



GAMBLING IN CONNECTICUT:

Analyzing the Economic and Social Impacts

Prepared for the State of Connecticut, Division of Special Revenue
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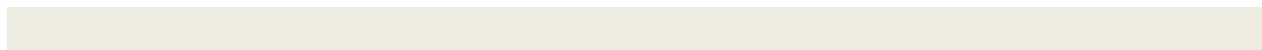


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Executive Summary

The economic and social impacts of legalized gambling in Connecticut can fairly be described as happenstance. They are the result of a chance confluence of policies, plans, legal actions and economic trends that had little to do with each other – but yet have collectively served to create a variety of positive and negative effects.

Some of the policies that have shaped these impacts range from the active – such as the decision a half-century ago to minimize regional government – to the passive – such as the absence of a coordinated gaming and tourism policy.

While state officials in various areas are clearly taking the issue of developing and implementing gaming policy seriously, they are required to live with the results created by this half-century of disparate policies and plans.

Indian Gaming

Of the various forms of legalized gambling in Connecticut, Indian gaming has had the most pronounced impact. The two destination casino resorts, Foxwoods Resort Casino and Mohegan Sun, attracted 24 million visits between them in 2007. They draw revenue into Connecticut from out of state that, in turn, gets redistributed to create even more jobs and profits – all of which leads to the consumption of goods and services from other businesses and industries. Such a scenario is vital to the establishment of a strong and competitive economic base.

The two casinos are responsible directly and indirectly for \$1.2 billion worth of personal income in Connecticut. Since 1992, they have accounted for about 12 percent of the net new job growth in Connecticut.

The 25 percent contribution on gross slot win totaled \$30 million in Fiscal Year 1993, when the Mashantucket Pequot Tribal Nation first put “video facsimile devices” (slot machines) onto the floor of its Foxwoods casino. In FY 2008, the figure mushroomed to \$411.4 million, thanks to expansions at Foxwoods and the October 12, 1996, opening of Mohegan Sun.

To put the amount in context, the state’s corporate income tax – which collects revenue from every corporation in the state – generates \$750 million in revenue. The Mashantucket Pequot And Mohegan Fund, consisting of just two entities, generates about 60 percent of what the corporate income tax generates. Casino revenue was the fifth-highest source of revenue for Connecticut in FY 2007.

Through December 2008, Connecticut’s 169 municipalities and state government shared \$4.87 billion as a result of money generated through slot royalties; the state government received about \$3.3 billion and the state’s towns roughly \$1.6 billion.

About half of the patrons who visit the two casinos are from out of state, which means that much of the casino contribution to the state is paid for by non-Connecticut residents.

The two tribal casinos have boosted tourism in southeastern Connecticut. The Mashantucket Pequots, for example, built the \$193 million Mashantucket Pequot Museum and

Research Center. It is the world's largest and most comprehensive Native American museum, attracting nearly 300,000 visitors in the last three fiscal years ending September 30, 2008.

Both casinos have alliances with scores of hotels in the region, some of which were built in recent years to take advantage of the presence of the casino resorts.

Vendors in nearly 90 percent of the state's 169 communities benefit from casino purchases of goods and services. The two casinos in 2007 directly employed more than 21,000 people, generating an annual payroll of nearly \$700 million. The total number of direct, indirect and induced jobs created in Connecticut is about 30,000.

The Lottery

The Connecticut Lottery is one of the most successful lotteries in the country, with gross sales of \$957 million in 2007. Twenty-nine percent of that amount went to the state's General Fund.

In its first fiscal year of operation in 1972, the Connecticut Lottery's weekly game (which was discontinued in 1985) generated more than \$17.2 million in total sales. Instant games were added to the mix in 1976, daily games in 1977 and the Lotto in 1984.

The Lottery added Cash Lotto in 1992 and Powerball in 1996. Instant and daily games accounted for 83 percent of total Lottery gross sales in FY 2007. Through FY 2008, the Connecticut Lottery generated sales of \$18.4 billion. And notably, most of the sales were generated after Foxwoods and Mohegan Sun opened.

According to our survey of Connecticut gamblers, lottery games are the most frequent gambling activity played either monthly (29 percent) or weekly (8 percent).

The Connecticut Lottery Corporation ("CLC") has put forth a comprehensive Voluntary Code of Good Practice that crystallizes its views on such issues as underage and problem gambling. While we have not evaluated similar codes in other states, we note that Connecticut voluntarily eschews certain games that would be legal in other states because they might offer more of an underage appeal. For example, the CLC does not allow the use of cartoon characters in its games, even though such images may be used successfully in other states to promote lottery sales.

Connecticut devotes marketing resources toward broadcast advertising designed to minimize underage gambling. CLC President Anne M. Noble, in discussing the Lottery's ad campaigns, described the situation as a necessary "tension of opposites" in trying to grow the Lottery but with an eye toward responsible gaming. She said that they develop, out of their advertising budget, public-service announcements to run at a ratio of one for every two ads promoting the Lottery.

Our research has determined that there is no correlation between lottery sales and poverty in which anyone can reasonably conclude that poorer residents of Connecticut are more inclined to play the lottery.

Spectrum conducted a statewide survey of lottery retailers, who were asked various questions, including whether they hired additional staff to meet the demands of selling lottery tickets. About 20 percent of the respondents indicated that they had. If we extrapolate the results of that sub-set to Connecticut retailers at large, it would indicate that about 974 individuals,

working about 15 hours per week each, are employed to handle lottery sales. Their total annual payroll – based on an average hourly rate of \$9, according to the survey – is about \$130,000.

The CLC’s view that casinos are competition has likely resulted in lost opportunities for lottery sales to out-of-state residents, who – from a public-policy perspective – represent the ideal customers. Their lottery purchases are more likely to displace discretionary purchases in their own states, rather than in Connecticut.

Off-Track Betting

The state introduced pari-mutuel wagering on dog racing, jai alai and off-track betting (“OTB”) in 1976. The first greyhound racing facility, Plainfield Greyhound Park, opened that year as did jai alai frontons in Bridgeport and Hartford. Milford Jai Alai opened in 1977. In 1995, the Bridgeport Jai Alai closed and was converted to the Shoreline Star Greyhound Park. That same year, Hartford Jai Alai was converted into an OTB facility.

The state’s last jai alai fronton, in Milford, closed in 2001 and the two greyhound parks ceased live dog racing in 2005. Live horse racing is still authorized by statute, but no horse track has ever operated. The only pari-mutuel betting opportunity is at OTB facilities.

The state operated OTB from its inception in 1976 to 1993, when it sold the operation to Autotote Enterprise, Inc. (“AEI”), which merged with Scientific Games Corporation in 2000. AEI is a subsidiary of Scientific Games. AEI continues to operate the state’s Off-Track Betting system. Wagers can be placed at OTB facilities in the following municipalities: East Haven, Norwalk, Waterbury, Torrington, Bristol, New Britain, Hartford, Windsor Locks, New Haven, Milford and Bridgeport. The different venues can collectively accommodate up to 9,000 patrons at any given time. Both Foxwoods and Mohegan Sun offer off-track betting through their racebooks, but operate independently. The casino racebooks do not report revenues.

Off-track betting gross sales have declined. In 2007, the amount wagered fell to \$233 million, generating \$4.8 million for the state’s General Fund. The \$233 million wagered in 2007 is lowest since the \$224 million wagered in 1995. Payments to municipalities that host off-track betting facilities totaled \$3.8 million in FY 2007, the lowest it has been since 1997.

Charitable Gaming

Connecticut was one of the early adopters of charitable gaming regulations. The state legalized bingo in 1939. Bazaars and raffles were introduced in 1955, and sealed tickets in 1987. Qualified organizations must first obtain approval from the local municipality and the Division of Special Revenue before they can hold a fundraising event. Bingo is the state’s most popular form of charitable gaming, followed by raffles and bazaars and sealed tickets.

The presence of “Las Vegas nights” resulted in a federal court ruling that opened the door for Indian gaming. The General Assembly repealed the Las Vegas-nights law on January 6, 2003.

Charitable gaming, like OTB, has also seen significant declines in gross receipts for non-profit organizations. Nonetheless, the games generated more than \$16.1 million for the organizations in 2007, and \$1.3 million for the state’s General Fund.

The changing workforce at the casinos

Although Indian casinos have been an economic juggernaut, there is a serious need to diversify the workforce in southeastern Connecticut. In the early 1990s, the region faced an economic crisis with large defense-spending cutbacks and downsizing in related manufacturing. From 1988 to 1993, it lost approximately 10,000 jobs, including nearly 4,800 manufacturing jobs. During the 10-year period from 1993 to 2003, the region lost another 10,000 manufacturing jobs. At the same time, it added more than 20,000 service jobs, most created as a result of the construction of the two Indian casinos.

The average salary (1993-2003) for the service jobs was \$33,000, compared to \$67,000 for manufacturing jobs. From 2001 to 2006, southeastern Connecticut lost 2,357 jobs that paid \$65,000 or more.

As a result of the change in labor-market dynamics, the service-producing sector of the region's economy now employs about eight out of every 10 workers in southeastern Connecticut.

Policy makers need to address the need to diversify the workforce as the trend could challenge long-term economic growth prospects for the region.

Are taxpayers picking up part of the tab for casino regulatory costs?

The agreements negotiated with the Indian tribes require them to pay for all "reasonable and necessary" regulatory costs. That money is in addition to the 25 percent contribution on gross slot win. At issue is whether the state can recover its indirect costs.

State Attorney General Richard Blumenthal issued an opinion in 1998 that said the state could and should recover all of its indirect costs. Blumenthal concluded that "proper and accepted accounting practices" require that such costs be recovered.

Yet, despite the opinion, the state has – according to information provided to us in the course of this research – failed to collect all of those costs, putting Connecticut taxpayers in the position of paying for a portion of regulatory costs, something that was not supposed to occur based on the agreements negotiated with the tribes.

At our request, the state Office of Policy and Management provided us with budget data for the regulatory agencies from the 2004 to 2008 fiscal years. It shows that the state sustained deficits totaling nearly \$16 million during that period – \$8.6 million at Mohegan Sun and \$7.3 million at Foxwoods.

Are municipalities getting their fair share of the casino revenue?

The direct dollar amount from Indian gaming flowing into the state's General Fund increased from \$24 million in FY 1994 to \$340 million in 2007. By comparison, the amount allocated for distribution to municipalities has stayed relatively constant during the same period. In FY 2007, the state's 169 municipalities split \$86.3 million, \$2 million less than they received in 1994.

Looking at it another way, the General Assembly allocated 78 percent of the state's gaming revenue to municipalities in the 1994 fiscal year, the first full year of Indian gaming. In 2007, the figure fell to just 21 percent.

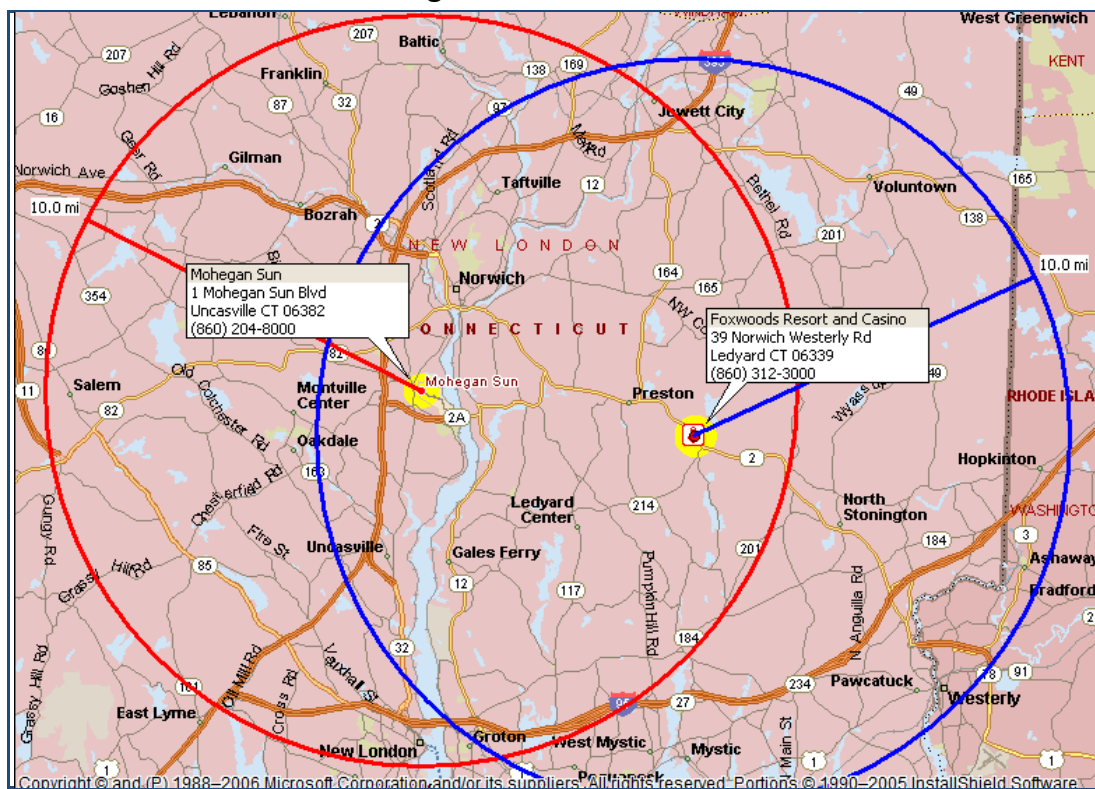
In interviews with Spectrum Gaming Group, municipal officials throughout Connecticut continually emphasized the need to restore the funding formula to a more balanced level to

enable municipal officials to reduce property taxes. The expectation was that the state’s 169 municipalities would receive the lion’s share of the slot contribution funds when then Governor Lowell Weicker entered into a Memorandum of Understanding (“MOU”) with the Mashantucket Pequot Tribal Nation that permitted video facsimile machines or slot operations at Foxwoods.

