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Analysis and Recommendations for the Massachusetts Lottery MSLC RFR Lot #526

Prepared by: Eugene Martin Christiansen, Chief Executive Officer
Prepared for: The Massachusetts Lottery
Wednesday, January 18, 2003

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Joseph C. Sullivan, Executive Director
Massachusetts State Lottery Commission
60 Columbian Street
Braintree, MA 02184

Re: MSLC RFR #526

Mr. Sullivan:

The consulting team of Christiansen Capital Advisors, LLC (CCA) is pleased to submit a report entitled "*Analysis and Recommendations for the Massachusetts Lottery*" addressing the requested items laid out in the response to MSLC RFR #526.

We appreciate the opportunity to be of assistance.

Sincerely,

Sebastian Sinclair
President

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Executive Summary

The following summary presents in abbreviated form the findings and recommendations contained in this report.

I. The Current State of the Massachusetts Lottery

Total Massachusetts Lottery sales in fiscal 2004 were $4.4 billion. Instant games accounted for $3.0 billion, or 68.2% of total sales. Keno accounted for $775.5 million or 17.8%. Instant ticket games and keno thus accounted for $3.75 billion or 86% of the Massachusetts Lottery's total FY 2004 sales. The numbers game accounted for $362.5 million or 8.3%. Mega Millions accounted for $96 million or 2.2%. Megabucks accounted for $48 million or 1.1%. Mass Cash accounted for $46.2 million or 1%. Mass Millions accounted for $60 million or 1.4%. Lotto family games (Megabucks, Mass Millions, Mega Millions, and Mass Cash) accounted for $250 million or 5.7%. Pull tabs accounted for $2.2 million or 0.1%.

The Massachusetts Lottery's portfolio of games consists of five long-established products (instant tickets, numbers game, and three lotto games), one product which appears to be stale and in decline (pull tabs), and one non-ticket game, keno, whose explosive initial growth is easing into maturity. A straight-line trend projection indicates that despite the fact that five of the games in the Massachusetts Lottery's current product portfolio had declining sales, the combined strength of instant ticket games and keno will likely increase total sales at the rate of $969,938 per month going forward at least in the near term, which would translate into an increase in sales of $11.6 million per year. This is, however, only a .04% annual increase, and moreover assumes no increase in competition (from machine gaming or any other source), no change in marketing (advertising budget), and no change in economic conditions from the *status quo*.

Our review of the Massachusetts Lottery in relation to other State lotteries shows that the Massachusetts Lottery is already optimized in many respects. Compared to other State lotteries it is tremendously successful. In terms of market penetration, the Massachusetts Lottery is two to three times as effective as the majority of U.S. lotteries. By many measures, particularly the instant ticket games that are the Lottery's most important product category, the Massachusetts Lottery is, by far, the most successful lottery in the United States.

In terms of revenue, agent expenses totaled $248.1 million, about 5.7 % of sales. Administrative expenses were 1.7% of sales. Net revenue after agent expenses and administrative expenses, which directly benefits the Commonwealth's 351 cities and towns, totaled $912 million. The Lottery is by far the largest contributor of government revenues of the legal gaming activities permitted in the Commonwealth. By all the measures we employed the Massachusetts Lottery is very efficient. Overall, the Massachusetts Lottery is the most efficient lottery in the United States in terms of generating government revenue.

Recent trends in Massachusetts Lottery game sales indicate that the Massachusetts Lottery's products are mature. Demand for the games the Lottery currently offers has been satisfied. Changes and improvements to these products could be made and these measures, coupled with the Lottery's effective management, could result in sales and revenue increases. Historically, however, such improvements will be difficult to maintain and sales increases in existing products

are likely to be minor. Sustained double-digit sales gains in the games the Lottery currently offers, or in similar products should they be introduced, are unlikely, and the Lottery and the Commonwealth of Massachusetts should not expect dramatic increases in revenues from the existing menu of games. Latent, unsatisfied demand for these and similar games, which produced double-digit sales increases in many State lotteries in the 1980s and early 1990s, is no longer present in Massachusetts, and will not be a source in increased Lottery revenues in the years ahead.

