Bank Secrecy Act and Casinos' Performances

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This study examines the impact of BSA on casino industry's market performance and accounting performance. Results show that the huge gaps in casino performances before BSA have been reduced since BSA. Specifically, pre-BSA, Nevada casinos had lower market performance but higher accounting performance than those casinos in the other states; post-BSA both measures for these two groups of casinos come closer. Results suggest that BSA has been effective in leveling the operating fields for the casino industry, and the improvement of Nevada casinos' market performance suggests that adoption of BSA is conducive to their reputation recovery.

Keywords: Bank Secrecy Act, Nevada Revised Statute Regulation 6A

INTRODUCTION

After 22 years of compliance with their own rules [Nevada Revised Statute (NRS) Regulation (Reg.) 6A] related to anti-money laundering (AML) activities, effective on July 1, 2007 Nevada casinos switched their AML compliance to the Bank Secrecy Act (*BSA*) provisions of Title 31, which put them in the same federal compliance system as the one followed by the casinos in the other states of the United States. NRS Reg. 6A was allegedly strict in dealing with AML activities. However, recent high-profile citations of violators in the gaming industry may make you think that the federal *BSA* provisions of Title 31 may have been harsher to Nevada casinos than was the NRS Reg. 6A. Therefore, it remains a valid empirical question what impact the transition from the state legislation to federal jurisdiction has had on the economic performance of the casino industry.

This study examines the effect of Nevada casinos' new compliance with the federal *BSA* provisions of Title 31 on casinos' market and accounting performances. Using data covering a period of 2003 to 2011, I identify those Nevada casinos that are affected by *BSA* and those that have been under the federal jurisdiction in the other states of the United States. This research design is expected to generate the most contrasting results, if there is any.

Results of this study show that the transition of Nevada casinos from NRS Reg. 6A to federal *BSA* has had a significant positive impact on the performance of the entire gaming industry in the United States. Specifically, pre-*BSA*, non-Nevada casinos had significantly higher market performance but much lower accounting performance than those Nevada casinos; post-*BSA*, the market performance of Nevada casinos improved to be very close to that of non-Nevada casinos, and the accounting performance of Nevada casinos does not change much, while the accounting performance of non-Nevada casinos improved significantly to be close to that of Nevada casinos. In essence, under the new regime of *BSA*,

Nevada casinos perform economically at the similar levels to those casinos in the other states of the United States, fulfilling the goals of the regulators to put all casinos under the same umbrella.

This study makes the following contributions. First, it contributes to the literature related to change in regulations. For Nevada casinos, the transition to *BSA* improved their market performance while not compromising their accounting performance, validating the right decision made by the State of Nevada to switch to *BSA*. Second, it contributes to the gaming literature. The exempt status of Nevada casinos, which was under the regime of NRS Reg. 6A might make people think that state-level Reg. 6A was not as rigid as the federal regulation, and the enactment and the operation of *BSA* will jeopardize the economic performance of Nevada casinos. However, the results suggest that compliance with the *BSA* has had a positive impact on their economic performance, indicating the timely repeal of NRS Reg. 6A. Lastly, this study contributes to the accounting disclosure literature. This study is related to mandatory reporting and disclosure of customer information in the revenue generating process. The results indicate that strictly following mandatory disclosure requirement has a positive impact on firms' economic performance, especially the market performance, possibly due to the reputation recovery effect.

The study is proceeded as follows. Next section deals with the background information and generates the hypotheses, the methodology and empirical results follow, and the last section summarizes and concludes.

BACKGROUND AND HYPOTHESES DEVELOPMENT

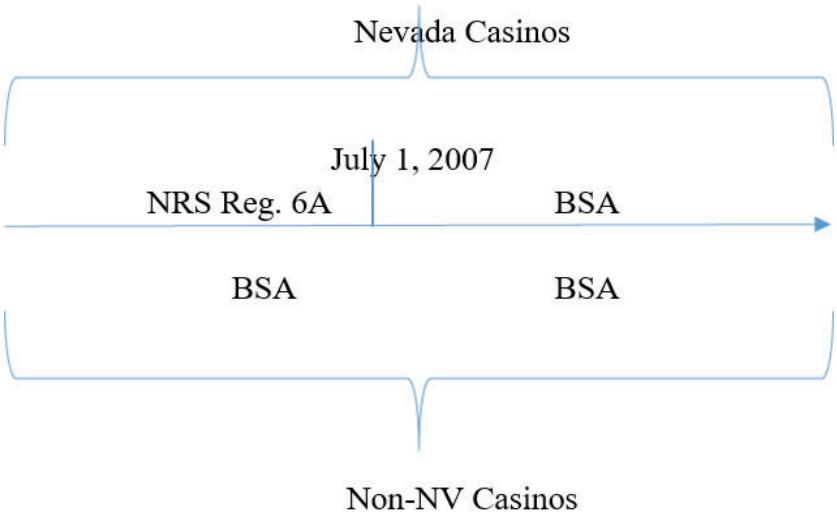
Background

Casino industry is notorious in various ways. Besides tobacco and alcohol, it is regarded as one of the sin industries (Hong and Kacperczyk, 2009). Casino industry is the staple pillar in Nevada's economy, and it has attracted inevitable and incessant attention, both malignant and benign, but mostly malignant. Probably the most significant vice people would think of casinos is moral turpitude. However, one of the increased attentions to this industry is the possibilities that criminals use casino cash transactions to launder their ill-gotten money.

Federal governments have made rules to combat money laundering activities. The United States Congress enacted 31 Code of Federal Regulations (C.F.R.) § 103.11, the Bank Secrecy Act (*BSA*) on October 26, 1970 to combat money laundering activities. *BSA* is also called Currency and Foreign Transactions Reporting Act. Originally banks are required to report certain cash transactions to the Internal Revenue Services (IRS). The U.S. Treasury Department adopted regulations governing reporting requirements.

The scope of the *BSA* was expanded to include casinos starting May 7, 1985. Casinos were categorized as financial institutions. Casinos and card clubs duly licensed or authorized to do business as casinos or card clubs and which have gross gaming revenues in excess of $1,000,000 are financial institutions subject to the requirements of the *BSA* provisions of Title 31. However, the *BSA* also allowed the Treasury Department to exempt casinos in any state where the regulatory system substantially meets the reporting and recordkeeping requirements of the *BSA* regulations. Certain Nevada casinos were exempt from the *BSA* because of the rigorous gaming regulatory regime of the state. Instead, these Nevada casinos followed NRS Reg. 6A: Cash Transactions Prohibitions, Reporting, and Recordkeeping. Figure 1 below presents the timeline of the transition for Nevada casinos from NRS Reg. 6A to *BSA*.