Casino-related impacts on southeastern Connecticut

As part of this report, the state of Connecticut specifically asked Spectrum Gaming Group to analyze casino-related impacts among the municipalities within a 10-mile radius of the casinos. They included Bozrah, Franklin, Griswold, Groton, Ledyard, Lisbon, Montville, New London, North Stonington, Norwich, Preston, Salem, Sprague, Stonington, Voluntown and Waterford. Spectrum contacted each municipality to determine if Indian gaming had impacted them in either a positive or negative way. Details are presented in a separate section.

Figure 1: Area within 10 Miles of Mohegan Sun and Foxwoods



From the day slot-machine gaming began in 1993, towns close to the casinos bitterly complained that the formula to distribute the Mashantucket Pequot And Mohegan Fund failed to consider local gaming-related impacts.

The state distributes funds based, in part, on the amount of state-owned property in a town and whether a town has hospitals or private colleges. Such property is tax exempt. The state distributions are meant to offset the loss of the tax-exempt property. The formula also takes into account property values, per-capita income and population.

Some of the perimeter municipalities have documented impacts such as increased traffic accidents, DUI arrests and the need for special programs to help non-English speaking students learn the English language.

In recent years, the General Assembly increased the compensation to some of the perimeter municipalities, but local officials say it is not nearly enough, and the level of funding often depends on the state's fiscal health.

Norwich, the largest municipality in the region, is coping with a number of problems. It is located within eight miles of both casinos. DUI arrests have more than doubled since 1992. Montville and Ledyard have also experienced significant increases. Roughly 20 percent of the motorists in Montville, Ledyard and North Stonington arrested for DUI acknowledged to police that their last drink was at a casino. One such motorist was charged with manslaughter in March 2009 for allegedly causing a fatal accident by driving the wrong way on I-395.

Norwich Public School administrators identified on a yearly basis nearly \$2 million in casino-related costs. In order to handle the influx of immigrant workers attracted to casino jobs, the district had to create English for Speakers of Other Languages ("ESOL") program because students speak nearly 30 different languages. They come from Haiti, Peru, the Dominican Republic and Eastern Europe. In addition, thousands of Chinese-speaking workers were recruited from New York City in late 2001 to work at the casinos.

Norwich Public Schools reported the following to us:

- In 1999, it enrolled 40 ESOL students. Today, the figure stands at nearly 400.
- About half of the ESOL students are proficient in math; less than a third in reading.
- The district, as of the 2008-2009 school year, operates two bilingual programs – one in Spanish and another in Haitian Creole. It may soon have to offer a third program in Mandarin Chinese.
- Budgets cuts forced the district to eliminate a full-day kindergarten program, close an elementary school and use outdated textbooks.

The City of Norwich copes with significant impacts as well. City officials estimate casino-related costs to be anywhere from \$1 million to \$2.5 million a year. They include:

- A 27 percent increase in motor vehicle accidents from 1991 to 2004.
- An increase in police overtime from \$85,000 in 1991 to more than \$280,000 in 2008.
- A 76 percent increase in calls for service from people needing the assistance of the police from 1992 to 2004.

Other area municipalities and school districts have sustained similar impacts but not to the same extent as Norwich. They include:

- Norwich Free Academy (Norwich's public high school): Its current ESOL enrollment is nearly 200, seven times the 1993 figure.
- Ledyard Public Schools: Educates children who live on the Mashantucket Pequot reservation yet receives no property taxes from families who live on land within the reservation because the Tribe is a sovereign nation.
- Montville Public Schools: Expending more resources to educate Chinese-speaking students. The number was 54 in 1994; 183 in 2007.
- Automobile and pedestrian accidents: Three casino workers walking to Mohegan Sun have been killed in car accidents in the past 16 months, the last of which was a hit and

run that occurred on April 14, 2008. The motorist was charged in early 2009 with manslaughter. Mohegan Sun has spent \$2 million to erect sidewalks and install lighting along a portion of Route 32 to cut down on the accidents.

Substandard housing, illegal conversions – casino workers

With many casino workers unable to afford housing in southeastern Connecticut, some landlords have converted single-family homes into boarding facilities. The practice is not only illegal, it is unsafe as well.

As recently as December 9, 2008, the Town of Montville's building official came across a small ranch home in Uncasville, where a landlord was in the process of converting a garage into two floors to accommodate two bedrooms and a kitchen. There were no smoke or carbon-monoxide detectors or proper emergency exits. The home itself, roughly 1,200 square feet, had another eight bedrooms.

A day earlier, Norwich housing officials inspected two single-family homes on West Thames Street that were converted into illegal boarding facilities. The same landlord owned both homes. Inspectors found beds in basements. The property owner divided the upstairs in both homes into individual rooms. All of the renovation work, including electrical, was done without permits.

Norwich added a new position, Blight Officer, in 2007 to investigate complaints of substandard housing and hotbedding.

The state Housing Prosecutor argues that a law is needed to allow building inspectors to access homes they suspect have serious code violations. Current law allows access only when the building inspector has actual knowledge of a problem or responds to a complaint as inspectors did in Montville and Norwich in December 2008.

Embezzlements

State and federal law enforcement officials made 43 embezzlement arrests in 1992, the year the first Indian casino opened. In 2007, the most recent year that statistics are available, the number increased to 214. No other state that reported 40 or more embezzlements in 1992 has had a higher percentage increase than Connecticut. The percentage increase in Connecticut from 1992 to 2007 is nearly 400 percent; nationwide the increase was 38 percent.

The FBI and state crime reports do not indicate how many of the embezzlements were gambling-related, but our research shows that many of those who stole from their employer used either part or all of the money to gamble at the two Indian casinos.

Among our findings:

- During the 11-year period ending December 31, 2008, we found 31 newspaper articles involving separate incidents that reported embezzled money in Connecticut was used to gamble at Connecticut casinos. Some involved multiple arrests. Incidents in which the embezzled money was embezzled in other states, such as Massachusetts and Rhode Island, were not included in our review.
- The embezzled amount during that time period totaled nearly \$8 million.

- Judges often sentenced the embezzlers to prison, ruining their lives as well as the lives of their families.
- Some of the embezzlers stole from public agencies. Tax collectors in the municipalities of Ledyard and Sprague stole \$300,000 and \$105,000, respectively; a payroll clerk at the Vernon Board of Education embezzled \$105,000. While there have been no embezzlement incidents in The Town of North Stonington, it imposes special internal controls to protect taxpayers in response to the rash of embezzlements in southeastern Connecticut. Its auditor charges for the service.

Problem Gambling

The National Council on Problem Gambling defines problem gambling as behavior that causes disruptions in any major area of life: psychological, physical, social or vocational. The term “problem gambling” includes, but is not limited to, the condition known as “pathological” or “compulsive” gambling, a progressive addiction characterized by increasing preoccupation with gambling; a need to bet more money more frequently; restlessness or irritability when attempting to stop; “chasing” losses and loss of control manifested by continuation of the gambling behavior in spite of mounting, serious negative consequences.

To measure the extent of problem gambling (sometimes referred to as chronic gambling), Spectrum commissioned a research study involving 3,099 participants 18 years or older. Surveyors questioned 2,298 participants through a random dial digit (RDD) telephone survey, and an additional 801 people participated through a separate online-panel survey. The purpose of implementing an online survey was to test the substitutability of using an online panel in place of a telephone panel and to capture individuals without a land line. There is a dedicated section within the report that provides a summary of the panel survey findings.

Participants were classified based on answers to questions from two widely accepted gambling screens: the South Oaks Gambling Screen (“SOGS”) and the NORC (National Opinion Research Center) DSM-IV Screen for Gambling Problems (“NODS”). DSM stands for the Diagnostic and Statistical Manual of Mental Disorders, a 1,000-page manual published by the American Psychiatric Association. It provides diagnostic criteria for mental disorders. The manual has been revised four times.

We then developed estimates for prevalence rates using Connecticut’s adult population (18 years and older) of 2,666,750. Prevalence rates measure the extent to which individuals could be classified as problem gamblers or probable pathological gamblers. The word probable is used because only a trained clinician can diagnose a pathological gambler. All telephone survey responses are not diagnoses.

The majority of the results provided in this report are generated from the phone survey to allow direct comparison to the 1997 WEFA report titled: *A Study Concerning the Effects of Legalized Gambling on the Citizens of the State of Connecticut*.

It would not be prudent to combine the phone and online surveys in the Spectrum Study to come up with one prevalence rate as the surveys involved two different samples. The phone survey was random in that there were no limitations placed on participants. It is more accurate due to the use of RDD of general population versus the panel, where participants opt in based on

recruitment efforts by marketing companies. In addition, the telephone survey involved nearly three times as many participants, resulting in a lower sampling-error margin.

The results of the telephone survey yielded the following SOGS lifetime numbers for probable pathological gamblers: 1.5 percent, (40,001 people)

The results of the surveys yielded the following NODS lifetime rates for probable pathological gamblers: 1.2 percent, (32,001 people)

The margin of sampling error for the 2,298 phone interviews is ± 2.1 percentage points at the 95 percent confidence level. This means that there is less than a 1-in-20 chance that the findings will deviate more than ± 2.1 percentage points from the actual population parameters.

For at-risk gamblers, a category that is only detected through the NODS screen, the lifetime number is 192,006. At-risk gamblers are defined as gamblers who during their lifetime can be classified as at risk of becoming problem gamblers. These are people who scored at a level on the gambling screen that was below that of a problem gambler but fell into a category described as at risk of becoming a problem gambler.

The 1997 Connecticut study generated, for the most part, higher SOGS prevalence rates. Past-year probable pathological rates were 2.8 percent for the 1997 study compared to .7 percent for the current study. Past year rates for problem gamblers were 2.2 percent compared to 0.9 percent in the current Spectrum study.

Impacts

Our telephone survey compared the lifetime gambling habits for problem and probable pathological gamblers with the gambling habits of non-problem gamblers:

- 62 percent gambled until their last dollar was gone compared to 12 percent for non-problem gamblers
- 29 percent gambled to pay off debts compared to 4 percent for non-problem gamblers
- 13 percent sold possessions to finance gambling compared to 1 percent for non-gamblers
- 26 percent borrowed to finance gambling compared to 1 percent for non-gamblers

Pathological gamblers are also more likely to suffer from mental health conditions such as mood disorders, depression and anxiety disorders.

Treatment Programs

Connecticut's outpatient problem gambling treatment program, established in 1982 in Middletown, is the oldest, continuously operating program in the nation. It has expanded to include a network of 17 sites that are operated through "The Bettor Choice," which is overseen by Problem Gambling Services ("PGS"), an agency within the Department of Mental Health and Addiction Services ("DHMAS").

The 17 clinics provide services at little or no cost to the problem gambler, which is important because the problem gambler is often unable to pay for treatment. Bettor Choice employs 22 clinicians, all of whom have master's degrees or higher along with several years of experience in treating problem gambling. In our opinion, they are dedicated to helping problem gamblers combat their addiction.

In 1996, the state had just one clinic, which saw 100 clients. In FY 2008, the figure was 922 clients. Still, as the prevalence rates show, there are thousands of residents who are either problem or probable pathological gamblers, which means Bettor Choice sees only a small fraction of them.

While Connecticut on a per-capita basis compares favorably with most states in funding for problem-gambling programs, there are other states that do much more, and obtain higher success rates. Oregon is one. It operates a residential program; Connecticut does not. Oregon also spends \$1.2 million to promote its gambling treatment and prevention programs; PGS has no budget to promote its services.

An effective promotion budget would significantly increase the number of clients seeking treatment. Bettor Choice administrators acknowledge that an outreach effort is critically needed to promote the program in minority areas.

The most commonly mentioned support group or 12-step program mentioned in our interviews and focus groups was Gamblers Anonymous ("GA"). GA, like other support or 12-step programs, does not involve professional intervention. Instead it relies on peer support, and is often used as a "way of getting through day to day." GA offers free membership to anyone who is a problem gambler or a recovering problem gambler.

Treatment is also available from psychologists and psychiatrists throughout the state. There are a number of research and treatment centers that have assisted problem gamblers. They include:

- The Problem Gambling Clinic at the Connecticut Mental Health Center, a joint effort of the center and Yale's Department of Psychiatry. During the past 10 years, the clinic has seen approximately 300 patients. Treatment is free.
- The Gambling Treatment and Research Center, located at the University of Connecticut Health Center. Its main source of funding is through grants from the National Institutes of Health. The center has treated more than 1,000 individuals with gambling problems.
- The Alliance Behavioral Services in Groton. It provides outpatient treatment for gambling addictions among other mental health disorders. There are set fees for services.

About This Report

The state of Connecticut, Division of Special Revenue, retained Spectrum Gaming Group to conduct a comprehensive analysis of the social and economic impacts of all forms of legal gambling in Connecticut. State law requires that such a study be conducted to determine the types of gambling activity in which citizens are engaging, and the desirability of expanding, maintaining or reducing the amount of legalized gambling in the state. The last Connecticut gaming-impact study was completed in June 1997.