Developing new hit games is extremely difficult. It may be unrealistic for the Commonwealth to expect substantial growth in lottery revenues from introducing new games, at least in the near term. Introducing new games and refreshing the Lottery's product line are essential management functions. A daily race monitor game and video lottery terminals (VLTs) would significantly increase Massachusetts Lottery sales and revenues. The other new games the Lottery asked us to evaluate do not promise similar success. Moreover, launching these new games would cost money, and might clutter the marketplace, confusing players and perhaps diluting the Massachusetts Lottery brand identity. This should not be surprising. If new hit games were easy to find more lotteries would have them.

II. Potential New Lottery Games

A Daily Race Monitor Game

The Massachusetts Lottery asked CCA to evaluate a "daily race" monitor game. The daily race game is similar to keno and would be displayed either on installed keno monitors or on an adjacent monitor in establishments that offer keno. The daily race game is distinct from keno in that (in the version proposed) the monitor display features a simulated (animated) horse race. Unlike betting on a horse race at either fixed (bookmaking) or pari-mutuel odds, however, outcomes are determined by a random number generator; in other words, there is no element of skill involved in playing the daily race game. The intent of the proposed daily race game is to increase sales of the Massachusetts Lottery's monitor games.

Extrapolating the results of a 33-week pilot daily race monitor game program in Maryland earlier in 2005 to Massachusetts fiscal 2004 keno sales yields the following projected combined monitor game sales in Massachusetts: assuming the daily race game was offered in all 1,767 Massachusetts keno outlets, Massachusetts fiscal 2004 keno sales of $775.5 million would have been reduced by $108.6 million, or 14%. Daily race game sales would total $276.6 million. Combined monitor game sales would thus increase from $775.5 million to $943.5 million, a gain in monitor game sales of $168 million, or 21.7%. Under these assumptions, then, introducing a daily race monitor game in all 1,767 Massachusetts keno outlets would increase Massachusetts Lottery monitor game sales by 21.7%, to $943.5 million.

Introducing a daily race monitor game would, further, refresh this product category. Subject to further study of the issue, we do not think a daily race monitor game would seriously harm Massachusetts's racing industry, which, like other small racing industries, needs machine games of its own to enable it to compete in the 21st century marketplace, not less competition from random lottery games. If the Massachusetts Lottery or the Commonwealth of Massachusetts

feels that more information concerning the possible impacts, whether positive or negative, a daily race monitor game might have on Massachusetts racing it could conduct market research designed to assess these impacts.

The Revenue Potential of a $20 Instant Ticket Game

The introduction of a $20 instant ticket in Massachusetts is likely to stimulate sales of all Massachusetts instant tickets, of all denominations (including a new $20 ticket), with resulting increases in the revenues generated for the Commonwealth from instant tickets. The sales increase is likely to be transitory, however. Some months after a $20 instant ticket is introduced sales of Massachusetts instant games in general are likely to revert to their pattern prior to the introduction of a $20 game. A $20 game is likely to establish its own niche in the Massachusetts market, and will probably not significantly cannibalize sales of instant tickets of other denominations.

A Play-Along Televised Bingo Game

The Massachusetts Lottery asked CCA to evaluate an on-line bingo game as a potential Massachusetts Lottery product. ("On-line" here means a retailer operated closed loop network system as opposed to a paper ticket bingo game, not an Internet bingo game). CCA evaluated a computerized play-along bingo game proposed to the Massachusetts Lottery by BIS LLC: in this proposed game, players would obtain bingo cards from Massachusetts Lottery agents or by other means, take them home, watch a televised bingo drawing, and mark their cards as numbers are called; that is, the television audience would participate in the televised bingo game. BIS LLC represents that Comcast has agreed to carry the bingo television show that is an essential element of the proposed televised bingo game.

Concerning the play-along television bingo game proposed to the Massachusetts Lottery by BIS LLC we make the following recommendations:

- Given the difficulty experienced in securing carriage for play-along television games in earlier decades the Massachusetts Lottery should obtain a copy of Comcast's agreement to carry the proposed bingo television program and have it examined by the Lottery's own counsel.

- The feasibility of a bingo television program, either non-gambling (sweepstakes) or gambling, may be effectively explored through an RFP process. The Massachusetts Lottery could assess the feasibility of a bingo television game by circulating an RFP to suitable companies, including large bingo companies including Mecca and Gala; cable or satellite television companies that have demonstrated interest in bingo programming: media companies that have demonstrated an interest in interactive games and/or gambling; domestic cable companies, such as Comcast; domestic telephone companies with active television service initiatives, lottery system suppliers; and operators of large bingo Web sites.