FIGURE 1
TIMELINE OF THE TRANSITION FROM NRS REG. 6A TO BSA



This figure displays the timeline of affected casinos (annual gaming revenue of $10 Million or more, and statistical win in table games of $ 2 Million or more) in Nevada that transitioned to *BSA*. During the study period, non-*NV* casinos of the same category have been subject to *BSA*, but before the event day of July 1, 2007, *NV* casinos were under the jurisdiction of NRS Reg. 6A. Both categories of casinos have been subject to *BSA* since July 1, 2007.

There are two basic reports that are required to be filed and reported to the Department of the Treasury. Financial Crimes Enforcement Network (FinCEN) Form 103 is used to file and report certain cash transactions, either in single transaction or in aggregate in a single day, that exceed $10,000. This form is called cash transaction report by casinos (CTRC). This reporting requirement only applies to transactions between the banks and their clients, internal transactions are excluded. Clear identity information must be collected by the banks regarding the clients and the bank personnel who finished the transaction.

The other form is FinCEN Form 102, also called the Suspicious Activity Report (SAR). This form is filed to report any cash transaction that is suspected to be from illegal source that is at least $5,000 in funds or other assets. If a transaction is both "suspicious" and greater than $10,000, the bank is required to file both FinCEN Form 102 and Form 103. When a suspicious transaction needs immediate attention, an appropriate law enforcement agency should be contacted. Both reports must be filed within 15 days following the day on which the reportable cash transaction occurred.

Besides the above-mentioned reporting requirements, *BSA* also requires a 5-year period for record keeping. Banks must keep copies of filed forms for five years. Violations of reporting, record-keeping, or both constitute grounds for penalties.

The state of Nevada has stringent laws governing the operations of its casinos. The Nevada Legislature has declared under Nevada Revised Statute 463.0129 (1):

(a) The gaming industry is vitally important to the economy of the State and the general welfare of the inhabitants.
(b) The continued growth and success of gaming is dependent upon public confidence and trust that licensed gaming and the manufacture, sale and distribution of gaming devices and associated equipment are conducted honestly and competitively, that establishments which hold restricted and non-restricted licenses where gaming is conducted and gaming devices are operated do not unduly impact the quality of life enjoyed by residents of the surrounding neighborhoods, that the rights of the creditors of licensees are protected and that gaming is free from criminal and corruptive elements.

(c) Public confidence and trust can only be maintained by strict regulation of all persons, locations, practices, associations and activities related to the operation of licensed gaming establishments, the manufacture, sale or distribution of gaming devices and associated equipment and the operation of inter-casino linked systems.

Briefly, NRS Reg. 6A applied to large-scale casinos in Nevada. Casinos that had annual gross gaming revenue of $10 million or more for the 12 months ending June 30 (Nevada Gaming Commission (NGC) fiscal year end) of each year and that had table games statistical win of $2 million or more for the 12 months ending June 30 of each year were required to report and file the counterparts of federal FinCEN Form 102 and 103. FinCEN Form 103-N, Currency Transaction Report by Casinos – Nevada (CTRC-N) was used to handle currency transaction reports for Nevada casinos. This report must be filed for each currency transaction involving cash-in or cash-out of more than $10,000. FinCEN Form 102, Suspicious Activity Report by Casinos and Card Clubs (SARC) was used to handle suspicious activities. This form must be filed by casinos for any suspicious illegal currency transaction involving or aggregating at least $3,000 in funds or other assets. This threshold was lower than the federal reporting requirement for SAR, which is $5,000. During this time, Nevada casinos which had over $1 million in gross annual gaming revenue were not subject to NRS Reg. 6A, and have been subject to the reporting and recordkeeping requirements of the *BSA* provisions of Title 31. In essence, the population of Nevada casinos that were exempt from *BSA* were large casinos, which warrants that publicly traded Nevada casinos are the target of this study.

The demise of NRS Reg. 6A is the result of a gradual coordination between the federal government and the State of Nevada. In response to terrorist attacks on September 11, 2001, President George W. Bush on October 26, 2001 signed into law "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism" (USA PATRIOT). Two of its goals of the act are (1) "to strengthen U.S. measures to prevent, detect and prosecute international money laundering and financing of terrorism", and (2) "to require all appropriate elements of the financial services industry to report potential money laundering."

In 2003, U.S. Department of the Treasury's FinCEN started pushing for amendments to NRS Reg. 6A with the intent that Reg. 6A should be identical to those rules in *BSA* of Title 31. Gannon (2007) states,

> Given that such regulatory efforts could be duplicative, the Gaming Control Board (GCB) and NGC determined that it would be more appropriate for the federal government, namely FinCEN and the IRS, to have full responsibility of regulating and enforcing the *BSA* and its related regulations within Nevada casinos.

and the Board and NGC stated that maintaining Reg. 6A in a manner sufficient to keep the exemption in effect was becoming an increasing burden on the BOARD's limited resources. On June 30, 2006, NGC proposed to repeal Reg. 6A. On September 21, 2006, NGC repealed it, and *BSA* was adopted on December 21, 2006, effective July 1, 2007.

BSA has applied to those Nevada casinos since July 1, 2007 that were exempt from it for 22 years during the period of 1985 till June 30, 2007. Therefore, all Nevada casinos that meet the *BSA* reporting and recordkeeping requirements have been treated the same as the other qualifying casinos in the other states of the U.S. since then.

It seemed that Nevada casinos went through a smooth transition from NRS Reg. 6A to *BSA* provisions of Title 31. *The Las Vegas Review Journal*, the official newspaper, did not have any significant news about this transition process. All casinos that were affected by this regulatory system change cooperated with the Treasury Department and quietly finished the compliance transition, and the *BSA* provisions of Title 31 have been in place since July 1, 2007.

However, Gannon (2007) states that "This is a major change for Nevada casinos." The major differences between *BSA* and NRS Reg. 6A lie in the different treatments with certain cash for cash transactions. For example, the NRS Reg. 6A prohibited certain cash for cash transactions by stipulating that:

(1) A 6A licensee shall not exchange cash for cash with or on behalf of a patron in any transaction in which the amount of the exchange is more than $3,000.
(2) A 6A licensee shall not issue a check, other negotiable instrument, or combination thereof, to a patron in exchange for cash in any transaction in which the amount of the exchange is more than $3,000.
(3) A 6A licensee shall not effect any transfer of funds by electronic, wire, or other method, or combination of methods, to a patron, or otherwise effect any transfer of funds by any means on behalf of a patron, in exchange for cash in any transaction in which the amount of the exchange is more than $3,000.