The General Assembly authorized the study through the budget that was adopted during the special session in June 2007. In executing this study, which was led by Spectrum Vice President for Research Michael Diamond, we listened to a wide variety of interests throughout the state, regardless of their stated or potential position on the issue of legalized gambling. Our role in all such meetings was to understand the concerns of others and be respectful of their views. We interviewed more than 150 people with an eye toward listening to their ideas and seeing gaming through their perspective.

The interviews were conducted by experienced Spectrum professionals and associates who have performed similar work in jurisdictions around the world. We were assisted in this Connecticut project by a variety of other professionals, with doctorates and other advanced degrees in certain sub-specialties, including experienced professionals working for Richard Stockton College of New Jersey and Ypartnership of Orlando, Florida.

We conducted four different focus groups to assist us in developing our study to address certain topics, such as the impact that gambling has had on the lives of problem gamblers and whether casino gambling has been beneficial for Connecticut. Questions were also asked of participants in an at-random telephone survey commissioned by Spectrum, which was based on responses from focus groups.

Thanks to our primary subcontractor, Hartford-based M.P. Guinan Associates, we enhanced our visits with her assistance during the course of this research. Under the leadership of Mary Phil Guinan, the firm provided essential guidance and support.

We note, with particular appreciation, that we had extraordinary access to management and staff at both Foxwoods and Mohegan Sun; both willingly and enthusiastically assisted us in our research. The executives and staff members who participated from the casinos are too numerous to mention here. We are grateful to all of them for their participation.

The following table lists the organizations that participated. It should be noted these groups were often contacted multiple times, and they provided access to a wide variety of officials and experts. We are grateful for their time and support.

Figure 2: List of Organizations Participating in This Study

Public Agencies (CT unless otherwise indicated)	Organizations, Private entities
Commission on Culture and Tourism	Chamber of Commerce Eastern Connecticut
Eastern Regional Tourism District	Connecticut Council on Problem Gambling
Uncas Health District	Connecticut Citizens Against Casinos
Southeastern Connecticut Council of Governments	Mohegan Sun Casino
Department of Consumer Protection, Liquor Control Division	Mohegan Tribal Gaming Authority
Division of Criminal Justice, New London State's Attorney	The Mohegan Tribe
Division of Criminal Justice, State Housing Prosecutor	Foxwoods Resort Casino
Division of Special Revenue	Mashantucket Pequot Tribal Nation
Office of Policy and Management	William W. Backus Hospital, Norwich
Department of Revenue Services	Chinese & American Cultural Assistance Association, New London County
Connecticut Lottery	Len Wolman, chairman and CEO of Waterford Group
Division of Problem Gambling Services, Lori Rugle, Executive Director	Mystic Coast and Country Travel Industry Association
Bettor Choice Program (For Problem Gamblers)	Greater Mystic Chamber of Commerce
Statewide Organized Crime Investigative Task Force	Metro Hartford Alliance
General Assembly's Office of Fiscal Analysis	Greater Hartford Convention and Visitors Bureau
New Jersey Division of Gaming Enforcement	Olde Mystic Village
Southeast Area Transit (SEAT)	AC Linen Supply
Eastern Connecticut Workforce Investment Board	Norwich Free Academy
US Naval Base	Autotote Enterprises

While we cannot list all the individuals who participated in the development of our research, we pay special note to the many public officials who willingly offered their time and advice. This list includes the following:

Figure 3: List of Public Officials Interviewed for this Study

Waterford First Selectman Daniel Steward	Norwich Mayor Benjamin Lathrop
Waterford Police Chief Murray Pendleton	Norwich City Manager Alan Bergren
North Stonington First Selectman Nicholas Mullane	Norwich Police Chief Louis Fusaro
Preston First Selectman Bob Congdon	Norwich Police Captain Timothy Menard
New London Mayor Kevin Cavanagh	Norwich Social Services Director Beverly Goulet
New London Police Captain William Dittman	Norwich Social Work Supervisor Lee-Ann Gomes
Rebecca Bombero, Management and Policy Analyst, New Haven	Norwich Public Utilities Division Manager Kerri Kemp
Kevin O'Connor, former US Attorney for the District of Connecticut	Norwich Regional Adult Education Director Mary Berry
Senator Donald Williams, D-29, President Pro Tempore	Norwich Superintendent of Schools Pamela Aubin
Representative Thomas Reynolds, D-42	Norwich School Board member Charles Jaskiewicz
Senator Andrea Stillman, D-20	Norwich Otis Library Director Bob Farwell
Groton Town Manager- Mark Oefinger	Montville Superintendent of Public Schools David Erwin
Senator Edith Prague, D-19	Montville Sergeant John Rich, Resident State Trooper
First Selectman Salem- Bob Ross	Montville Mayor Joseph Jaskiewicz
Representative Jack Malone, D-47	Montville Department of Senior & Social Services Director Kathleen Doherty Peck
Senator Andrew Maynard, D- 18	Montville Fire Marshal Raymond Occhialini
First Selectman East Lyme- Paul Formica	Montville Sergeant Michael Collins, Resident State Trooper
Connecticut Lottery Corporation President and CEO Anne Noble	Montville Building Official Vernon Vessey
Connecticut Lottery Corporation Vice President of Sales & Marketing Paul Sternburg	Montville Tax Assessor Lucy Beit
Connecticut Lottery Corporate Counsel & Director of Government Affairs James F. McCormack	Ledyard Superintendent of Public Schools Michael Graner
US Naval Base Chaplain Joe Cotch	Ledyard Mayor Fred Allyn Jr.
Ledyard Tax Assessor Paul Hopkins	Ledyard Public Works Director Steven Masalin

About Spectrum Gaming Group

Spectrum Gaming Group (“Spectrum,” “we” or “our”), founded in 1993, is an independent research and professional services firm serving public- and private-sector clients worldwide. Our principals have backgrounds in gaming operations, economic analysis, law enforcement, due diligence, gaming regulation, compliance and journalism.

Spectrum professionals have been studying the impacts of gaming for more than three decades and are among the pioneers in this particular discipline. Spectrum has studied the economic and social impacts of legalized gambling throughout the United States and elsewhere, from New Jersey, Illinois, Louisiana, Kansas and Pennsylvania to Guam and South Korea.

Spectrum does not advance any pro-gaming or anti-gaming viewpoint, which means that we do not downplay or ignore examples, arguments or evidence that might contain either positive or negative implications.

Spectrum holds no beneficial interest in any casino operating companies or gaming equipment manufacturers or suppliers. We employ only senior-level executives and associates who have earned reputations for honesty, integrity and the highest standards of professional conduct. The interest of past or potentially future clients never influences our work.

Each Spectrum project is customized to our client’s specific requirements and developed from the ground up. Our findings, conclusions and recommendations are based solely on our research, analysis and experience. Our mandate is not to tell clients what they want to hear; we tell them what they need to know. We will not accept, and have never accepted, engagements that seek a preferred result.

Among our most recent public-sector clients are the Commonwealth of Massachusetts, Broward County (FL), West Virginia Lottery Commission, the New Jersey Casino Reinvestment Development Authority, the Atlantic City Convention and Visitors Authority, the Singapore Ministry of Home Affairs, Rostov Oblast (Russia), and the Puerto Rico Tourism Company. Recent private-sector clients include the Casino Association of New Jersey, Harrah’s Entertainment, Morgan Stanley, the Pokagon Band of Potawatomi Indians, and the Seneca Nation of Indians.

We maintain a network of leading experts in all disciplines relating to the gaming industry, and we do this through our offices in Ascona, SUI; Atlantic City, Bangkok, Guangzhou, Harrisburg, Hong Kong, Las Vegas, Macau, Manila and Tokyo.

Introduction

Connecticut residents can legally gamble at two destination gaming resorts – Foxwoods Resort Casino and Mohegan Sun – as well through the Connecticut Lottery, off-track betting, and charitable gaming.

Our analysis shows that each of these forms of gambling is inter-related. At their core, they follow the same business model: Customers wager money in the hope of winning more, with the operators holding profit margins of varying degrees. Yet each has developed separately, subject to market conditions and policies that have been established by individuals and organizations in the public and private sectors without, in most cases, any regard for the other policies being established. Moreover, these varied gaming policies are established without taking into account non-gaming policies in a variety of other areas, and vice versa.

We cannot over-emphasize the importance of the crucial relationship – sometimes subtle, and sometimes profound – between public policy and the economic and social impacts of gaming. This relationship has proven to be dramatic in Connecticut.

Spectrum has identified several themes that have become apparent as a result of public policies – and we underscore that some of these public policies might appear to have little to do with gaming, and in some cases, pre-date the legalization of gaming by decades.

These themes include:

- Gaming in its various forms is not fully woven into the state’s tourism policies, which has resulted in lost opportunities to enhance gaming’s value – as well as state revenue – by not fully leveraging spending from out-of-state residents. Hotel officials complained to us that marketing programs are much too fragmented.
- The state has not, from the standpoint of optimizing the benefits of gaming, sufficiently invested in such areas as transportation or job training that could make it easier to capture out-of-state visits, or to marry job opportunities at casinos with existing pockets of unemployment or under-employment. The result has been a failure to diversify the workforce.
- The absence of effective regional government in Connecticut has made it difficult for communities to address needs created by gaming (particularly casinos), and the state funding formula for distribution of casino revenue to municipalities has not been designed to address that issue.

Spectrum, of course, recognizes that the Division of Special Revenue, the General Assembly and others are keenly aware of the need for planning and the problems created by the absence of planning. The commissioning of this very report is evidence of that commitment. However, the historic problems created over decades as cited throughout this report, coupled with the inherent difficulty of any state to renegotiate tribal compacts, cannot be minimized.

Some conflicts in gaming policy are inevitable and widely acceptable. For example, the Connecticut Lottery Corporation (“CLC”) has the mixed tasks of growing revenue while taking affirmative steps to discourage minors from gambling and those who cannot afford to from doing

so. It spends resources pursuing both goals.¹ The CLC devotes marketing resources in a TV campaign to discourage underage gambling. At the same time, the CLC adopted a policy that includes eschewing the use of cartoon characters in its games, even though such images may be used successfully in other states to promote lottery sales. However, some conflicting goals would not appear to be either necessary or productive. The result: missed opportunities. For example, Connecticut has financial stakes in the success of both the CLC and the tribal casinos. If the two forms of gaming were viewed more as potential partners rather than competitors, marketing efforts could be developed to capture more out-of-state dollars for both sources.

Connecticut was one of the earliest states to develop agreements with Indian tribes regarding casino gambling. As a pioneer, Connecticut had less of an opportunity to witness the evolution of Indian gaming in other states and to glean lessons from their experience. No one in Connecticut could have fully anticipated the economic success of Foxwoods and Mohegan Sun, nor could they have foreseen the demands on everything from traffic and public safety to employment and housing. Additionally, when the Connecticut General Assembly abolished county government in 1959,² it could not have foreseen the long-term impacts of that shift in policy a half-century later.

Writing in the *St. John's Law Review*, Terry J. Tondro noted a growing demand in various communities and states for regional planning:

“While Connecticut’s institutions and laws reflect some of these pressures for regional planning and cooperation, the overall picture is one of ad-hoc responses to particular situations, rather than the result of a planned evolution. Regional planning may be inevitable, and some consider it necessary, but Connecticut’s experience is that it will be haphazard and not at all coordinated.”

Tondro’s observations – while not focused on gaming policy – are certainly relevant to this analysis. Casino destination resorts, as found in Connecticut, create impacts that extend far beyond the municipal boundaries of their host communities. The impacts are regional in nature and, absent a regional response, can create problems for communities that do not have commensurate resources to address those impacts.

A 1991 casino impact study warned of “significant and long-lasting” impacts. The report emphasized the need for “close cooperation between tribal, municipal, regional and state officials in an on-going effort to identify and address problems and opportunities of mutual interest as they arise.”³ Local and state officials acknowledge the advice was unfortunately not heeded.⁴

The economic downturn hit Connecticut later than other areas of the country. It began in March 2009, three months after the country officially sank into a recession.⁵ Even with recent layoffs and the recession, the two casinos continue to employ more than 20,000 people. The

¹ Interview with Connecticut Lottery Corporation executives.

² “Fragments of State and regional planning in Connecticut at century's end,” *St. John's Law Review*, Fall 1999.

³ Southeastern Connecticut Regional Planning Agency, 1991 Casino Impact Study.

⁴ Spectrum interviews, Fall 2008.

⁵ Jungmin Charles Joo, Connecticut Department of Labor, “*March 2009 Economic Digest*.”

casino-related development put pressure on land development patterns throughout southeastern Connecticut.

We agree with the following assessment of the Southeastern Connecticut Council of Governments (“SCCOG”): “Connecticut’s strong tradition of home rule and its lack of regional government results in a highly fragmented governmental structure that is often inadequate to deal effectively and efficiently with a variety of problems that are regional in scope.”⁶

In addition to the 20 southeastern Connecticut municipalities that are members of SCCOG, there are the two federally recognized, sovereign Native American tribal nations. However, state law prevents tribal members from having a vote, which SCCOG administrators say is unfortunate. SCCOG noted in a 2007 report: “Developing consensus among these separate governmental entities is enormously cumbersome and frequently impossible. Initiating action is even more difficult.”

The General Assembly created SCCOG to address regional problems. But its powers are limited. It can discuss, recommend and coordinate responses, but has no regulatory or taxing powers. Only state government or the municipalities themselves can implement its proposals.

This report is designed to analyze what has occurred with respect to the impacts of all forms of legalized gambling, and not what *should have* occurred. However, we are compelled to point out that policies, with respect to large industries, have a profound impact on the fiscal and economic health of a state. They do not occur in a vacuum. Rather, they are interdependent.