- The Massachusetts Lottery should satisfy itself that sufficient demand for a joint Massachusetts Lottery/television or Internet bingo game is present in the Massachusetts market by conducting market research designed to assess the dimensions of demand for such a product. As noted, Internet bingo, either play-for-free or play-for-money, is available to any American who wants it today, and consequently a play-for-money bingo television game launched in 2005 would be entering a competed market.

- The Massachusetts Lottery might also conduct market research designed to assess the possible impact a play-for-money television/lottery ticket game would have on charitable gaming in Massachusetts.

The Revenue Potential of an Electronic Game Card

Electronic game cards are intended to expand a lottery's player base, increase the entertainment value of lottery games, and generate incremental revenue. The Iowa Lottery's experience with an electronic game card, the most relevant to date, suggests that, in Iowa, the electronic game card is falling short of these goals. The sales curve of the electronic game card shows a sharp upward spike following its introduction, followed by a nearly equally sharp decline. It appears that either the initial interest in this device is in the nature of a novelty and is not sustained, and/or that the games offered on this new platform in Iowa did not stimulate sustained play, that is, players quickly tire of the games offered on this platform in Iowa. Importantly, the electronic game card has not measurably increased total instant ticket sales in Iowa.

The Iowa experience suggests that a similar electronic game card programmed with similar games would produce similar results in Massachusetts. In making this observation, however, we also observe that the electronic game card is a new platform and programming it with traditional instant ticket games may not be the optimal content for this platform. Trial and error with other games (or content) on the electronic game card may produce better results. The Massachusetts Lottery should view an electronic game card as a new platform for selling lottery products first and as a new instant game second. Only more trial and error in the marketplace can determine the ultimate value of this new platform for selling lottery products.

III. Gambling in Massachusetts

Consumer spending on the Massachusetts Lottery (i.e., sales less prizes) totaled $1,219.9 million, or 92.5% of all consumer expenditures on gambling in Massachusetts in fiscal 2004. Consumer spending on pari-mutuel betting (i.e., pari-mutuel takeout) totaled $94.4 million, or 7.2% of all consumer expenditures on gambling in Massachusetts. Charitable games and bingo combined accounted for 0.4% of total consumer spending on gambling. In all, consumers, most of them Massachusetts residents, spent nearly $1.32 billion on gambling in fiscal 2004.

Although Massachusetts has no casinos and no gaming devices at its pari-mutuel facilities, Massachusetts residents spend substantial amounts of money in casinos or "racinos" (pari-mutuel facilities with slot machines or VLTs) in other States. In effect, Massachusetts is exporting personal income to gaming facilities in other jurisdictions, and funding the budgets of neighboring States through gaming privilege taxes collected from Massachusetts personal

income spent in these casinos and racinos. By CCA's conservative estimate, Massachusetts residents spend at least a billion dollars on casino or machine gaming in other States each year. Massachusetts residents additionally spend hundreds of millions of dollars annually on non-gaming goods, services and activities at full-service casino hotel destination resorts of the kind found in eastern Connecticut and in Las Vegas.

IV. Video Lottery Terminals (VLTs)

We examined two scenarios in which gaming devices might be introduced under Massachusetts's lottery law at the Commonwealth's four pari-mutuel facilities: one utilizing central system video lottery terminals or Delaware-style VLTs, and one utilizing central determination system video lottery terminals; that is, a machine gaming system that employs lottery decision logic to determine the outcome of trying its devices similar to the VLTs currently operating in New York. There are significant performance differences between these two kinds of VLTs, with significant implications for the revenues generated from VLT operations.

Under a scenario with 2,000 central system or Delaware-style VLTs located at each of the four licensed pari-mutuel facilities in Massachusetts we project that the total gross gaming revenue VLTs at these four pari-mutuel facilities could generate would be around $1.1 billion (i.e., stabilized revenue or Year Three results in our projections).

Under a scenario with 2,000 central determination system or New York-style VLTs located at each of the four licensed pari-mutuel facilities in Massachusetts, which would compete with better devices in Connecticut, Rhode Island, and Maine, we project that the total gross gaming revenue VLTs at these four pari-mutuel facilities could generate would be around $431.2 million.