These transactions, however, are allowed under *BSA* but subject to reporting and recordkeeping thresholds, and it seems that the reporting and recordkeeping of these transactions have the greatest impact on Nevada casinos' compliance with the *BSA*. It seems that Nevada casinos are worried about the ever-increasing federal attention to their operations. Casino operators are flabbergasted at the possible rule that they have to disclose the source of their high rollers' gambling funds (Stutz, 2014). Recent violations of *BSA* provisions of Title 31 by Nevada casinos might put you to think that *BSA* provisions of Title 31 are more effective in combating money laundering activities than NRS Regulation 6A, opposite to the view held by many. For example, the *Wall Street Journal* (2016) reported that Las Vegas Sands Corp. on May 12, 2016 paid a fine of $2 million to the state of Nevada for violating the gaming laws in an "unsuitable manner." This settlement was linked to a settlement made in 2013 between Las Vegas Sands and the Justice Department, in which Sands avoided criminal charges by agreeing to pay $47 million in the allegation that it failed to file the suspicious activity report for one of the high rollers.

Hypothesis Development

BSA differentiates from NRS Reg. 6A in that it focuses the attention on reporting and disclosing the related transactions rather than merely preventing them. Accounting literature documents information asymmetry reduction effects of regulatory disclosures. For example, Park, Park, and Ro (1999) document that fair value disclosures of available for sale securities and held-to-maturity securities (SFAS 115) are conducive to a better valuation of bank equities. Heflin, Subramanyam, and Zhang (2003) conduct a research to study the impact of Regulation Fair Disclosure in 2000 on the quality of information available to investors before earnings announcements. They find some evidence of improvement in information quality. *BSA* has put Nevada casinos and those in the other states under the same federal jurisdiction, casino operators in Nevada smoothly transitioned into this federal law without any major opinions in the news, and they have been working cooperatively with the federal governments in implementing and correcting their violations. If casinos in Nevada are disclosing more post-*BSA* than pre-*BSA* about their possible major sources of gaming revenue with the intent to also minimize money laundering activities, then the information asymmetry between casinos and the investors will be less, and the financial environment for the entire casino industry will be more transparent than before. Therefore, the difference in market valuation between casinos in the state of Nevada and those outside pre-*BSA*, if there is any, will be much reduced. Based on the reasoning above, my first hypothesis is as follows,

Hypothesis 1. *The transition from state level gaming regulation NRS Reg. 6A to the federal regulation of BSA has reduced information asymmetry for the casino industry, so that Nevada casinos' market performance increases post-BSA, and the difference in market performance between the casinos in Nevada and those outside pre-BSA will be reduced post-BSA, ceteris paribus.*

BSA was enacted in 1970 for banks and financial institutions to combat money-laundering activities. Casinos were classified as financial institutions in 1985 due to the nature of the business. Federal government exempt those casinos in the State of Nevada from *BSA* and it allowed them to follow the state level regulation NRS Reg. 6A based on the fact that Reg. 6A was commensurate with *BSA* with regard to the strictness in AML activities. The gradual push from the federal government for Nevada casinos toward the same federal jurisdiction as that followed by casinos in the other states, and the voluntary

transition of *NV* casinos to *BSA* to avoid the increased burden to keep the separate state-level regulation suggest that Nevada casinos were confident about the strictness of NRS Reg. 6A. Therefore, transition to *BSA* should not have a significant impact on their accounting based financial performance. Following the reasoning above, I formulate my second hypothesis as follows:

Hypothesis 2. *The transition of Nevada casinos from NRS Reg. 6A to BSA does not have a significant impact on their accounting-based financial performance.*

METHODOLOGY

The sample of the study is from COMPUSTAT-North America and I/B/E/S, consisting of gaming firms only. In further tests, I also use banks and financial institutions. To capture the compliance effect of *BSA* provisions of Title 31, I identify firms in the gambling industry by following the North American Industry Classification System (NAICS). The advantage of using NAICS other than Standard Industrial Codes (SIC) is that an establishment is identified based on its location of operations, not based on its headquarters. Therefore, a gaming unit of a multi-states gaming corporation operated in Las Vegas will be treated as an independent business unit in the NAICS system, and it is not the case in the SIC system.

There are two gaming groups under the NAICS system. NAICS 713210 includes casinos only, and NAICS 721120 includes those casinos with hotels attached to them. Since *BSA* was effective July 1, 2007, following prior literature (Hope, Ma, and Thomas, 2013; Leung and Srinidhi, 2006), this study examines the period of eight years with four years before the event and four years after (2003 to 2011, inclusive). Subsequent to identifying the list of firms in these two NAICS groups, I search online to determine whether a casino is an establishment in the State of Nevada or not. A total of 106 casinos were identified, with 49 in Nevada, and 57 somewhere else. All financial variables are from COMPUSTAT and analysts following (*AF*) is from I/B/E/S.

The empirical model is as follows:

$$FIRM\ PERFORMANCE = \beta_0 + \beta_1\, BSA + \beta_2\, NV + \beta_3\, BSA*NV + \beta_4\, AF + \beta_5\, SIZE + \beta_6\, MTB + \beta_7\, LEV + \beta_8\, RD + \varepsilon \quad (1)$$

Firm performance is measured with Tobin's Q (*TQ*) or return on assets (*ROA*). Proxies for firm performance are an issue of a long-lasting debate. Following prior literature (Anderson and Reeb, 2003; Mehran, 1995) *TQ* is an appropriate market measure of firm performance, and *ROA* is an appropriate accounting measure of firm performance. *NV* is an indicator variable taking the value of 1 if a casino is designated as a Nevada casino, otherwise it is zero. Current literature is not clear about the effect of this variable on firms' performance. Therefore, I do not have a prediction for *NV*. *BSA* is an indicator variable taking the value of 1 if the fiscal year is 2007 and beyond. Since I am only testing four years before and after, the *BSA* refers to the period of 2007 – 2011, inclusive. Since the effect of *BSA* is an empirical question of this study, I do not have a prediction for this variable, either. The interaction term *BSA*NV* measures the incremental effect of *BSA* on *NV* casinos' performance. Since I have no specific predictions for *NV* and *BSA*, there is no predicted sign for *BSA*NV*.