We know that the impacts of casinos – particularly of large destination resorts – can be significant, and certainly do not stop at municipal lines. In many states – and this is the case in Connecticut – there can be a mismatch between the challenges casinos pose and an allocation of the resources needed to meet those challenges. This could, in turn, intensify both the positive and negative effects of casinos.

For example, if one community is feeling the negative effects of traffic and the demand for low-income housing, and it does not receive a commensurate share of resources, the negative effects would be intensified as that community struggles to find the resources to meet those challenges.

If, by contrast, another community enjoys an outsized share of the positive benefits – from reduced unemployment to growth in service industries – and this same community gets a disproportionately high share of the resources, the positive impacts would be enhanced.

Other casino states such as New Jersey, Colorado and Pennsylvania recognize the need to compensate host communities for casino impacts.

Colorado, for example, allocated nearly \$7 million in casino revenue in FY 2008 for local governments to address documented gaming impacts. Meanwhile, the municipalities near the two Indian casinos in Connecticut have been pleading for such a program.

Grant funds are provided to eligible local governments in Colorado through a competitive process to finance the planning, construction and maintenance of public facilities. Successful

⁶ Southeastern Connecticut Council of Governments Regional Plan of Conservation and Development 2007.

applicants must be able to quantify gaming impacts and to identify the public service and facility needs associated with those impacts. Freemont County received a \$400,000 grant to resurface a county road impacted by casino traffic. The District Attorney in Jefferson County received a grant of nearly \$200,000 to compensate for increased caseload due to gaming.

Other states that compensate host communities include Pennsylvania, which designates 4 percent of gross casino win to communities where casinos have been built. Casinos in Atlantic City provide 1.25 percent of their gross win to the Casino Reinvestment Development Authority, which has invested much of that money into Atlantic City, fostering economic development and improving infrastructure. A significant amount of the money has been used to improve traffic flow as well as to build affordable housing.

While some communities close to the casinos have received additional funds, local officials in those towns argue that the money is not enough to compensate for actual impacts. They note that towns far from the casinos can use the Mashantucket Pequot And Mohegan Fund for purposes other than addressing casino-related impacts.

These themes, which are to varying degrees recurring and occasionally pervasive, present the tableau or backdrop on which any analysis of gaming in Connecticut must be presented. The following Spectrum report has been developed with the firm belief that anyone seeking a deeper understanding of the economic and social impacts of legalized gaming must be aware of these over-arching trends, and must take them fully into account.

Section I: History of Legalized Gambling in Connecticut

Opportunities to Gamble

Connecticut citizens today have the opportunity to legally gamble in several ways:

- The Connecticut Lottery, operated by the quasi-public Connecticut Lottery Corporation. Patrons can select numbers from online games or purchase scratch-off tickets.
- Statewide off-track betting (“OTB”), operated by Autotote Enterprises, Inc. (“AEI”)
- Charitable gaming activities of bingo, sealed ticket sales, bazaars, and raffles; conducted by nonprofit organizations.
- Indian gaming at Foxwoods Resort Casino, in Ledyard, operated by the Mashantucket Pequot Tribal Nation. Foxwoods offers table games, slot machines, high-stakes bingo, poker and a racebook.
- Indian gaming at Mohegan Sun, in Montville, operated by the Mohegan Tribe. Mohegan Sun offers table games, slots, poker and a racebook.

The Connecticut Division of Special Revenue (“DOSR”) oversees all gambling. Since its inception, the agency has acted to ensure the integrity for gambling activities that returned \$708,405,084 to the state treasury during FY 2007-2008.⁷

Indian gaming revenue to the state has increased significantly since Foxwoods opened with slot machines on January 16, 1993. In FY 1993, it totaled \$30 million. In FY 2008, it exceeded \$411 million.

The first step in examining the relationship between gambling revenue and state spending is to quantify the data historically, as seen in the following two tables:

Figure 4: Net Revenue to Connecticut, 1997-2001 (\$ in millions)

	1997	1998	1999	2000	2001
Total	\$464.37	\$527.94	\$565.71	\$579.98	\$591.76
Lottery	\$251.52	\$264.27	\$271.31	\$253.60	\$252.00
Off-Track Betting	\$6.87	\$5.44	\$5.47	\$5.62	\$5.67
Greyhound Racing	\$0.36	\$0.32	\$0.29	\$0.25	\$0.21
Jai Alai	\$0.52	\$0.40	\$0.34	\$0.32	\$0.29
Charitable Gaming	\$1.49	\$1.42	\$1.26	\$1.21	\$1.16
Casinos	\$203.60	\$256.08	\$287.03	\$318.99	\$332.42

Source: Connecticut Division of Special Revenue

⁷ Division of Special Revenue Annual Report, FY 2007-2008.

Figure 5: Net Revenue to Connecticut, 2002-08 (\$ in millions)

	2002	2003	2004	2005	2006	2007	2008
Total	\$647.83	\$651.26	\$690.83	\$693.17	\$718.78	\$715.59	\$700.22
Total Lottery	\$271.51	\$256.81	\$280.76	\$268.52	\$284.87	\$279.00	\$283.00
Off-Track Betting	\$5.74	\$5.78	\$5.78	\$5.28	\$5.06	\$4.81	\$4.60
Greyhound Racing	\$0.20	\$0.18	\$0.15	\$0.10	\$0.03	\$-	\$-
Jai Alai	\$0.14	\$-	\$-	\$-	\$-	\$-	\$-
Charitable Gaming	\$1.28	\$1.23	\$1.40	\$1.43	\$1.31	\$1.30	\$1.21
Casinos	\$368.95	\$387.25	\$402.73	\$417.84	\$427.53	\$430.48	\$411.41

Source: Connecticut Division of Special Revenue

The following tables, in actual dollars, pertain to the same data but examine the revenue as a ratio to total population in Connecticut:

Figure 6: Connecticut Net Gambling Revenue to Connecticut per Capita, 1997-2001

	1997	1998	1999	2000	2001
Total	\$138.64	\$156.88	\$167.05	\$169.96	\$172.37
Lottery	\$75.10	\$78.53	\$80.12	\$74.31	\$73.40
Off-Track Betting	\$2.05	\$1.62	\$1.62	\$1.65	\$1.65
Greyhound Racing	\$0.11	\$0.10	\$0.09	\$0.07	\$0.06
Jai Alai	\$0.16	\$0.12	\$0.10	\$0.10	\$0.09
Charitable Gaming	\$0.45	\$0.42	\$0.37	\$0.35	\$0.34
Casinos	\$60.79	\$76.09	\$84.76	\$93.47	\$96.82

Source: Connecticut Division of Special Revenue

Figure 7: Connecticut Net Gambling Revenue to Connecticut per Capita, 2002-2007

	2002	2003	2004	2005	2006	2007
Total	\$187.35	\$187.02	\$197.73	\$198.01	\$205.08	\$204.32
Lottery	\$78.52	\$73.75	\$80.36	\$76.70	\$81.28	\$79.66
Off-Track Betting	\$1.66	\$1.66	\$1.66	\$1.51	\$1.44	\$1.37
Greyhound Racing	\$0.06	\$0.05	\$0.04	\$0.03	\$0.01	\$ -
Jai Alai	\$0.04	\$ -	\$ -	\$ -	\$ -	\$ -
Charitable Gaming	\$0.37	\$0.35	\$0.40	\$0.41	\$0.37	\$0.37
Casinos	\$106.70	\$111.21	\$115.27	\$119.36	\$121.98	\$122.91

Source: Connecticut Division of Special Revenue

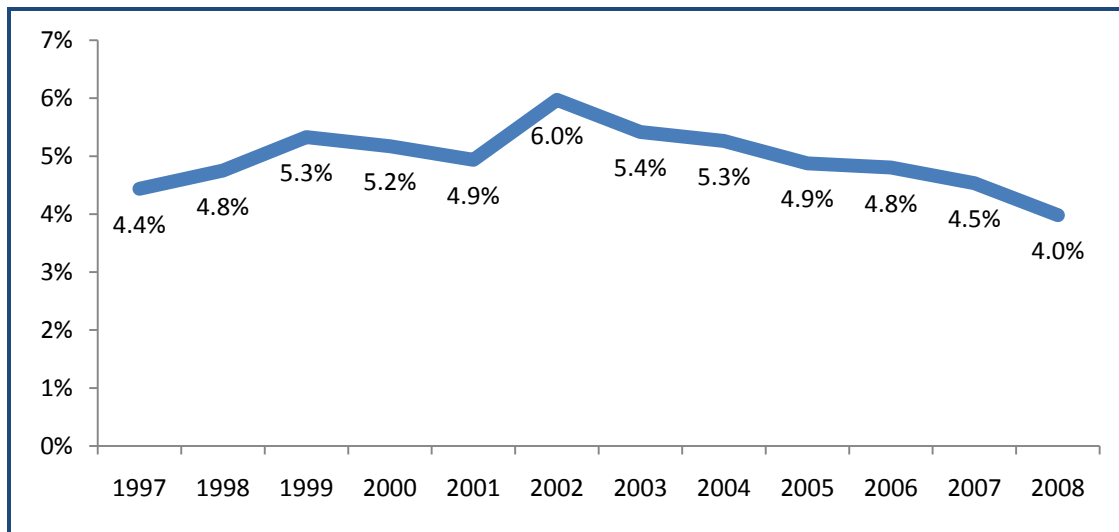
Figures 6 and 7 were designed to show the relative ratio of gambling revenue to population. They do not indicate, nor should they be interpreted to indicate, per-capita spending on different forms of gambling. Because most forms of gambling attract adults from out-of-state – which is indeed a public-policy goal – such an interpretation would be misleading. These tables

illustrate year-over-year trends, as well as the relative level of contribution from each form of gambling.

Note that while the Lottery per-capita net revenue has grown somewhat over the past decade, casino revenue to the state has nearly doubled, becoming the primary driver behind the overall growth in this important measure.

We then examined gaming revenue as a proportion of overall state spending. Here, the range over the past decade has been relatively stable:

Figure 8: Gaming’s Share of State General Fund



Source: State budget figures

Indeed, the percentage – after having grown in the first half of this span – has since shrunk back closer to its original ratio.

However, even with the shrinkage, Connecticut’s dependence on gaming revenue as a percent of its general revenues is among the highest in the country. At 4.8 percent, only six other states in FY 2006 – Nevada, Rhode Island, West Virginia, South Dakota, Delaware and Louisiana – had a greater reliance on gambling revenue. Connecticut’s reliance is more than double the national average.⁸

Senator Donald Williams Jr., D-29th District, is the state Senate’s President Pro Tempore. Williams told us that he was concerned that policymakers may be pressured into further expanding gambling to help address the state’s fiscal problems. “We’re experiencing the worst downturn since the casinos opened,” he said, noting that there already have been suggestions that casinos be allowed to serve alcohol around the clock.

In terms of per capita or gambling revenue per resident, only four states – Nevada, West Virginia, Rhode Island, and Delaware – have higher dollar amounts than Connecticut’s \$205.⁹

⁸ Rockefeller Institute, *From a Bonanza to a Blue Chip? Gambling Revenue to the States*, June 19, 2008.

⁹ Ibid.

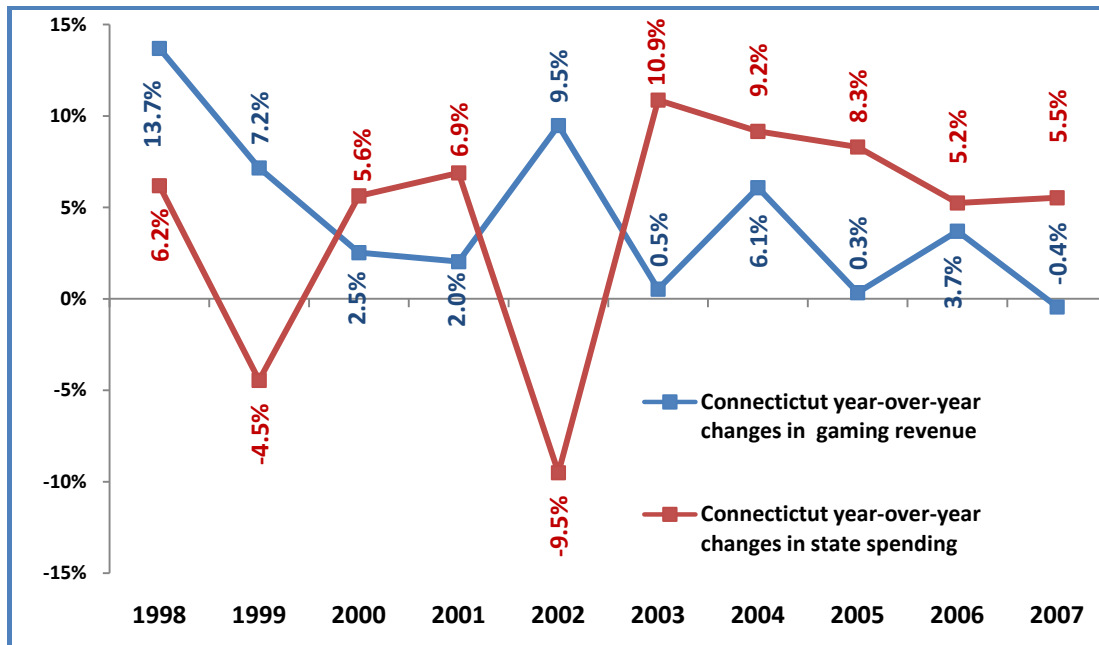
As the Rockefeller Institute noted in a June 2008 study¹⁰, state revenues from gambling have risen steadily during the past 10 years, reaching \$23.2 billion in FY 2007. Ten states collect more than \$1 billion. Another seven collect more than \$500 million. Connecticut collected \$716 million, putting it in the top tier of gaming states.

