-specific confounding factors are controlled for by excluded firms with known earnings announcements, stock split announcements, dividend announcements, or

significant news events.⁵ Our specific study adds another layer of reliability by finding insignificant results in the pre-event window (i.e., the pre-test period). This type of design does not and cannot prove causality as causality itself is an assumption (Holland, 1986).⁶

Our model shows that after imposing proper controls, CTT and Non-CTT company stock prices behave differently after the president's statements than they did before, relative to the market, and the direction of this difference is consistent with the statements having a negative impact on CTT companies and a positive impact on Non-CTT companies. As with any empirical study, we reject the null hypothesis (no effect) within standard statistical boundaries and can only state that the observed results are consistent with certain hypotheses. Could there be some omitted variable that is the hidden, underlying cause of the changes? This question could be asked of any empirical study and reasonableness should be the guide, not absolute proof.

When examining all casino-related companies in our dataset, results initially support the benign nature of the president's statements about Las Vegas. But, after recognizing that different types of companies may be affected in different ways, we find strong results when analyzing CTT and Non-CTT casino segments separately. Results are the strongest with the primary 3-day window and are slightly weaker with the alternate 5-day event window, which contains additional noise. During the pre-event control period, we would expect statistically insignificant results for both casino segments as well as for all companies combined. As expected, all results are weak during this period. Furthermore, the results do not appear to be driven by or sensitive to the assumptions of any particular statistical test, providing additional reliability and robustness support.

President Obama's statements were not negatively associated with *all* publicly-traded, casino-related companies, nor were they negatively associated with all Las Vegas casino companies. They corresponded to statistically and economically significant *negative* return estimates for CTT casino companies (2-7% reduction in market capitalization) and statistically and economically significant *positive* return estimates for Non-CTT casino companies across the U.S. (1-6% increase in market capitalization). Our findings suggest that presidential rhetoric can be tailored towards particular industries in a positive or negative manner, and, whether intentional or not, may have been recently employed in a non-benign way with President Obama's two statements about Las Vegas.

President Obama's statements were not negatively associated with all publicly-traded, casino-related companies, nor were they negatively associated with all Las Vegas casino companies.

⁵ Las Vegas Sands announced earnings below analyst expectations after market close on February 11, 2009, and was excluded from the analysis. They experienced a significantly negative return shock the following day. MGM, Wynn, and Monarch did not experience a similar return shock and, in fact, experienced two positive return shocks and one benign. Thus, they do not appear to be contaminated by the Las Vegas Sands announcement in a manner that would bias towards a negative effect of the president's 2009 statement on CTT companies.

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