Control variables are added in the model based on prior literature that suggests these control variables are associated with firm performance. *AF* is log of one plus the number of analysts following a firm (Zang, 2012). Analysts are information intermediaries reducing information asymmetry and monitoring the management. Therefore, it should be positively associated with firm performance. *SIZE* is the natural log of firms' total assets. *SIZE* is negatively associated with *TQ* (Anderson and Reeb, 2003; Mehran, 1995), but it can be positively or negatively correlated to *ROA* (Mehran, 1995; Gunny, 2010). Therefore, I predict a negative sign for *SIZE* when *TQ* is the dependent variable and non-directional when *ROA* is the dependent variable. *MTB* is the ratio between market value of equity and book value of equity. Based on Anderson and Reeb (2003), *MTB* is positively correlated with *TQ* and *ROA*. *LEV* is the leverage of a firm, the ratio between the long-term debt and total assets, indicating the default risk of a firm, and it should be

negatively correlated with *TQ* and *ROA*. *RD* is the intensity of research and development, a ratio between research and development expense and total assets. More *RD* suggests more value to a firm. Therefore, it should be positively associated with *TQ* and *ROA* (Mehran, 1995).

EMPIRICAL RESULTS

Descriptive Statistics

Table 1 presents the descriptive statistics of the casino sample in this study, including casinos in the State of Nevada and those in the other states. *TQ* is averaged at 1.784, indicating the market value is about 1.80 times of the replacement value of a casino. However, the average of *ROA* is -0.020, indicating that on average, a casino's accounting performance is negative. About 56 percent of observations fall in the *BSA* period, and 58.5 percent of observations are from the State of Nevada. The average *SIZE* of casinos is 5.498, the average of *MTB* is 2.249, and the average of *LEV* is 0.432. The interesting thing is the average *RD* of 0.002, suggesting casinos do not spend much on research and development.

TABLE 1
DESCRIPTIVE STATISTICS

Variable	N	Mean	Std Dev	Minimum	Q1	Median	Q3	Maximum
TQ	520	1.784	1.593	0.414	1.013	1.340	1.982	8.652
ROA	520	-0.020	0.195	-0.426	-0.031	0.015	0.049	0.724
BSA	520	0.562	0.497	0.000	0.000	1.000	1.000	1.000
NV	520	0.585	0.493	0.000	0.000	1.000	1.000	1.000
*BSA*NV*	520	0.315	0.465	0.000	0.000	0.000	1.000	1.000
AF	520	1.001	0.456	0.693	0.693	0.693	1.386	2.708
SIZE	520	5.498	2.090	-2.323	4.080	5.561	7.069	9.791
MTB	520	2.249	2.134	-3.258	0.000	1.146	2.770	9.294
LEV	520	0.432	0.300	0.000	0.161	0.457	0.641	0.873
RD	520	0.002	0.012	0.000	0.000	0.000	0.000	0.139

This table presents descriptive statistics for casinos, those in Nevada and other states. *TQ* is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; *ROA* is the return on assets, measured as the ratio between income before extraordinary items and total assets; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *NV* is an indicator variable set to one if a casino is located in the State of Nevada; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is the ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Table 2 shows the comparison between Nevada casinos and casinos in the other states and the comparison between the pre-*BSA* period and the post-*BSA* period. Both comparisons apply the *t*-tests and *Wilcoxon Rank Sum* tests. Panel A presents the comparison between Nevada casinos and the casinos in the other states. It seems that *NV* casinos are not valued as high as those in the other states, because the difference between *TQ* is statistically less from both the *t*-test (*p*-value 0.035) and the *Wilcoxon Rank Sum* test (*p*-value 0.001). However, it is the opposite from the perspective of *ROA*. *NV* casinos are much better (*p*-value 0.001) than those casinos in the other states from the accounting performance. There is not much difference between *AF* for these two groups of casinos. Nevada casinos are much larger than those in the other states, since *SIZE* difference is statistically significant (*p*-value <0.0001) from both the *t*-test and the *Wilcoxon Rank Sum* test. The difference of *MTB* is statistically different from *Wilcoxon Rank Sum* test,

but not from the *t*-test, indicating faster growth for *NV* casinos. There is no difference in *LEV* between these two groups of casinos. There is a statistical difference between the two groups in *RD*, with *NV* casinos spending more in *RD*, but only from the *Wilcoxon Rank Sum* test.

TABLE 2

Panel A

Comparison of NV Casinos and Those in Other States

	NV Casinos	Others	Diff.	TTest p-value	Wilcoxon Rank Sums Test p-value
Obs.	304	216			
TQ	1.647	2.022	-0.375	0.035	0.018
ROA	0.002	-0.058	0.060	0.001	0.001
AF	1.016	0.981	0.035	0.387	0.393
SIZE	6.000	4.750	1.250	<0.0001	<0.0001
MTB	2.557	1.789	0.768	0.448	0.0195
LEV	0.436	0.426	0.010	0.739	0.696
RD	0.002	0.001	0.001	0.708	0.0065

Panel B

Comparison of Casinos Before and After *BSA*

	Pre-*BSA*	Post-*BSA*	Diff.	TTest p-value	Wilcoxon Rank Sums Test p-value
Obs.	292	228			
TQ	1.771	1.799	-0.028	0.871	0.175
ROA	-0.013	-0.034	0.021	0.266	0.749
AF	1.023	0.974	0.049	0.219	0.278
SIZE	5.616	5.346	0.270	0.170	0.053
MTB	2.386	2.074	0.312	0.755	0.733
LEV	0.439	0.422	0.017	0.536	0.518
RD	0.003	0.001	0.002	0.018	0.242

TQ is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; *ROA* is the return on assets, measured as the ratio between income before extraordinary items and total assets; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *NV* is an indicator variable set to one if a casino is located in the State of Nevada; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is the ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Panel B of Table 2 compares all casinos before and after *BSA*. The only differences lie in *SIZE* and *RD*, and there is not much difference in any other variable before and after *BSA*. For example, it seems that pre-*BSA SIZE* is greater than that of post-*BSA* (*p*-value from *Wilcoxon Rank Sum* test 0.053). In addition, the pre-*BSA RD* is greater than that of post-*BSA* (*p*-value of *t*-test 0.018).