The Rockefeller report noted: “Gambling revenue is now at an all-time high, but growth is slowing due to objections about social impacts and broader economic trends. From a fiscal perspective, state-sponsored gambling now resembles a blue-chip stock – reliably generating large amounts of cash, but no longer promising dramatic growth in revenue.”

To broaden our analysis, we searched for any evidence of a cause and effect between gaming revenue and state spending in Connecticut – i.e., is there any evidence that revenue growth fueled by various forms of gaming is, in turn, fueling state spending.

The first chart looks at increases or decreases in these two measures of revenue from gambling, and overall state spending within the same fiscal year:

Figure 9: Changes in Gaming Revenue vs. Changes in State Spending



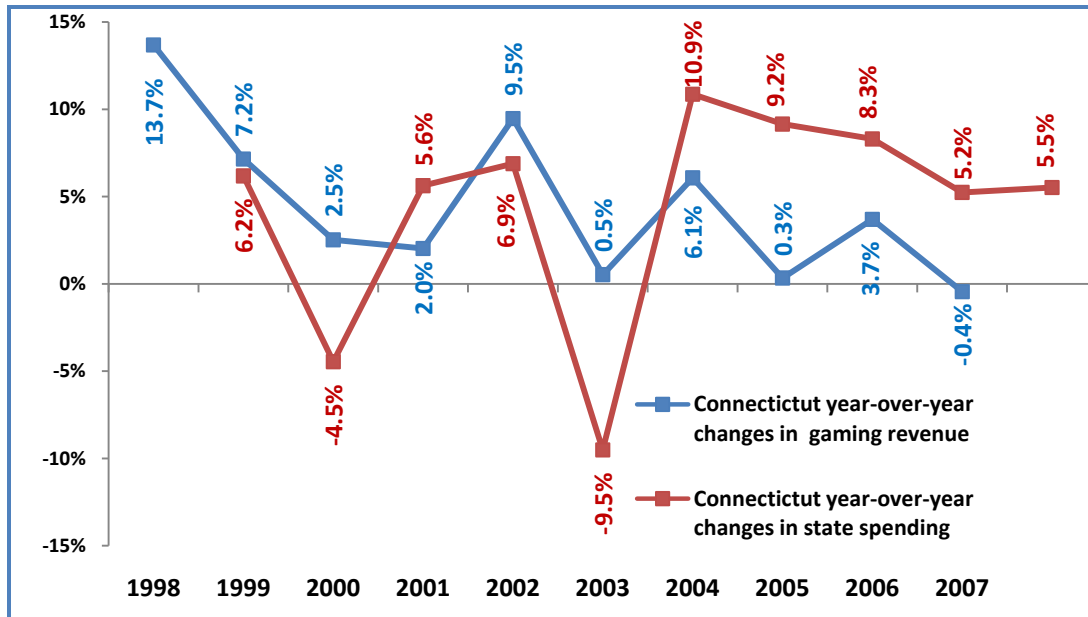
Source: Connecticut Division of Special Revenue, Office of State Comptroller

The chart shows no perceptible correlation between the two measures.

The next chart is a slight variation. We recognize that revenue changes from gaming sources might not fuel changes in state spending the same fiscal year, but might have an impact the following year, due to the lag between collecting revenues in one year and budgeting spending the following year. As a result, we shifted spending one year ahead of revenue.

¹⁰ Ibid.

Figure 10: Changes in Gaming Revenue vs. Changes in State Spending: One-Year Lag



Source: Connecticut Division of Special Revenue, Office of State Comptroller

Here, the two measures are closer to each other, indicating at least some linkage between gaming revenue and state spending. However, we recognize that numerous factors are at play in setting state budgets – ranging from federal aid to changes in consumer spending to housing values and other factors that have little to do with gaming. At best, this chart might indicate that gaming revenue is acting as somewhat of a thermostat. Adjustments in the economic health of all forms of gaming in one year would likely lead to modest adjustments in state spending the following year. That is neither surprising nor avoidable. Indeed, it would be an inevitable byproduct of using gaming as a material source of revenue for the state.

Rates on income taxes, property taxes or sales taxes can be adjusted to provide the necessary level of funding for government. With gaming, generally this relationship would not hold. The level of revenue is a function of how well the industry succeeds in generating sales.

Indian Gaming

In 1986, a special act of Congress provided federal recognition to the Mashantucket Pequot Tribal Nation. It then opened a high-stakes bingo hall in Ledyard. Two years later, Congress passed the Indian Gaming Regulatory Act (“IGRA”), which allowed federally recognized American Indian tribes to operate any legalized gaming activity already authorized by state law.

When Connecticut refused to negotiate a compact with the Mashantucket Pequots to operate a casino, the Tribe filed suit in federal court, arguing that it should be allowed to do so based on charitable organizations staging “Las Vegas nights.” The state argued that the 1972 law only authorized charity fund-raising events for one or two days, and should not be considered a

general allowance of casino gaming, noting that cash prizes were not permitted. The federal Second Circuit Court of Appeals, however, disagreed, ruling in 1990 that the existence of “Las Vegas nights” entitled the Tribe to operate a casino on its federally recognized tribal land.¹¹

Over the state’s objections, the US Secretary of the Interior imposed certain gaming procedures that had been adopted by a federal mediator known as the Mashantucket Pequot-State of Connecticut Federal Procedures law.

On February 16, 1993, Foxwoods added slot machines to its casino after a Memorandum of Understanding (“MOU”) was reached a month earlier between the state and the Tribe that resulted in a “contribution” to Connecticut of 25 percent of gross slot machine revenue.

The General Assembly has since repealed the “Las Vegas nights” law to prevent other Indian tribes from opening up casinos.

The Mashantucket Pequots agreed to amend its MOU to allow the Mohegans to also have the exclusive right to operate “video facsimiles of games of chance.” The wording was changed to “commercial casino games” in both MOUs.

The Mohegan Tribe of Connecticut won federal recognition in 1994. The Mohegan Sun opened in 1996 with state approval of the Mohegan Tribe-State of Connecticut Compact. The MOU required the Mohegans to also make a contribution of 25 percent of slot machine gross win to the state.

The table below shows the slot win at the two casinos. It represents the amount the casinos retained after paying off all wagers; it is not profit, which is determined after the casinos pay wages, goods and services, debt and other expenses.

Figure 11: Gross Slot Win, Mohegan Sun and Foxwoods

Fiscal year*	Mohegan Sun	Foxwoods	Fiscal year*	Mohegan Sun	Foxwoods
1993		\$81,526,795	2003	\$763,815,776	\$785,202,112
1994		\$375,482,357	2004	\$823,403,536	\$787,532,382
1995		\$542,896,068	2005	\$851,537,777	\$819,812,200
1996		\$594,811,060	2006	\$892,083,304	\$818,023,141
1997	\$227,632,554	\$583,831,731	2007	\$916,381,818	\$805,521,026
1998	\$384,031,430	\$660,271,975	2008	\$885,091,882	\$760,150,699
1999	\$463,801,176	\$694,324,415	**2009	\$415,756,760	\$358,517,625
2000	\$529,000,120	\$756,940,157	Total	\$8,399,138,123	\$10,983,731,673
2001	\$566,938,166	\$762,735,092	**Through December 2008		
2002	\$679,663,824	\$796,152,838			

*Year ending June 30

Source: Division of Special Revenue

¹¹ Mashantucket Pequot Tribe v. State of Connecticut, 913 F.2d 1024 (2nd Cir. 1990).

Charitable Gaming

Charitable gaming varies from state to state, but typical games include bingo, roulette, pull-tabs, Las Vegas nights and raffles. The profits from the venture go to the charity or group of charities, rather than to a municipality or private casino. In Connecticut, the state receives revenue from charitable gaming as well.

Connecticut was one of the early adopters of charitable gaming regulations, and – as noted – the presence of “Las Vegas nights” resulted in a federal court ruling that led to Indian gaming. The state legalized bingo in 1939. It introduced bazaars and raffles in 1955 and sealed tickets in 1987. Qualified organizations must obtain a permit from the Division of Special Revenue and receive municipal approval before they can hold a fundraising event.

Bingo is the state’s most popular form of charitable gaming, followed by raffles and bazaars and sealed tickets.¹² State regulation requires that no one associated with the administration of bingo be paid any type of salary; only volunteers can be involved.

Bingo in Connecticut, as well as nationwide, has been on the decline, largely due to casino gambling and the aging of the customer base.¹³ Indeed, our research around the nation has shown anecdotal evidence that, because bingo and casino gambling both offer a combination of gambling and a social experience, bingo attendance can be significantly impacted by the presence of nearby casinos. Bingo providers are responding with new versions of games to attract newer, younger players. Those new games include electronic and progressive bingo as well as linking bingo halls to one another to generate bigger payouts.

In 2007, per-capita charitable gaming spending was down 15.7 percent from 2000. Not all states release charitable gaming data. Of those that do, Connecticut ranked 25th out of 29 states, with charitable gaming per-capita spending at \$13.26. Overall, the US average was \$46.95.¹⁴ In 1990, prior to casino gambling in Connecticut, the state’s per-capita spending on charitable gaming was \$15.70.¹⁵

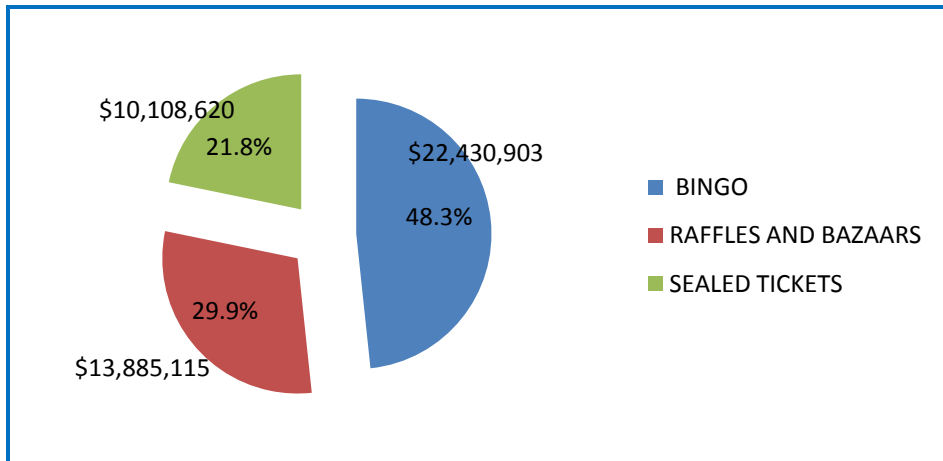
¹²Connecticut Division of Special Revenue.

¹³ Charity bingo trying 'to reinvent itself', USA TODAY, June 14, 2006.

¹⁴ National Association of Fundraising Ticket Manufacturers (“NAFTM”) 2007 Annual Report; US Census Bureau.

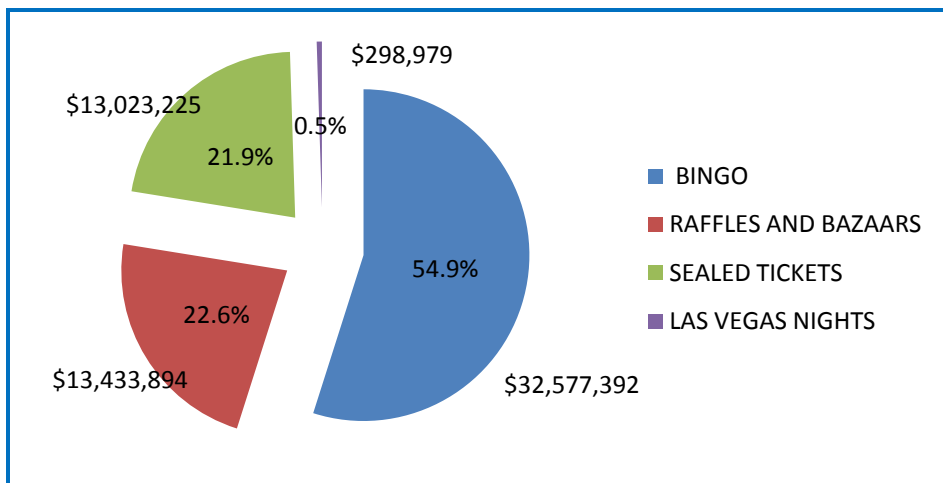
¹⁵ National Association of Fundraising Ticket Manufacturers (“NAFTM”) 2007 Annual Report; US Census Bureau.

Figure 12: 2007 Charitable Gaming Revenue by Type, as % of Total Gross Receipts



Source: Connecticut Division of Special Revenue

Figure 13: 1996 Charitable Gaming Revenue by Type, as % of Total Gross Receipts



Source: Connecticut Division of Special Revenue

Lottery

The first North American colonies used lotteries to raise money. Lotteries helped build Yale University in New Haven. Scandals plagued many lotteries, and by 1894, every state banned them. The lottery made a comeback in 1964 in New Hampshire. New York followed in 1967.

The earliest effort to implement a lottery in Connecticut was in the late 1950s; it didn't take hold until 1972. Today, 42 states, plus the District of Columbia, operate lotteries, using computer-based, online games and instant-scratch games.¹⁶

¹⁶ Connecticut Lottery 2007 Comprehensive Annual Financial Report.