CCA reviewed Senate Bill 2215, the "Live Racing Revitalization Act" and an estimate of first-year gross gaming revenue reported by State House News Service, and compared the financial projections implied by this bill with CCA's financial projections for VLTs in Massachusetts.

The gross gaming revenue estimated by State House News Service, $725.8 million, is lower than CCA's estimate of $815.4 million in Year One of Delaware-style VLT operations but substantially higher than CCA's estimate of $323.4 million in Year One of New York-style VLT operations. CCA estimates that in the first year of operations Delaware-style VLTs would generate $489.2 million for the Commonwealth, $57.1 million for purses, $40.8 million for the Massachusetts Live Racing Development Fund and $4.1 million for problem gambling programs. For comparison, under the same distribution formula the estimate of machine gross gaming revenue reported by State House News Service would generate $435.5 million for the Commonwealth, $50.8 million for purses, $36.3 million for the Massachusetts Live Racing Development Fund and $3.6 million for problem gambling programs. In the first year of operations CCA estimates that New York-style VLTs would generate $194 million for the Commonwealth, $22.6 million for purses, $16.2 million for the Massachusetts Live Racing Development Fund and $1.6 million for problem gambling programs.

CCA was asked to assess the potential impacts of expanded VLT-type gaming in the State of Massachusetts on the traditional offerings of the Massachusetts Lottery.

Among our findings:

- Lottery impacts from machine gaming are somewhat mitigated if the geographic presence of casino games is restricted.

- The Massachusetts lottery market has already been somewhat restructured by the impacts of casino games at Foxwoods and Mohegan Sun and VLTs in Rhode Island. The Massachusetts Lottery is already competing with nearby casinos and pari-mutuel devices for the gambling dollar.

- Ticket lotteries and casinos serve different customer bases and satisfy different consumer needs and expectations.

Keno and instant ticket sales would be more negatively impacted by VLTs than numbers or lotto games. We expect these impacts to be most severe in the early years of VLT operations, with lottery sales recovering somewhat as time goes on, although we do expect lottery sales growth rates to be somewhat curtailed going forward following the introduction of video lottery terminals.

In the scenario described in this report in which central system or Delaware-style VLTs are introduced at Massachusetts pari-mutuel facilities we project that lottery sales will decline by 3.6% in Year 1 of VLT operations and 3.8% in Year 2, at which point sales should slowly begin to recover. In this scenario we project that by Year 5 sales will recover to previous levels.

In the scenario described in this report in which central determination system or New York-style VLTs are introduced at Massachusetts pari-mutuel facilities we would not expect observable negative impacts on Massachusetts Lottery sales.

V. Areas for Further Study

In addition to the specific tasks CCA was asked to perform (MSLC RFP LOT # 526), we reviewed several areas of strategic importance for the Lottery's future. These areas are the retail network; lotto family games; interactive platforms, including the Internet, interactive television and mobile telephones; the Massachusetts Lottery's consumer base as an undeveloped asset; the possible extension of the Massachusetts Lottery brand; and the securitization of lottery revenues. The results of this review are presented in the concluding section (Section 9) of this report. Each of the subjects discussed in this section is deserving of further study.

I. Overview of Gambling in Massachusetts

The Commonwealth of Massachusetts permits four kinds of gambling: pari-mutuel betting on horse and greyhound racing; a lottery that is operated by the Commonwealth; charitable bingo, which is overseen by the Massachusetts Lottery; and other charitable games including raffles and casino nights, [1] which are likewise administered by the Massachusetts Lottery.

Exhibit 1.1 presents handle or gross wagering for these four forms of gambling for the fiscal years 2003, 2004 and 2005. The Massachusetts Lottery is by far the largest component, with sales (gross wagers) of $4.47 billion in 2005, or 92.2% of total wagering in Massachusetts. Pari-mutuel betting is the second largest form of gambling, with handle (gross wagers) of $375.8 million in 2005, or 7.8% of total wagering in Massachusetts.