Table 3 presents correlations between variables used in the main empirical analyses. *TQ* is negatively correlated with *ROA* (r = -0.277), contradictory to findings from prior studies that *TQ* should be

positively correlated with *ROA*. This suggests that the normal correlation between *TQ* and *ROA* does not occur in our casino sample, and that probably is the special nature of these gaming firms. One sensitivity test at the end validates this conjecture. However, the Spearman correlation is positive (r = 0.111). *NV* is negatively correlated with *TQ*, but positively correlated with *ROA*, from both *Pearson* and *Spearman* correlation tests, indicating that *NV* casinos have lower market performance and higher accounting performance than those of the casinos in the other states. As predicted, *TQ* is negatively correlated with *SIZE* (r = -0.263) and *LEV* (r = -0.138). *ROA* is positively correlated with *SIZE* (r = 0.320, and *Spearman* r = 0.271).

The correlations do not suggest any definite association between *TQ* and *BSA*NV* and that between *ROA* and *BSA*NV*. For example, the *Pearson* correlation between *TQ* and *BSA*NV* is -0.002, and the *Spearman* correlation is 0.005. Neither is statistically significant. The *Pearson* correlation between *ROA* and *BSA*NV* is 0.086, not statistically significant. But the *Spearman* correlation is 0.142, statistically significant at 0.05 significant level.

TABLE 3
CORRELATIONS OF VARIABLES

	TQ	*ROA*	*BSA*	*NV*	*BSA*NV*	*AF*	*SIZE*	*MTB*	*LEV*	*RD*
TQ	1	**0.111**	0.050	**-0.128**	0.005	0.020	-0.071	**0.638**	-0.036	**0.204**
ROA	**-0.277**	1	0.015	**0.170**	**0.142**	0.074	**0.271**	**0.258**	-0.020	**0.118**
BSA	-0.009	0.053	1	-0.053	**0.600**	0.048	0.091	-0.016	0.030	0.055
NV	**-0.113**	**0.152**	-0.053	1	**0.572**	0.038	**0.264**	**0.109**	0.018	**0.127**
*BSA*NV*	-0.002	0.086	**0.600**	**0.572**	1	0.027	**0.234**	**0.122**	-0.007	**0.108**
AF	0.057	0.091	0.054	0.038	0.033	1	0.030	0.035	**0.083**	**0.130**
SIZE	**-0.263**	**0.320**	0.064	**0.294**	**0.238**	0.066	1	**0.162**	**0.430**	0.033
MTB	**0.342**	-0.007	0.015	0.036	0.084	0.076	-0.029	1	**-0.099**	**0.173**
LEV	**-0.138**	-0.006	0.029	0.016	-0.008	0.070	**0.378**	-0.062	1	**-0.108**
RD	0.069	-0.014	**0.100**	0.018	0.066	0.053	**-0.102**	0.018	**-0.184**	1

Pearson correlations are below the diagonal, and Spearman correlations are above it. The bold-faced values are correlations that are at least significant at the 0.05 significance level. *TQ* is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; *ROA* is the return on assets, measured as the ratio between income before extraordinary items and total assets; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *NV* is an indicator variable set to one if a casino is located in the State of Nevada; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Table 4 presents the empirical results using *TQ* as the dependent variable. There are four columns listed for the results. Each column shows the variance inflation factors (VIF) to quantify the issue of multicollinearity. Column (1) only includes the variables of interest, and Column (2) adds control variables and *Year* fixed effects. All coefficient estimates for *BSA*, *NV*, and the interaction terms are statistically significant. The intercept of 2.332 in Column (1) represents the average *TQ* of non-Nevada casinos before the *BSA*. The corresponding average *TQ* for these non-*NV* casinos after *BSA* is 1.756, calculated as 2.332-0.576. The decrease in *TQ* is 0.576, the coefficient estimate of *BSA*, approximately 24.70 percent drop in market valuation. On the other hand, the average *TQ* for *NV* casinos before the *BSA* is 1.501, calculated as 2.332 – 0.831, and the average *TQ* for them after *BSA* is 1.778, calculated as 2.332-

0.576-0.831 +0.853. In other words, the average *TQ* for *NV* casinos increased by 0.277 compared to the pre-*BSA* period, an 18.45 percent increase.

However, for the post-*BSA* period, there is not much difference in *TQ* between *NV* casinos (1.778) and non-*NV* casinos (1.756), but pre-*BSA*, this difference in *TQ* was 0.831 (the coefficient estimate of *NV*), with a much higher *TQ* for non-*NV* casinos, a decrease of 35.63 per cent in *TQ*. In addition, none of the VIFs indicate any concerns of multicollinearity issue, since none of it is close to the threshold of 10 (Wooldridge, 2009, p. 98). In sum, the results suggest that the transition of jurisdiction from state to federal increases the market valuation of *NV* casinos and brings all casinos in the nation to about the same level of market valuation, and the change is significant both statistically and economically, supporting the predictions of Hypothesis 1 (H1).

TABLE 4
EMPIRICAL RESULTS FOR H1 – DEPENDENT VARIABLE: *TQ*

	Dependent variable: *TQ*							
	Pred.	(1)		(2)		(3)		(4)	
	Sign		VIF		VIF		VIF		VIF
Intercept		2.332 ***		2.874 ***		2.111 ***		1.919 ***	
		(11.27)		(9.40)		(6.44)		(6.83)	
TQ_{t-1}	+					0.273 ***	1.07	0.304 ***	1.07
						(5.69)		(6.98)	
BSA	?	-0.576 **	2.75	-0.455 *	2.80	-0.453 *	2.96	-0.469 **	2.95
		(-2.04)		(-1.74)		(-1.73)		(-2.05)	
NV	?	-0.831 ***	2.15	-0.555 **	2.23	-0.512 **	2.28	-0.473 **	2.21
		(-3.22)		(-2.30)		(-2.13)		(-2.28)	
*BSA*NV*	?	0.853 **	3.85	0.691 **	3.92	0.702 **	4.19	0.686 **	4.08
		(2.42)		(2.12)		(2.17)		(2.42)	
AF	+			0.147	1.02	0.064	1.02	0.078	1.02
				(0.87)		(0.39)		(0.54)	
SIZE	-			-0.172 ***	1.29	-0.116 ***	1.30	-0.096 ***	1.26
				(-4.09)		(-2.77)		(-2.68)	
MTB	+			0.042 ***	1.02	0.030 ***	1.05	0.031 ***	1.05
				(6.45)		(4.83)		(5.18)	
LEV	-			-0.162	1.20	-0.190	1.22	-0.207	1.19
				(-0.54)		(-0.65)		(-0.82)	
RD	+			4.46	1.07	4.946	1.08	6.475	1.07
				(0.73)		(0.81)		(1.15)	
Year		No		Yes		Yes		Yes	
F-value		3.460 **		10.34 ***		11.31 ***		14.51 ***	
R-Sq		0.030		0.198		0.251		0.264	
Adj R-Sq		0.021		0.179		0.229		0.246	
Obs		520		520		495		683	