Proponents of a Connecticut lottery argued that a legal lottery would take business away from illegal-numbers operations and would become a “painless” revenue source for state-education funding. Opponents raised concerns about corruption, morality and the adverse effect on low-income residents.

In 1971, Connecticut enacted Public Act No. 71-865, which authorized a state lottery, off-track betting, horse racing and the creation of the Commission on Special Revenue/Division of Special Revenue to regulate the state’s gaming activities. The agency was renamed the Division of Special Revenue (“DOSR”) in 1979. At the same time, the General Assembly also created a Gaming Policy Board to help “ensure the highest standard of legalized gambling regulation.”

The Lottery sold its first tickets on February 15, 1972. It was operated and regulated by the DOSR until 1996 when conflict concerns were raised about serving as both operator and regulator.

The state then created the Connecticut Lottery Corporation (“CLC”) in 1996. In order to maximize revenues, this quasi-public lottery corporation – among the first in the United States – was authorized to operate without the budgetary constraints and restrictions imposed on other state agencies. The CLC receives no state funds.¹⁷

In its first fiscal year of operation in 1972, the Connecticut Lottery’s weekly game (which was discontinued in 1985) generated more than \$17.2 million in total sales. Instant games were added to the mix in 1976, daily games in 1977 and the Lotto in 1984.

Cash Five was added in 1992 and Powerball in 1996. Instant and daily games accounted for 83 percent of total lottery gross sales in FY 2007. Powerball accounted for 10 percent of sales, but that figure can be much higher depending on the size of jackpots.¹⁸

Through FY 2008, the Connecticut Lottery generated cumulative sales of \$18.4 billion. And notably, most of the sales were generated after Foxwoods and Mohegan Sun opened.

Over a 20-year period, from FY 1972 to FY 1992, lottery sales totaled \$5.2 billion. In comparison, during a 15-year period FY 1993 (when Foxwoods was authorized to add video facsimile machines or slot machines) to FY 2008, sales totaled \$12.5 billion.

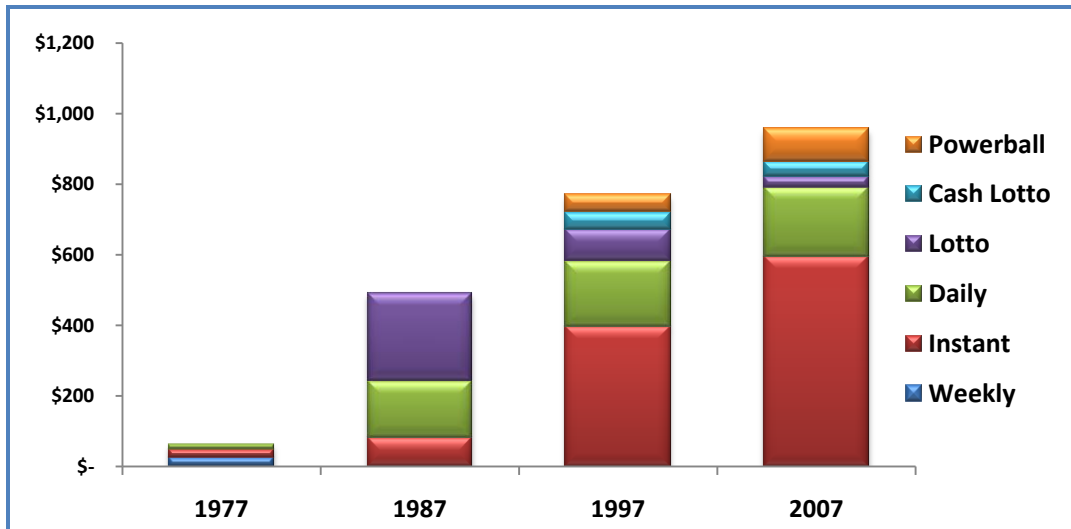
According to CLC officials, two of the most recent instant games are the \$50 Million Payout Spectacular (a \$10 ticket, with a total print run of 9 million tickets) and the \$70 Million Blockbuster (a \$10 ticket with a total print run of 9 million tickets). The former offers five \$1 million annuities as top prizes and the latter offers seven \$1 million annuities. Both games, like other instant games, have a wide variety of lesser prizes.

The shift in player preferences is reflected in the following chart, that shows the mix of games at 10-year intervals:

¹⁷ Connecticut P.A. 96-212.

¹⁸ Connecticut Division of Special Revenue.

Figure 14: Changing Preferences in Lottery Games (\$ in millions)



Source: Division of Special Revenue

The chart shows instant games – which have been part of the Connecticut Lottery since 1976 – have grown in popularity. And because instant games return a high percentage of sales as prizes, this growth has reduced the percentage of lottery sales transferred to the General Fund.

The following table shows total sales by game from the inception of the Lottery:

Figure 15: Lottery Sales by Game for Fiscal Years 1972 to 2008, in dollars

FY	Weekly	Instant	Daily	Lotto	Cash Lotto	Powerball	Total
1972	17,288,925						17,288,925
1973	34,711,849						34,711,849
1974	30,752,727						30,752,727
1975	30,894,815						30,894,815
1976	29,493,098	41,927,201					71,420,299
1977	25,824,711	23,826,954	13,082,292				62,733,957
1978	19,201,917	41,863,247	46,391,128				107,456,292
1979	12,871,166	49,725,859	58,327,191				120,924,216
1980	11,525,566	45,505,590	73,167,966				130,199,122
1981	10,103,356	56,162,297	84,695,066				150,960,719
1982	10,374,509	53,811,277	105,858,579				170,044,365
1983	14,169,658	56,039,768	118,462,919				188,672,345
1984	11,824,652	67,029,466	131,497,615	44,062,100			254,413,833
1985	7,334,605	74,473,823	144,166,658	118,481,848			344,456,934
1986		75,370,000	152,562,000	201,180,000			429,112,000
1987		80,744,000	162,070,000	246,470,000			489,284,000
1988		79,961,000	175,289,000	259,347,000			514,597,000
1989		72,326,000	186,187,000	236,011,000			494,524,000
1990		94,695,000	197,783,000	232,880,000			525,358,000
1991		120,006,000	191,625,000	219,541,000			531,172,000
1992		119,752,000	195,228,000	219,794,000	8,911,000		543,685,000
1993		110,270,096	206,512,689	202,473,626	33,289,095		552,545,506
1994		163,424,175	204,435,016	153,699,391	30,688,193		552,246,775
1995		260,133,000	195,027,213	170,456,205	45,198,122		670,814,540
1996		296,131,624	181,286,172	139,506,779	48,453,225	41,529,699	706,907,499
1997		395,985,000	187,365,000	90,125,000	47,301,000	49,013,000	769,789,000
1998		429,274,577	175,273,722	81,294,438	58,485,186	61,284,746	805,612,669
1999		474,031,672	172,719,693	51,307,443	48,359,709	124,498,286	870,916,803
2000		516,624,983	172,549,679	47,331,909	44,521,398	56,481,537	837,509,506
2001		528,334,805	178,014,553	37,219,618	41,820,131	54,322,440	839,711,547
2002		543,242,449	179,607,289	54,078,099	42,049,572	88,925,859	907,903,268
2003		530,692,944	181,810,755	36,675,347	41,154,669	74,955,932	865,289,647
2004		558,013,401	178,304,309	34,200,305	41,280,824	95,857,056	907,655,895
2005		592,265,541	184,713,023	35,614,156	40,780,953	79,560,269	932,933,942
2006		587,558,948	187,222,868	32,260,541	41,351,503	121,932,928	970,326,788
2007		594,933,065	197,584,181	30,386,267	41,371,201	92,751,720	957,026,434
2008		618,969,398	207,618,854	32,201,001	41,158,693	98,199,946	998,147,892
Total	266,371,554	8,353,105,160	5,026,438,430	3,006,597,073	696,174,474	1,039,313,418	18,388,000,109

Source: Division of Special Revenue: Connecticut Lottery Corporation

The FY 1997 thru FY 2008 figures are from the Connecticut Lottery Corporation's audited financial statements

Off-Track Betting/Pari-Mutuel Facilities

The state introduced pari-mutuel wagering on dog racing, jai alai and off-track betting (“OTB”) in 1976. The first greyhound racing facility, Plainfield Greyhound Park, opened that

year, as did jai alai frontons in Bridgeport and Hartford. Milford Jai Alai opened in 1977. In 1995, Bridgeport Jai Alai closed and was converted to the Shoreline Star Greyhound Park. That same year, the Hartford Jai Alai was converted into an OTB facility.

The state's last jai alai fronton, in Milford, closed in 2001, and the two greyhound parks ceased live dog racing in 2005. Live horse racing is still authorized by statute, but no horse track has ever operated. The only pari-mutuel betting opportunities are at OTB facilities, which accept telephone betting. Both Foxwoods and Mohegan Sun offer off-track betting through their racebooks, but they operate independently. Casino racebooks don't report revenues. Telephone betting is not permitted at the two casino racebooks.

The state operated OTB from its inception in 1976 until 1993. The state then sold the operation to AEI, which became Scientific Games Corporation following a merger in 2000.¹⁹ Wagers can be placed at facilities in East Haven, Norwalk, Waterbury, Torrington, Bristol, New Britain, Hartford, Windsor Locks, New Haven, Milford and Bridgeport. The different venues collectively accommodate up to 9,000 patrons at any given time.

One-in-five respondents in the Spectrum telephone survey reported that they place their OTB bets at one of the two casino racebooks, an indication that the casino racebooks are taking business away from the OTB facilities.

Note the OTB system was sold for \$20 million to a private operator in 1993, resulting in a significant decline in General Fund transfers as, prior to that date, the state retained all OTB profits.

¹⁹ Hoover's Profile, "*Scientific Games Corporation*," <http://www.answers.com/topic/scientific-games-corporation>, (accessed on May 15, 2009).

Figure 16: Pari-Mutuel Gross Sales, by Type

Fiscal	Off-Track	Dog Racing**	Jai Alai*	Total
1976	\$11,298,654	\$64,877,042	\$20,646,599	\$96,822,295
1977	\$93,966,692	\$125,284,151	\$248,135,071	\$467,385,914
1978	\$108,028,104	\$97,983,478	\$229,022,431	\$435,034,013
1979	\$118,028,104	\$100,421,789	\$236,838,885	\$455,288,778
1980	\$166,294,918	\$90,672,151	\$219,769,169	\$476,736,238
1981	\$180,179,203	\$95,088,262	\$209,611,209	\$484,878,674
1982	\$190,403,568	\$104,240,017	\$225,907,725	\$520,551,310
1983	\$183,548,291	\$114,441,553	\$228,344,014	\$526,333,858
1984	\$187,064,643	\$117,337,700	\$231,119,273	\$535,521,616
1985	\$185,589,642	\$118,501,313	\$239,807,091	\$543,898,046
1986	\$188,782,000	\$118,981,000	\$241,574,000	\$549,337,000
1987	\$193,260,000	\$117,036,000	\$255,112,000	\$565,408,000
1988	\$200,340,000	\$118,902,000	\$213,476,000	\$532,718,000
1989	\$202,121,000	\$114,900,000	\$193,804,000	\$510,825,000
1990	\$193,428,000	\$96,456,310	\$212,788,255	\$502,672,565
1991	\$199,924,000	\$83,084,933	\$194,295,951	\$477,304,884
1992	\$175,313,888	\$72,991,808	\$186,368,360	\$434,674,056
1993	\$163,831,210	\$51,014,000	\$142,745,000	\$357,590,210
1994	\$178,247,181	\$45,380,000	\$119,189,000	\$342,816,181
1995	\$224,862,846	\$41,331,668	\$102,544,405	\$368,738,919
1996	\$244,007,115	\$45,210,086	\$63,743,074	\$352,960,275
1997	\$254,946,925	\$32,218,000	\$49,585,000	\$336,749,925
1998	\$262,213,261	\$28,735,674	\$37,876,737	\$328,825,672
1999	\$265,481,548	\$26,169,755	\$32,269,685	\$323,920,988
2000	\$272,013,961	\$22,092,075	\$30,723,616	\$324,829,652
2001	\$274,510,529	\$18,686,686	\$27,926,005	\$321,123,220
2002	\$276,349,625	\$18,362,630	\$13,054,755	\$307,767,010
2003	\$279,614,045	\$15,930,314	\$0	\$295,544,359
2004	\$279,250,542	\$13,612,619	\$0	\$292,863,161
2005	\$255,047,341	\$9,257,599	\$0	\$264,304,940
2006	\$244,444,205	\$2,287,501	\$0	\$246,731,706
2007	\$233,492,621	\$0	\$0	\$233,492,621
2008***	\$224,797,249	0	0	\$224,797,249

Source: Division of Special Revenue

*Connecticut Jai Alai, Inc. (Milford Jai Alai) ceased operations December 12, 2001; Bridgeport Jai Alai, April 30, 1995 and Hartford Jai Alai on September 5, 1995.

**Plainfield Greyhound Park ceased live racing on May 14, 2005; Shoreline Star Greyhound Park, operated by Bridgeport Jai Alai, Inc., ceased live racing on October 10, 2005.

***Through November 2008.

Section II: Extent of Problem Gambling

Spectrum Gaming Group was contracted to evaluate the incidence of chronic gambling as defined by Connecticut C.G.S. Sec. 17a-713:

“A person who is chronically and progressively preoccupied with gambling and the urge to gamble and with gambling behavior that compromises, disrupts or damages personal, family or vocational pursuits.”