Exhibit 1.1: Massachusetts Gross Wagering (Handle) FY2003-2005 ($M)

	2003	2004	2005
Lottery	$4,191.1	$4,368.4	$4,465.7
Pari-Mutuel	400.5	375.8	352.2
Bingo	n/a	n/a	n/a
Charitable	n/a	n/a	n/a
Totals	**$4,591.6**	**$4,744.2**	**$4,817.9**

Note: Charitable games and bingo are excluded from this exhibit because a reliable measure of wagering on these games is not available. The lottery keeps 5% of the gross revenue generated by the charitable bingo (beano) operators, and keeps 50% of the sale of charitable pull tab tickets to qualified non-profit organizations.

Source: Massachusetts Lottery, Massachusetts State Racing Commission

Exhibit 1.2 calculates percentage changes in gross wagering in each of these forms of gambling in Massachusetts between FY 2003 and FY 2005. Lottery sales increased by $274.6 million, or 6.6%, over this period. Pari-mutuel handle declined by $48.3 million, or 12.1%, between FY 2003 and FY 2005.

Exhibit 1.2: Percentage Change in Massachusetts Gross Wagering (Handle) FY 2003-FY 2005

	$ Change 2003-2005	% Change 2003-2005
Lottery	$274.6	6.6%
Pari-Mutuel	-48.3	-12.1%
Totals	**$226.2**	**4.9%**

Source: Massachusetts Lottery, Massachusetts State Racing Commission

[1] In Massachusetts, charitable gaming consists of pull tabs sold to beano licensees, raffles and bazaars (casino nights, including Texas Hold 'Em). Pull tabs are also sold to commercial outlets. There are approximately 300 licensed beano organizations in the Commonwealth and about 4,000 raffle and bazaar permit holders. These events can only be run by non-profit organizations. Beano licenses are issued by the Lottery Commission to qualified organizations. The Lottery Commission acts as a tax collector for these activities.

Exhibit 1.3 presents gross revenues, or consumer spending, for the four forms of gambling in Massachusetts for fiscal 2004. Consumer spending on the Massachusetts Lottery (i.e., sales less prizes) totaled $1,219.9 million, or 92.5% of all consumer expenditures on gambling in Massachusetts in fiscal 2004. Consumer spending on pari-mutuel betting (i.e., pari-mutuel takeout) totaled $94.4 million, or 7.2% of all consumer expenditures on gambling in Massachusetts. Charitable games and bingo [2] combined accounted for 0.4% of total consumer spending on gambling. In all, consumers, most of them Massachusetts residents, spent nearly $1.32 billion on gambling in fiscal 2004.

Exhibit 1.3: Massachusetts FY 2004 Gross Revenues (Consumer Spending) ($M)

	Revenues	% Total
Lottery	$1,219.9	92.5%
Pari-Mutuel	94.4	7.2%
Bingo	1.7	0.1%
Charitable	3.3	0.3%
Totals	**$1,319.3**	**100.0%**

Source: Massachusetts Lottery, Massachusetts State Racing Commission

Although Massachusetts has no casinos and no gaming devices at its pari-mutuel facilities, Massachusetts residents spend substantial amounts of money in casinos or "racinos" (pari-mutuel facilities with slot machines or VLTs) in other States. In effect, Massachusetts is exporting personal income to gaming facilities in other jurisdictions, and funding the budgets of neighboring States through gaming privilege taxes collected from Massachusetts personal income spent in these casinos and racinos.

[2] Charitable game revenues and bingo revenues stated in exhibit 1.3 are a reflection of revenues received by the lottery from these operations and are not an accurate measure of true consumer spending on those forms of gambling.

Map 1 shows full-scale casinos within 400 miles of Boston.

Map 1: Full Scale Casino Locations Within 400 miles of Boston, Massachusetts

Source: Christiansen Capital Advisors, LLC

Map 2 shows the locations of gaming facilities within 100 miles of Boston, including casino resorts (Foxwoods and Mohegan Sun in Connecticut), as well as Newport Grand and Lincoln Jai-Alai in Rhode Island, pari-mutuel facilities with video lottery terminals or VLTs.

Map 2: Locations of Gaming Facilities Within 100 miles of Boston, Massachusetts

Source: Christiansen Capital Advisors, LLC

Exhibit 1.4 presents CCA's estimates of spending (i.e., gross gaming revenue or win) by Massachusetts residents in casinos or "racinos" in Connecticut and Rhode Island in 2004. Massachusetts residents spent approximately $714.3 million on gambling at Foxwoods and Mohegan Sun in Connecticut and approximately $131.8 million on gambling at Lincoln Park and Newport Grand in Rhode Island, or a total of approximately $846.1 million on gambling in these two neighboring States. Massachusetts residents spent additional sums on non-gambling goods, services and activities at Foxwoods and Mohegan Sun, which are full-service resorts that have hotels and offer dining, retail, and various recreations.