Statistical significances of levels at least at 0.10, 0.05, and 0.01 are represented by *, **, and ***, respectively. *TQ* is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *NV* is an indicator variable set to one if a casino is located in the State of Nevada; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Column (2) presents the result with the full model including the firm-year fixed effects. *BSA*, *NV*, and the interaction term remain statistically significant. Following the same calculation method, the *TQ* for non-*NV* casinos pre-*BSA* was 2.874, and it is 2.419 post-*BSA*; the *TQ* for *NV* pre-*BSA* was 2.319, and it is 2.555 post-*BSA*. The pattern is very similar in that pre-*BSA* the huge gap in *TQ* (-0.555, the coefficient estimate of *NV*) with higher *TQ* for non-*NV* casinos is getting much smaller with a higher *TQ* for *NV* casinos of 0.136. The results from the full model (2) maintain qualitatively similar to those in model (1), corroborating the notion that the transition from the state to federal jurisdiction brings all casinos in the nation to the similar market valuation, with an increase in market valuation for Nevada casinos, supporting the predictions of H1.

Model (3) incorporates the lagged term of *TQ* to mitigate the endogeneity issue. Wooldridge (2009, p. 310) state that,

> In some applications we suspect that one or more of the independent variables is correlated with an omitted variable, but we have no idea how to obtain a proxy for that omitted variable. In such cases, we can include, as a control, the value of the dependent variable from an earlier time period. This is especially useful for policy analysis.

As predicted and seen from the results in Column (3), the lagged *TQ* (coefficient estimate of 0.273) is positive and statistically significant. *BSA, NV*, and the interaction term are still statistically significant with the same signs as those in Models (1) and (2). The *TQ* for non-*NV* casinos pre-*BSA* is 2.111, and the *TQ* for *NV* casinos post-*BSA* is 0.512 less, significantly lower. However, post-*BSA*, the *TQ* for non-*NV* casinos is 0.453 less than what it was, a significant drop in market valuation, and the *TQ* for *NV* casinos is 0.190 higher than that of non-*NV* casinos, an 11.46 percent increase in market value. In addition, none of the VIFs indicate any multicollinearity issues. In summary, the results from Model (3) still support that the transition from the state to federal jurisdiction brings all casinos in the nation to the similar market valuation. However, in this case, the *TQ* for *NV* casinos post-*BSA* is economically higher.

In Model (4), I expand the study period to cover one more year pre- and post-*BSA*. Therefore, the period covers 2002 to 2012, inclusive. The results from this full model still corroborate those from the prior three models. Specifically, the *TQ* for non-*NV* casinos pre-*BSA* is 1.919, and the corresponding *TQ* for *NV* casinos pre-*BSA* is 0.473 lower; the *TQ* for non-*NV* casinos post-*BSA* is 1.450, and the corresponding value for *NV* casinos is 1.663. Again the gap is getting smaller with a higher value for *NV* casinos, a 14.69 percent increase, economically significant. The results hold qualitatively the same.

Table 5 presents the empirical results using *ROA* as the dependent variable. All independent variables and four models remain the same except the sign for *SIZE*. In all models, *BSA* and *NV* are statistically positive and significant, and the interaction term is negative and statistically significant. In Model (1), the intercept represents the average *ROA* for non-*NV* casinos pre-*BSA*, -0.098. The corresponding *ROA* for *NV* casinos pre-*BSA* is 0.100 higher (*ROA* of 0.002), statistically and significantly higher in accounting performance. Post-*BSA*, the average *ROA* for non-*NV* casinos is 0.065 higher than -0.098 (*ROA* of -0.033), and the corresponding *ROA* for *NV* casinos post-*BSA* is 0.002. The results suggest that the huge gap in accounting performance with non-*NV* casinos pre-*BSA* is getting much smaller post-*BSA* without noticeable change to the accounting performance for *NV* casinos. Comparison to the results from Column (1) in Table 4 suggests that the huge gaps both in market performance and accounting performance pre-*BSA* between *NV* casinos and non-*NV* casinos have tremendously reduced post-*BSA*, even though pre-*BSA*

for *NV* casinos the market performance (*TQ*) was lower and the accounting performance (*ROA*) was higher. In sum, the results from Column (1) support the predictions of Hypothesis 2 (H2) that the transition from NRS Regulation 6A to *BSA* has no significant impact on Nevada casinos' accounting performance. In addition, the huge gap in accounting performance pre-*BSA* between Nevada casinos and non-*NV* casinos has been reduced.

TABLE 5
EMPIRICAL RESULTS FOR H2 – DEPENDENT VARIABLE: *ROA*

	Dependent variable: *ROA*							
	Pred.	(1)		(2)		(3)		(4)	
	Sign		VIF		VIF		VIF		VIF
Intercept		-0.098 ***		-0.245 ***		-0.215 ***		-0.332 ***	
		(-4.31)		(-7.38)		(-6.20)		(-6.14)	
ROA_{t-1}	+					0.167 ***	1.11	0.044	1.07
						(3.74)		(1.00)	
BSA	?	0.065 **	2.59	0.058 **	2.65	0.057 **	2.81	0.093 **	2.72
		(2.24)		(2.09)		(1.99)		(2.11)	
NV	?	0.100 ***	2.40	0.067 **	2.48	0.067 **	2.53	0.098 **	2.46
		(3.52)		(2.50)		(2.45)		(2.30)	
*BSA*NV*	?	-0.065 *	3.74	-0.076 **	3.83	-0.076 **	4.06	-0.106 *	1.03
		(-1.74)		(-2.16)		(-2.12)		(-1.90)	
AF	+			0.028	1.02	0.036 *	1.03	0.031	1.03
				(1.53)		(1.92)		(1.09)	
SIZE	±			0.034 ***	1.31	0.029 ***	1.41	0.039 ***	1.31
				(7.44)		(6.10)		(5.34)	
MTB	+			-0.001	1.02	-0.001	1.03	0.001	1.02
				(-0.11)		(-0.09)		(0.21)	
LEV	-			-0.099 ***	1.23	-0.113 ***	1.24	-0.054	1.21
				(-3.22)		(-3.61)		(-1.11)	
RD	+			-0.208	1.06	-0.070	1.06	0.406	1.05
				(-0.28)		(-0.09)		(0.31)	
Year		No		Yes		Yes		Yes	
F-value		5.290 ***		9.75 ***		10.19 ***		5.69 ***	
R-Sq		0.034		0.149		0.180		0.093	
Adj R-Sq		0.027		0.133		0.163		0.077	
Obs		520		520		486		632	