The definition is similar to that of the National Council on Problem Gambling which described problem gambling as behavior that causes disruptions in any major area of life. It went on to say problem gambling included “pathological” or “compulsive” gambling, a progressive addiction.

Although the overwhelming majority of Connecticut residents find gambling harmless entertainment and an enjoyable recreational activity, some regular gamblers develop significant problems that can also harm people close to them.²⁰ The association between availability and problem gambling has been well-documented in scientific literature.²¹

Ypartnership, a Florida-based leading consumer insights and research firm, conducted a consumer survey to gauge the effects of legalized gambling on Connecticut citizens for Spectrum Gaming Group. Specifically, Ypartnership identified demographic characteristics of gamblers along with participation levels and the extent of problem gambling. .

The telephone survey involved random digit (RDD) technology to generate the telephone numbers for the interviews. The survey involved 3,099 participants 18 years or older. Surveyors questioned 2,298 people through a random dial digit (RDD) telephone survey, and an additional 801 people through a separate online-panel survey.

The majority of the results provided in this report are generated from the phone survey to allow direct comparison to the 1997 WEFA report.

Surveyors asked participants a series of questions related to two problem gambling screens. The answers were analyzed, and researchers then classified the respondents accordingly.

A total of 15,360 telephone numbers were dialed over the course of the study. Of the total, 4,588 of the number were eligible households, 4,439 were continuously unavailable (1,929 exceeded the maximum call attempts), and 6,282 were invalid.

The margin of sampling error for the 2,298 phone interviews is ± 2.1 percentage points at the 95 percent confidence level. This means that there is less than a one in 20 chance that the findings will deviate more than ± 2.1 percentage points from the actual population parameters.

²⁰ Abbott, M.W. & Volberg, R.A. (1999). *Gambling and Problem gambling in the Community: An International Overview and Critique*. Report Number One of the New Zealand Gaming Survey. Wellington: Department of Internal Affairs. Available at <http://www.dia.govt.nz>.

²¹ Shaffer, H.J., Hall, M.N. & Vanderbilt, J. (1997). *Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis*. Boston, MA: Harvard Medical School Division on Addictions.

The NORC DSM-IV Screen for Gambling Problems (“NODS”) was designed to more closely follow the most recent psychiatric criteria for pathological gambling. It was designed specifically for administration in large population surveys. The NODS is composed of 17 lifetime criteria and 17 corresponding past-year criteria.

The NODS screen is based on more recent psychiatric criteria for pathological gambling, whereas the SOGS screen provides direct comparability to the 1997 Connecticut study. For each gambling screen, assessments were calculated based on lifetime and past-year gambling behavior. The NODS screen is also distinct in that it includes a category for at-risk gamblers, whereas the SOGS screen does not. At-risk gamblers are defined as gamblers who during their lifetime can be classified as at risk of becoming problem gamblers. These are people who scored at a level on the gambling screen that was below that of a problem gambler but fell into a category described as at risk of becoming a problem gambler. The prevalence rates were based on Connecticut’s adult population of 2,666,750.

The analysis of telephone survey responses cannot be considered diagnoses. During the clinical interview, the clinician determines whether the patient meets five or more of the following criteria²²:

1. **Preoccupation:** Preoccupied with reliving past gambling experiences. Planning the next venture, or thinking of ways to get money with which to gamble.
2. **Tolerance:** Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
3. **Withdrawal:** Restless or irritable when attempting to stop gambling.
4. **Loss of Control:** Has repeatedly been unsuccessful in efforts to stop gambling.
5. **Escape:** Gambles as a way of escaping from problems or relieving feelings of helplessness, guilt, anxiety or depression.
6. **Chasing:** After losing money gambling, often returns another day to get even.
7. **Lying:** Lies to family members, therapist or others to conceal the extent of gambling.
8. **Illegal Acts:** Committed illegal acts, such as forgery, fraud, theft or embezzlement, to finance gambling.
9. **Risked Relationship:** Has jeopardized or lost a significant relationship, job or career opportunity because of gambling.
10. **Bailout:** Relies on others to provide money to relieve a desperate financial situation caused by gambling.

South Oaks Gambling Screen (SOGS)

SOGS is the most common instrument for assessing the prevalence of pathological gambling. It was the instrument used in the 1997 WEFA study. The screen is a 20-item questionnaire that was developed with 1,616 people, about half of which had diagnoses of substance abuse and pathological gambling. Its authors say the SOGS screen “offers a convenient means to screen clinical populations of alcoholics and drug abusers, as well as

²² American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*.

general populations, for pathological gambling.” In recent years, the use of SOGS has been criticized for over-estimating false positives.²³

Henry Lesieur, a psychologist at the Rhode Island Hospital’s gambling treatment program, developed SOGS at South Oaks Hospital in New York City. The original version was developed in 1987. It was revised in 1993. The questions elicit yes/no answers. They are designed to assess “the degree and breadth of consequences caused by gambling losses and maladaptive compensatory behaviors, such as borrowing or gambling further to recoup losses.”²⁴

Based on answers to SOGS questions, individuals were then classified as:

- “Non-gamblers” (no gambling)
- “Non-problem gamblers” (0-2 “yes” responses)
- “Problem gamblers” (3-4 “yes” responses)
- “Probable pathological gamblers” (5+ “yes” responses)

The screening instrument in our telephone survey was based on DSM-IV, which was published in 1994. The instrument has demonstrated reliability and validity in hundreds of studies internationally during the past 20 years. DSM is the *Diagnostic and Statistical Manual of Mental Disorders*. Published by the American Psychiatric Association, it provides diagnostic criteria for mental disorders. DSM-IV is the most current version of the manual. It covers “the gamut of human behavior from mood to personality to addiction.”²⁵

The performance of the SOGS lifetime screen is generally very good at detecting pathological gambling among those who experience the disorder. It also captures individuals who do not have the disorder, known as false positives. In comparison, the past-year SOGS identifies fewer false positives than the lifetime measure but produces more false negatives, those who have the disorder but are not identified by the screen. Hence, it provides a weaker screen for identifying pathological gamblers. However, it is a better method for detecting change in the prevalence of problem gambling over time.

Although the SOGS has been widely used in hundreds of studies around the world for almost two decades, some researchers have questioned its efficacy on the grounds that it was developed in a clinical setting yet is used in large general population studies. In addition, some researchers are concerned that the test contained unproven assumptions about problem gambling.²⁶

Indeed, the previous WEFA study also noted the issue of false positives and the fact that the screen was developed in a clinical setting. It concluded the criticisms should be taken into account when reviewing SOGS data. In addition, the study noted that the SOGS screen may not identify abnormal gambling tendencies that are less severe than those identified in a pathological gambler.

²³ Lesieur, H.R. & Blume, S.B. (1987). The South Oaks Gambling Screen (SOGS): A new instrument for the identification of Pathological gamblers. *American Journal of Psychiatry*, 144, 1184-1188.

²⁴ Ibid.

²⁵ Ashley Pettus, “Psychiatry by Prescription,” *Harvard Magazine*, July-August 2006, p. 40.

²⁶ Volberg, R.A. (2001). *Changes in gambling and Problem gambling in Oregon, 1997 to 2000*. Salem, OR: Oregon Gambling Addiction Treatment Foundation.

The following chart shows the past-year SOGS prevalence rates. Prevalence is the percentage of the population classified as problem or pathological gamblers.

The margin of sampling error for the 2,298 phone interviews is ± 2.1 percentage points at the 95 percent confidence level. This means that there is less than a one-in-20 chance that the findings will deviate more than ± 2.1 percentage points from the actual population parameters.

Figure 17: Current SOGS Prevalence Rates

(Spectrum telephone survey of 2,298 participants)

Number of Criteria	Lifetime	Past-Year
Non-Gamblers	9.1	9.1
Non-Problem Gamblers (0-2)	87.1	89.1
0	71.9	79.4
1	10.6	8.0
2	4.6	1.7
Problem (3-4)	2.2	0.9
3	1.3	0.6
4	0.9	0.3
Probable Pathological (5+)	1.5	0.7
5	0.4	0.4
6	0.4	0.1
7	0.2	0.1
8	0.1	0.0
9	0.0	0.0
10+	0.4	0.1
Problem and Probable Pathological	3.7	1.6

Below, we convert the percent of problem and probable pathological gamblers into numbers of Connecticut residents 18 years or older who fall into the different categories based on the SOGS screen.²⁷

Probable pathological gamblers:

- 0.7 percent, past year 18,667
- 1.5 percent, lifetime 40,001

Problem gamblers:

- 0.9 percent, past-year 24,001
- 2.2 percent, lifetime 58,669

Combined rates for problem and probable pathological gamblers

- 1.6 percent, past year 42,668
- 3.7 percent, lifetime 98,670

These estimates are based on confidence intervals produced by sample error. Sample error is dependent on the percentage of individual results and sample size. As the results move closer to 0 percent and 100 percent, the confidence interval becomes smaller. For example, the

²⁷ 2007 US Census American Community survey population estimates (Connecticut adult population of 2,666,571) (accessed on May 19, 2009).

confidence interval for past-year SOGS probable pathological gamblers is 0.4 percent to 1.0 percent that is, the percentage result (0.7 percent) plus and minus the sample error of 0.3 percent; and for past year SOGS problem gamblers, the confidence interval is 0.5 percent to 1.3 percent, that is the percentage result (0.9 percent) plus and minus the sample error of 0.4 percent.

While the sample size for both probable pathological and problem gamblers is identical, probable pathological gamblers have a smaller confidence interval than problem gamblers because the percentage of probable pathological gamblers (0.7 percent) is closer to the extreme of 0 percent than problem gamblers (0.9 percent).

Sample error is also dependent on sample size. The larger the sample size, the smaller the confidence intervals. When looking at sub-groups of a sample, the confidence interval increases and the results are considered less reliable. Thus, caution should be used when viewing results presented by subgroup.

The estimated ranges for the number of problem and probable pathological gamblers using the SOGS screen are as follows:

- Past Year Problem (0.9%) +/- (0.4%) 13,333 to 34,668
- Past Year Pathological (0.7%) +/- (0.3%) 10,667 to 26,666
- Lifetime Problem (2.2%) +/- (1.2%) 26,666 to 90,670
- Lifetime Probable Pathological (1.5%) +/- (.7%) 21,334 to 58,669

Following is a table of our telephone survey prevalence rates for problem/pathological gamblers broken down by county. Interestingly, the rates are much higher in the more urbanized counties of Hartford and New Haven.

Figure 18: SOGS Connecticut Prevalence Rates by County*

County	Rate/100,000 ²⁸
Hartford County	3.76
New Haven County	3.19
Middlesex County	3.04
Tolland County	2.70
*New London County	2.24
Windham County	1.70
Fairfield County	1.67
Litchfield County	1.06

*Foxwoods and Mohegan Sun are in New London County

²⁸ Rates were calculated based on current population estimates gathered from the Connecticut State Data Center.

Figure 19: SOGS Connecticut Gambling Prevalence Rates*

	Group size	Past-Year Prevalence (3+) %	Confidence Interval
All Gamblers	2,088	2.0	±0.6
Past-Year Gamblers	1,624	2.5	±0.8
Monthly Gamblers	838	3.9	±1.4
Weekly Gamblers	227	7.6	±3.8
Among Past-Year Players			
Casino	818	3.9	±1.4
Lottery	1,234	3.1	±1.0
Private**	313	6.3	±2.7
Sports Pool***	553	4.6	±1.8

*Prevalence is defined as respondents who were classified as either problem or probable pathological gamblers

**Games played most often in one's house that could include poker, dice, and dominoes. It could also include wagers placed on golf and or bowling between participants.

***Refers to a pool in which participants choose a sporting event outcome. An example would be pools in which participants pick winners in the NCAA championship basketball tournament.

Figure 20: SOGS Results for Internet vs. Non-Internet

Number of Items	Have Internet (1,921)	Do Not Have Internet (374)
Non-Gamblers	6.9	18.4
Non-Problem Gamblers (0-2)	89.1	79.1
0	73.0	67.6
1	11.5	6.8
2	4.6	4.7
Problem (3-4)	2.4	0.9
3	1.5	0.2
4	0.9	0.7
Probable Pathological (5+)	1.7	1.5
5	0.5	0.0
6	0.5	0.2
7	0.2	0.2
8	0.1	0.2
9	0.0	0.2
10+	0.4	0.7
Problem/Probable Pathological	4.1	2.4

Results from our Internet panel survey, discussed in a separate section of this report, generated much higher prevalence rates than did the telephone survey. The table above shows that telephone survey participants with Internet access have higher prevalence and participation rates in gambling than those telephone survey participants without such access.

The 1997 WEFA study generated, for the most part, higher SOGS prevalence rates than the Spectrum study. This was especially so for those that screened positive for problem gambling

within the past year. The figure in 1997 was 2.2 percent; it was 0.9 percent in the Spectrum study.

The WEFA study involved 992 adult residents, less than half the participants in the Spectrum survey. WEFA acknowledged that “a larger sample should be considered” to measure future prevalence.²⁹

Figure 21: SOGS Past-Year Problem Gambling Rates for Connecticut and Other States

	2008 Connecticut Telephone Survey (2,298)	1997 Connecticut Study (993)	2006 Arizona Study (2,750)
Problem Gamblers	0.9%	2.2%	1.6%
Probable Pathological Gamblers	0.7%	0.6%	7.0%
Total Probable Pathological Gamblers and Problem Gamblers	1.6%	2.8%	8.6%

Figure 22: SOGS Lifetime Problem Gambling Rates for Connecticut and Other States

	2008 Connecticut Telephone Survey (2,298)	1997 Connecticut Study (993)	2006 Arizona Study (2,750)
Problem Gamblers	2.2%	4.2%	3.6%
Probable Pathological Gamblers	1.5%	1.2%	1.9%
Total Probable Pathological Gamblers and Problem Gamblers	3.7%	5.4%	5.5%

NORC DSM-IV Screen for Gambling Problems (NODS)

In concert with the 1997 WEFA study, the primary prevalence screen used to estimate the number of problem/probable pathological gamblers was the SOGS screen. But consideration should also be given to results derived from the NODS screens. There are inherent strengths and weaknesses in each screen.