Exhibit 1.4: Estimated Spending by Massachusetts Residents in Casinos or Racinos in Neighboring States ($M)

	Consumer Spending	Percent by Facility	Percent of Total
CT Tribal Casinos	$714.3	33.6%	84.4%
Rhode Island VLT Facilities	131.8	34.6%	15.6%
Total	**$846.1**	**33.8%**	**100.0%**

Source: Christiansen Capital Advisors, LLC

Massachusetts residents spent smaller but significant sums on gambling in more distant places, including Las Vegas, Atlantic City, in Canada, on cruise ships, and in other locations. All told, spending by Massachusetts residents on gambling outside the Commonwealth exceeds $1 billion annually, or a little less than one quarter of the amount consumers spend on the Massachusetts Lottery.

We also reviewed estimates of patron origin and spending at Connecticut and Rhode Island gaming facilities prepared by the University of Massachusetts Dartmouth Center for Policy Analysis (CFPA) for fiscal 2004. [3] The CFPA based its estimate of Connecticut and Rhode Island gaming facility patron origins on a sampling of 9,672 private automobiles and 228 tour buses at Foxwoods and a sampling of 6,597 private automobiles and 243 tour buses at Mohegan Sun. The CFPA conducted a gaming behavior survey that completed responses from a random sample of 2,439 adults in Rhode Island and Massachusetts, making this report particularly interesting.[4]

Exhibit 1.5 presents the CFPA's estimates of spending by Massachusetts residents on gambling in Connecticut and Rhode Island and the contribution made by Massachusetts residents to the two States' treasuries in the form of gaming privilege taxes.

The CFPA estimates that Massachusetts residents spent approximately $831.5 million at Connecticut's two casinos in calendar 2004. Based on this estimated spending, the CFPA estimates that Massachusetts residents indirectly contributed approximately $116.6 million to the

[3] University of Massachusetts Dartmouth Center for Policy Analysis, *Casino Gaming in New England: 2005 Update*.

[4] The CFPA says this survey has a 2% margin of error.

Connecticut State treasury in 2004, which shares in machine gross gaming at Connecticut's two tribal casino resorts, Foxwoods and Mohegan Sun. The CFPA estimates that Massachusetts residents spent approximately $179.9 million at Rhode Island's two racinos, Lincoln Greyhound Park and Newport Grand Jai-Alai, in calendar 2004. The CFPA estimates that Massachusetts residents indirectly contributed approximately $97.8 million to the Rhode Island State treasury as a result of this estimated spending at Rhode Island's two gaming facilities. The CFPA's estimates of spending by Massachusetts residents on gambling in Connecticut and Rhode Island are somewhat higher than CCA's more conservative estimates; by either set of projections, Massachusetts residents are spending in excess of a billion dollars annually in casinos or racinos in other States.

Exhibit 1.5: Center for Policy Analysis Estimates of Spending by Massachusetts Residents in Connecticut and Rhode Island Gaming Facilities in 2004 ($M)

	2004
Spending by Massachusetts Residents CT Casinos	$831.5
Massachusetts Residents Contribution to CT Treasury	$116.6
Spending by Massachusetts Residents at RI Casinos	$179.9
Massachusetts Residents Contribution to RI Treasury	$97.8

Source: Center for Policy Analysis University of Massachusetts Dartmouth

The CFPA also conducted survey research on visitation by residents of Massachusetts to gambling facilities in Connecticut and Rhode Island. Exhibit 1.6 summarizes the CFPA's findings concerning these visits by Massachusetts residents in 2004.

According to the CFPA, Massachusetts residents accounted for 36% of total visits to Foxwoods and 21% of visits to Mohegan Sun in 2004, and that 19.0% of adult Massachusetts residents gambled at Foxwoods in that year while 13.0% of adult Massachusetts residents gambled at Mohegan Sun. The CFPA found that Massachusetts residents account for 34.6% of total expenditures at Lincoln Park and 72.8% of total expenditures at Newport Grand.