Statistical significances of levels at least at 0.10, 0.05, and 0.01 are represented by *, **, and ***, respectively. *ROA* is the return on assets, measured as the ratio between income before extraordinary items and total assets; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *NV* is an indicator variable set to one if a casino is located in the State of Nevada; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is the ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Results from analyzing the Columns (2), (3), and (4) substantiate the same notion as that in Column (1) that the transition from state to federal jurisdiction does not have a significant impact on *NV* casinos' accounting performance, and it brings the accounting performances of all casinos in the nation much closer. For example, in Column (3), the *ROA* for non-*NV* casinos pre-*BSA* was -0.215, while the corresponding value for *NV* casinos was 0.067 higher, -0.148. However, post-*BSA*, the average *ROA* for non-*NV* casinos is 0.057 higher (*ROA* of -0.158), and the corresponding *ROA* for *NV* casinos post-*BSA* is -0.167. The accounting performance difference between non-*NV* and *NV* casinos post-*BSA* is much smaller than what it was pre-*BSA*.

One issue that I have not resolved is the negative correlation between *TQ* and *ROA* in my main sample of casinos. The above empirical analyses have partially answered that question in that the transition from the state to federal jurisdiction has narrowed the differences between the *TQ* and *ROA* pre- and post-*BSA*. To further address this issue, I take a sample of regular banks and financial institutions (NAICS 522110) during the same testing period of 2003 – 2011, and test the differences between *TQ* and *ROA* pre- and post-*BSA*. The method is based on the assumption that banks and financial institutions are an ideal control group, because they have been subject to *BSA* jurisdiction since 1970, and if the transition of Nevada casinos from NRS Regulation 6A to *BSA* has any significant impact on casinos' performance, this event should not have any significant impact on that for the banks and financial institutions.

Table 6 presents the correlations between all variables used in the tests for banks and financial institutions. As predicted and noticed, the correlation between *TQ* and *ROA* are both positive and statistically significant for *Pearson* ($r = 0.424$) and *Spearman* ($r = 0.630$) correlations.

TABLE 6
CORRELATIONS OF VARIABLES FOR BANKS AND FINANCIAL INSTITUTIONS

	TQ	*ROA*	*BSA*	*AF*	*SIZE*	*MTB*	*LEV*	*RD*
TQ	1	**0.630**	-0.003	-0.014	**0.252**	**0.970**	0.021	**0.092**
ROA	**0.424**	1	0.002	**-0.025**	**0.105**	**0.157**	**-0.089**	**0.025**
BSA	-0.013	0.017	1	**0.078**	0.014	-0.006	-0.007	0.000
AF	-0.022	-0.003	**0.100**	1	**-0.024**	-0.008	-0.015	-0.018
SIZE	**0.121**	**0.055**	0.015	-0.020	1	**0.061**	**0.246**	**0.033**
MTB	**0.646**	**0.068**	-0.001	-0.013	**0.070**	1	**0.025**	**0.040**
LEV	0.050	**-0.058**	-0.016	**-0.032**	**0.233**	0.018	1	**0.042**
RD	**0.206**	**0.052**	-0.009	-0.011	0.012	**0.021**	**0.118**	1

This table presents variable correlations for banks and financial institutions. Pearson correlations are below the diagonal, and Spearman correlations are above it. The bold-faced values are correlations that are at least significant at the 0.05 significance level. TQ is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; ROA is the return on assets, measured as the ratio between income before extraordinary items and total assets; BSA is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; AF is the natural log of one plus the number of analysts following a firm; SIZE is the natural log of firms' total assets; MTB is the ratio between market value of equity and book value of equity; LEV is firms' leverage measured as the ratio between the long-term debt and total assets; RD is the ratio between the research and development expense and the total assets.

Table 7 displays the empirical results with *TQ* as the dependent variable. As noticed in all three models, none of the coefficient estimates for *BSA* is significant, suggesting that *BSA* has no significant impact on banks and financial institutions pre- and post-*BSA*, corroborating indirectly the predictions of H1 that *BSA* has had significant impact on casinos' market performance (*TQ*) in the nation.

TABLE 7
EMPIRICAL RESULTS SUPPORTING H1-BANKS AND FINANCIAL INSTITUTIONS
DEPENDENT VARIABLE: *TQ*

	Dependent variable: *TQ*					
	Pred.	(1)		(2)		(3)	
	Sign		VIF		VIF		VIF
Intercept		1.029 ***		0.968 ***		0.886 ***	
		(430.20)		(177.78)		(24.48)	
TQ_{t-1}	+					0.053	1.64
						(1.48)	
BSA	?	-0.002	1.00	-0.002	1.01	-0.002	1.04
		(-0.52)		(-0.67)		(-0.56)	
AF	+			0.001	1.01	-0.003	1.03
				(0.23)		(-0.67)	
SIZE	-			0.001	1.08	-0.003 ***	1.14
				(1.30)		(-3.26)	
MTB	+			0.041 ***	1.02	0.081***	1.42
				(32.63)		(21.20)	
LEV	-			-0.012	1.13	0.092 **	1.75
				(-0.60)		(2.45)	
RD	+			309.46 ***	1.08	231.710 ***	1.90
				(9.83)		(8.63)	
Year		No		Yes		Yes	
F-value		5.690 ***		203.05 ***		132.91 ***	
R-Sq		0.001		0.456		0.814	
Adj R-Sq		0.001		0.453		0.808	
Obs		1462		1462		1350	

This table displays empirical results from testing banks and financial institutions. Statistical significances of levels at least at 0.10, 0.05, and 0.01 are represented by *, **, and ***, respectively. *TQ* is the Tobin's Q measured as the ratio between market value of equity and the book value of equity; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is the ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

Table 8 presents the empirical results with *ROA* as the dependent variable. Very similar to the results in Table 7, none of the coefficient estimates of *BSA* is statistically significant, indirectly supporting the predictions of H2 that *BSA* has significantly reduced the gaps in *ROA* for *NV* and non-*NV* casinos pre- and post-*BSA*.