NODS was developed in 1998 when the National Gambling Impact Study Commission contracted with the National Opinion Research Center at the University of Chicago (“NORC”) and its partner organizations to undertake a national survey of problem gambling in the United States. The screening instrument was designed to more closely follow the most recent psychiatric

²⁹ WEFA GROUP June 1997, “A Study Concerning the Effects of Legalized Gambling on the Citizens of the State of Connecticut,” Page 130.

criteria for pathological gambling and was designed specifically for administration in large population surveys.³⁰

The NODS is composed of 17 lifetime criteria and 17 corresponding past-year criteria. Past-year criteria are only administered if the corresponding lifetime item is endorsed. An important difference between the NODS and SOGS is that NODS places time and other quantitative limits on several of the criteria, which is in keeping with the approach taken in alcohol and substance abuse research.

Because it is based on the most recent psychiatric criteria for diagnosis of pathological gambling, the NODS has been used in a growing number of state-level prevalence surveys in the United States.^{31,32,33}

The NODS screen includes a classification for at-risk gamblers. Thus, this segment of gamblers was identified using the lifetime NODS and is presented in this section. Since it is difficult to fully grasp established criteria with just one question, NODS uses several questions to represent one concept. If the respondent answers yes to any of the questions, they receive a point. The NODS Screen is based on a maximum score of 10, using 17 criteria compared to 20 by SOGS. Thus, the maximum score on NODS is 10 compared to the maximum score of 20 in SOGS. In the NODS scale, at-risk gamblers fall between non-problem and problem gamblers, scoring 1 to 2 points.

Approximately 7 percent of the participants in the telephone survey were categorized as at-risk gamblers, and 80 percent as non-problem gamblers. When examining the possible societal impacts of problem gambling, at-risk gamblers are of concern because they represent a much larger proportion of Connecticut's population than pathological gamblers. Over time, the possibility exists that they could become problem gamblers.

³⁰ Gerstein, D.R., Volberg, R.A., Toce, M.T., Harwood, H., Palmer, A., Johnson, R., Larison, C., Chuchro, L., Buie, T., Engelman, L. & Hill, M.A. (1999). *Gambling impact and behavior study: Report to the National Gambling Impact Study Commission*. Chicago, IL: National Opinion Research Center at the University of Chicago, <http://cloud9.norc.uchicago.edu/dlib/ngis.htm>.

³¹ Shapira, N.A., Ferguson, M.A., Frost-Pineda, K. & Gold, M.S. (2002). *Gambling and Problem gambling prevalence among adults in Florida*. Report to the Florida Council on Compulsive Gambling. Gainesville, FL: University of Florida.

³² Volberg, R.A. (2001). *Changes in gambling and Problem gambling in Oregon, 1997 to 2000*. Salem, OR: Oregon Gambling Addiction Treatment Foundation.

³³ Volberg, R.A. & Bernhard, B.J. (2006). *The 2006 survey of gambling and Problem gambling in New Mexico*. Albuquerque, NM: Responsible Gaming Association of New Mexico.

Figure 23: 2008 Spectrum NODS Telephone Survey Results

	Lifetime	Past-Year
Non-Gamblers	9.1	9.1
Non-Problem Gamblers (0)	80.3	85.4
0	80.3	85.4
At-Risk Gamblers (1-2)	7.2	4.1
1	5.8	3.3
2	1.4	0.8
Problem (3-4)	2.1	0.8
3	1.6	0.6
4	0.5	0.2
Probable Pathological (5+)	1.2	0.6
5	0.5	0.2
6	0.1	0.1
7	0.3	0.2
8	0.0	0.0
9	0.0	0.0
10	0.3	0.1
Problem and Probable Pathological	3.3	1.4

The percentage of past-year probable pathological gamblers in Connecticut is 0.6 percent; lifetime, 1.2 percent. The problem-gambler rates are understandably higher: 0.8 percent for past-year; 2.1 percent for lifetime.

The combined rates for problem gamblers and probable pathological gamblers: 1.4 percent for the past year and 3.3 percent for lifetime (slightly lower than the SOGS rates of 1.5 percent and 3.7 percent, respectively).

For at-risk gamblers, a category that does not exist on the SOGS screen, the past-year rate of 4.1 percent translates into 109,336 Connecticut adult residents. Lifetime, the figure is 192,006 for a rate of 7.2 percent.

Prevalence estimates using the NODS Screen are provided below with margin-of-error rates factored in:

- Past Year Problem (0.8%) +/- (0.4%) 10,667 to 32,001
- Past Year Pathological (0.6%) +/- (0.3%) 8,000 to 24,001
- Lifetime Problem (2.1%) +/- (1.2%) 24,001 to 88,003
- Lifetime Pathological (1.2%) +/- (0.6%) 16,001 to 48,002

To further focus on at-risk gamblers, we compared their participation in gambling activities on a monthly basis with non-problem and problem gamblers.

Figure 24: Monthly Gambling by Category

	Non-Problem Gamblers (2054) %	At-Risk Gamblers (165) %	Problem Gamblers (75) %
Lottery	27.5	45.1	56.1
Casino	5.3	20.4	33.3
Sports pools*	1.8	12.0	12.3
Private games**	3.7	9.2	22.8
Sports betting	1.3	8.5	21.1
Internet	0.4	4.2	12.3
Bingo	1.3	0.7	7.0

*Refers to a pool in which participants choose a sporting event outcome. Such activity may or may not be illegal. An example would be pools in which participants pick winners in the NCAA championship basketball tournament.

**Games played most often in one's house that could include poker, dice, and dominoes. It could also include wagers placed on golf and or bowling between participants.

Figure 25: NODS Past-Year Rates Compared With Other States

	2008 Connecticut Telephone Survey (2,298)	2006 California (7,121)	2006 New Mexico (2,850)	2003 Arizona (2,750)
At-Risk Gamblers	4.1%	4.7%	3.6%	5.3%
Problem Gamblers	0.8%	0.9%	0.7%	0.7%
Probable Pathological Gamblers	0.6%	0.4%	0.6%	0.3%
Total Probable Pathological Gamblers and Problem Gamblers	1.4%	1.3%	1.3%	1.0%

Figure 26: NODS Lifetime Rates Compared With Other States

	2008 Connecticut Telephone Survey (2,298)	2006 California (7,121)	2006 New Mexico (2,850)	2003 Arizona (2,750)
At-Risk Gamblers	7.2%	1.0%	0.6%	11.0%
Problem Gamblers	2.1%	2.2%	1.1%	1.6%
Probable Pathological Gamblers	1.2%	1.5%	1.1%	5.0%
Total Probable Pathological Gamblers and Problem Gamblers	3.3%	3.7%	2.2%	6.6%

*1997 Connecticut study not available

The term “pathological gambling” was first included in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (“DSM-III”) of the American Psychiatric Association.³⁴ It was described as an impulse-control disorder, or compulsion characterized by an inability to resist overwhelming and irrational drives. Each subsequent revision of the manual has seen changes in the diagnostic criteria for the disorder. The most recent changes incorporated empirical research that linked pathological gambling to other addictive disorders, such as alcohol and drug dependence.³⁵

Impulse-control disorders are defined primarily by loss of control and can be classified as either chronic or acute. Pathological gambling is considered a chronic impulse-control disorder because it can recur over a lifetime, even after counseling and other intervention strategies.

The criteria used to define pathological gambling derive from three broad conceptual themes often associated with addictions to substances such as drugs and alcohol, namely compulsion or craving; loss of control; and continuing the behavior despite adverse consequences. More recent studies demonstrate that biological and physiological mechanisms that help produce excitement, euphoria and well-being in gamblers are similar to those of other addicts.^{36,37} Like other addictions, abstinence symptoms have been observed,³⁸ and one study concluded that the craving experienced by pathological gamblers in the absence of a game could be even more severe than that of alcoholics.³⁹

All clinical disorders can be classified as either chronic or acute in nature. An acute disorder can be cured and will leave no further susceptibility, whereas lifetime susceptibility marks a chronic disorder.

One study, Shaffer et al.,⁴⁰ systematically reviewed past-year prevalence rates for pathological gambling from national studies conducted between 1975 and 1996 and found that the average prevalence rate before 1993 was 0.8 percent, and after was 1.3 percent. It attributed this increase to the increase in gambling venues. Another study⁴¹ found that the location of a casino within 50 miles of a residence (versus 51 to 250 miles) was associated with an

³⁴ American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*. Washington, DC: Author.

³⁵ American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: Author.

³⁶ Meyer G, Hauffa BP, Schedlowski M, Pawlak C, Stadler MA, Exton MS. Casino gambling increases heart rate and salivary cortisol in regular gamblers. *Biol Psychiatry*. 2000;48(9):948-53.

³⁷ Griffiths M. Tolerance in gambling: an objective measure using the psychophysiological analysis of male fruit machine gamblers. *Addict Behav*. 1993 May-Jun;18(3):365-72.

³⁸ Wray I, Dickerson MG. Cessation of high frequency gambling and “withdrawal” symptoms. *Br J Addict*. 1981;76(4):401-5.

³⁹ Tavares H, Zilberman ML, Hodgins DC, el-Guebaly N. Comparison of craving between Pathological gamblers and alcoholics. *Alcohol Clin Exp Res*. 2005;29(8):1427-31.

⁴⁰ Shaffer, H.J., Hall, M.N. & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health*, 89 (9), 1369-1376.

⁴¹ Gerstein, D.R., Volberg, R.A., Toce, M.T., Harwood, H., Palmer, A., Johnson, R., Larison, C., Chuchro, L., Buie, T., Engelman, L. & Hill, M.A. (1999). *Gambling impact and behavior study: Report to the National Gambling Impact Study Commission*. Chicago, IL: National Opinion Research Center at the University of Chicago, <http://cloud9.norc.uchicago.edu/dlib/ngis.htm>.

approximate doubling of the pathological gambling rate. Yet another study, Welte et al.,⁴² concluded living within 10 miles of a casino is associated with a 90 percent increase in the odds of being a problem or pathological gambler.

Shaffer, LaBrie and LaPlante⁴³ examined county-level prevalence estimates in relation to casino availability from a statewide survey in Nevada and found that the four counties with greatest access to casinos had the highest problem-gambling rates and the four with least availability had the lowest rates.

Our research found that the more urban counties of New Haven and Hartford had higher problem gambling and participation rates than New London County, where the two Indian casinos are located. Connecticut, however, is a small state and the two Indian casinos are easily accessible from any point so caution should be exercised in giving that point too much weight.

Gambling problems vary in duration and severity. A substantial proportion of these problems occur in persons who do not meet the criteria for the recognized psychiatric disorder of pathological gambling but who engage in risky gambling.

Various studies indicate that certain forms of gaming have a particularly strong association with problem gambling, most notably those that are continuous in nature and involve an element of skill or perceived skill such as card games or electronic gaming machines.

These studies, conducted both in the United States and abroad, have documented that problem gamblers are more likely to prefer and frequently play these types of games. While prevalence estimates for problem and pathological gamblers in general populations range from 1.7 percent to 5 percent, rates among players of electronic gaming machines and sports betting are as high as 25 percent,^{44,45,46} even among populations that had previously low levels of gambling participation.

Card games do involve an element of skill whereas electronic gaming machines involve “perceived skill.” Electronic gaming machines are the modern version of “one-armed bandits,” mechanical slot machines that have now evolved into sophisticated computer-operated multi-game terminals.⁴⁷ There is the illusion of control in these games, whereby players believe that

⁴² Welte, J.W., Barnes, G.M., Wiczorek, W.F., Tidwell, M-C. & Parker, J.C. (2004). Risk factors for pathological gambling. *Addictive Behaviors*, 29, 323-335.

⁴³ Shaffer, H.J., LaBrie, R.A. & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, 18 (1), 40-48.

⁴⁴ Abbott, M.W. & Volberg, R.A. (1999). *Gambling and Problem gambling in the Community: An International Overview and Critique*. Report Number One of the New Zealand Gaming Survey. Wellington: Department of Internal Affairs, <http://www.dia.govt.nz>.

⁴⁵ Gerstein, D.R., Volberg, R.A., Toce, M.T., Harwood, H., Palmer, A., Johnson, R., Larison, C., Chuchro, L., Buie, T., Engelman, L. & Hill, M.A. (1999). *Gambling impact and behavior study: Report to the National Gambling Impact Study Commission*. Chicago, IL: National Opinion Research Center at the University of Chicago, <http://cloud9.norc.uchicago.edu/dlib/ngis.htm>.

⁴⁶ Schrans, T., Schellinck, T. & Walsh, G. (2000). *Technical report: 2000 regular VL players followup: A comparative analysis of Problem development and resolution*. Focal Research Consultants Ltd.

⁴⁷ Dowling, N., D. Smith, Thomas, T. (2005) “Electronic gaming machines: are they the ‘crack-cocaine’ of gambling? *Addiction*” 100, 33-45.