TABLE 8
EMPIRICAL RESULTS SUPPORTING H 2-BANKS AND FINANCIAL INSTITUTIONS
DEPENDENT VARIABLE: *ROA*

	Dependent variable: *ROA*					
	Pred.	(1)		(2)		(3)	
	Sign		VIF		VIF		VIF
Intercept		0.007***		0.002 **		0.001	
		(20.02)		(2.03)		(0.75)	
ROA_{t-1}	+					0.497 ***	1.01
						(40.81)	
BSA	?	0.001	1.00	0.001	1.01	0.001*	1.01
		(1.61)		(1.47)		(1.89)	
AF	+			-0.001	1.01	-0.001	1.01
				(-0.36)		(-0.52)	
SIZE	±			0.001 ***	1.06	0.001***	1.06
				(6.15)		(4.20)	
MTB	+			0.001 ***	1.01	0.001***	1.01
				(5.90)		(3.55)	
LEV	-			-0.029***	1.07	-0.024 ***	1.07
				(-7.41)		(-6.51)	
RD	+			78.59 ***	1.01	46.040 ***	1.02
				(5.49)		(3.47)	
Year		No		Yes		Yes	
F-value		3.120 *		23.46 ***		261.13 ***	
R-Sq		0.001		0.016		0.182	
Adj R-Sq		0.001		0.016		0.181	
Obs		1586		1586		1476	

This table displays empirical results from testing banks and financial institutions. Statistical significances of levels at least at 0.10, 0.05, and 0.01 are represented by *, **, and ***, respectively. *ROA* is the return on assets, measured as the ratio between income before extraordinary items and total assets; *BSA* is an indicator variable set to one if the fiscal year is 2007 and beyond; otherwise, it is equal to zero; *AF* is the natural log of one plus the number of analysts following a firm; *SIZE* is the natural log of firms' total assets; *MTB* is the ratio between market value of equity and book value of equity; *LEV* is firms' leverage measured as the ratio between the long-term debt and total assets; *RD* is the ratio between the research and development expense and the total assets.

SUMMARY AND CONCLUSIONS

This study empirically addresses a topic that is being discussed in the gaming industry. Money laundering activities are suspected to be associated with the gaming industry. Bank Secrecy Act (*BSA*) provisions of Title 31 were enacted in 1970 for financial institutions to combat the money laundering activities. Casinos have been added to the financial institution category in 1985. However, Nevada casinos were administered locally by Nevada Gaming Commission (NGC) under Nevada Revised Statute (NRS) Regulation 6A. With the increased attention to anti-terrorism together with money laundering

activities, in 2007, federal government determined, and the State of Nevada agreed to replace NRS Regulation 6A and put Nevada casinos under the same umbrella as that for casinos in the other states.

The results show that *BSA* has a positive net effect on Nevada casinos' financial performance. Specifically, before the transition, there were huge gaps in casinos' performances. Casinos in Nevada had much lower market performance and much higher accounting performance than those of non-Nevada casinos. Since the event, however, the gaps have been significantly reduced. Nevada casinos have improved its market performance, while keeping its accounting performance relatively unchanged.

The results of this study have important implications. The results suggest that the federal government and State of Nevada have made the right decision to switch from the local regulation to the federal jurisdiction. The reduced gaps in both market performance and accounting performance suggest that the universal federal currency transaction and reporting system has created a more transparent operating environment for the gaming industry in the United States by possibly reducing the information asymmetry between casinos in the State of Nevada and those in the rest of the nation. The NRS Regulation 6A seemed to be outdated and redundant. The Nevada Gaming Control Board stated that keeping two similar systems became an increasing burden to the State of Nevada. By transitioning to the federal jurisdiction, the State of Nevada could use the extra force to deal with other issues.

The exemption from the federal regulation could have had a negative effect on Nevada casinos' reputation in the anti-money laundering activities. Before the transition, the huge gap in market performance between casinos in Nevada and those in the other states might explain part of the question. In addition, the subsequent decrease in the gap and the increase in the market performance of Nevada casinos may suggest some benefits of the reputation recovery in that they are following the same federal mandatory disclosure requirements in anti-money laundering activities as those in the other states by showing that they are more socially responsible.

This study could have potential values to regulators in evaluating the effectiveness of the *BSA* provisions of Title 31 in combating the money laundering activities. The results also suggest that there was no significant difference in the effectiveness of anti-money laundering activities between the defunct NRS Regulation 6A and the federal *BSA*. The unchanged accounting performance of Nevada casinos and the improved accounting performance of non-Nevada casinos after the transition is likely to explain this point.

Due to inherent limitations of event studies, I cannot rule out the possibility that some other unobserved variables are driving the results of this study. Therefore, readers should use caution when making conclusions based on the findings of this study.

REFERENCES

Anderson, R., & Reeb, D. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, LVIII (3), 1301-1328.

Gannon, K. (2007). Goodbye 6A, hello BSA. *Nevada Gaming Lawyer*, (September), 6-8.

Gunny, K. (2010). The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks. *Contemporary Accounting Research*, 27(3), 855-888.

Heflin, F., Subramanyam, K.R., & Zhang, Y. (2003). Regulation FD and the financial information environment: Early evidence. *The Accounting Review*, 78(1), 1-37.

Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics*, 9, 15-36.

Hope, O., Ma, M., & Thomas, W. (2013). Tax avoidance and geographic earnings disclosure. *Journal of Accounting and Economics*, 56, 170-189.

Leung, S., & Srinidhi, B. (2006). The effect of the Private Securities Litigation Reform Act on analyst forecast properties: The impact of firm size and growth opportunities. *Journal of Business Finance & Accounting*, 33(5-6), 767-792.

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics*, 38, 163-184.

Park, M.S., Park, T., & Ro, B.T. (1999). Fair value disclosures for investment securities and bank equity: evidence from SFAS No. 115. *Journal of Accounting, Auditing & Finance*, 14(3), 347-370.

Stutz, H. (2014, April 8). Casinos shudder over possible federal requirements to divulge source of high rollers' gambling funds. *Las Vegas Review Journal*. Retrieved from http://reviewjournal.com/columns-blogs/inside-gaming/casinos-shudder-over-possible-federal-requirement-divulge-source-high.

The Wall Street Journal. (2016). Las Vegas Sands reaches agreement with Nevada regulators. Retrieved July 4, 2016, from http://www.wsj.com/articles/las-vegas-sands-reaches-agreement-with-nevada-regulators-463016877

Wooldridge, J.M. (2009). *Introductory Econometrics: A Modern Approach*. Mason, OH: South-Western Cengage Learning.

Zang, A. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *The Accounting Review*, 87(2), 675-703.