Exhibit 1.6: Center for Policy Analysis Estimates of Visitation by Massachusetts Residents in Connecticut and Rhode Island Gaming Facilities in 2004

	2004
Percentage of Adult Visits to Foxwoods by Massachusetts Residents	36%
Percentage of Adult Visits to Mohegan Sun by Massachusetts Residents	21%
Percentage of Massachusetts Adult Residents who Gambled at Foxwoods	19%
Percentage of Massachusetts Adult Residents who Gambled at Mohegan Sun	13%
Percentage of Massachusetts Adult Residents who Gambled at Lincoln Park	3%
Percentage of Massachusetts Adult Residents who Gambled at Newport	1%

Source: Center for Policy Analysis University of Massachusetts Dartmouth

The CFPA found that fewer Massachusetts residents visited Rhode Island gaming facilities than Connecticut gaming facilities, even though Connecticut gaming facilities are more distant. The CFPA estimates that 2.6% of adult Massachusetts residents have gambled at Lincoln Park in the last 12 months, while 1.4% of adult Massachusetts residents have gambled at Newport Grand during 2004. The CFPA attributes this to differences between the Rhode Island and Connecticut gaming facilities. Foxwoods and Mohegan Sun are full-service resorts representing billions of dollars of invested capital that offer table and machine games as well as restaurants, hotel rooms, retail, and recreations of various kinds. Resorts of this kind typically draw patrons from greater distances. Lincoln Park and Newport Grand are what the CFPA calls "convenience gambling venues" that essentially offer machine games (VLTs), which have more limited appeal.

Exhibit 1.7: Cumulative Spending by Massachusetts Residents in Connecticut and Rhode Island Gaming Facilities ($M)

	Cumulative Totals
CT Casino Spending	$5,700.0
CT Non-Gambling Leisure and Accommodations	$1,600.0
RI Casino Spending	$2,200.0
CT Gambling Privilege Tax	$1,000.0
RI Gambling Privilege Tax	$542.0

Source: Center for Policy Analysis University of Massachusetts Dartmouth

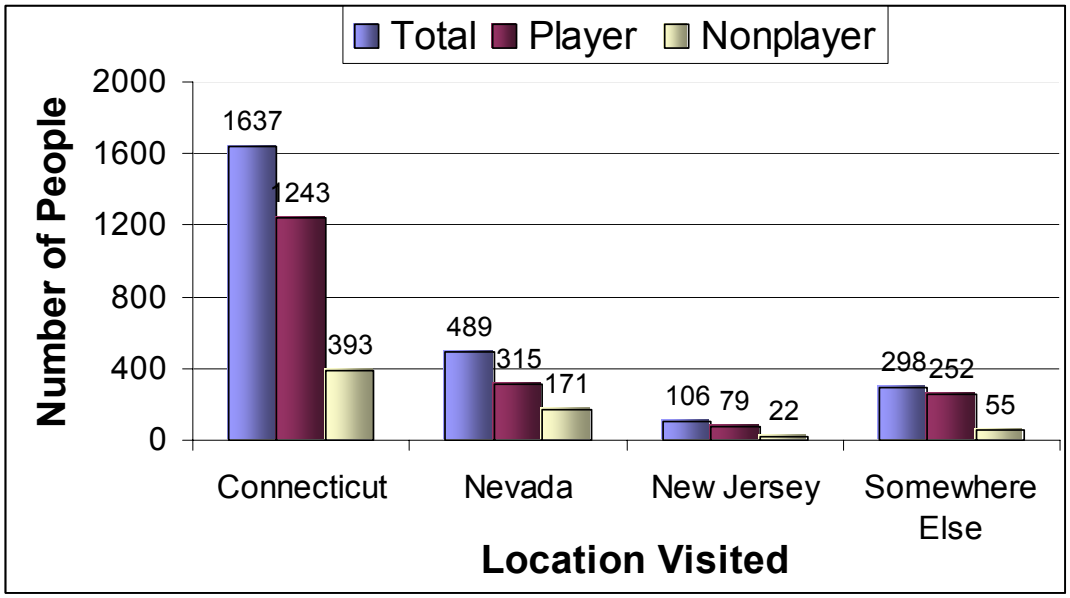
Exhibit 1.7 presents the CFPA's estimates of cumulative spending by Massachusetts residents on gambling in Connecticut and Rhode Island since the casino and racino facilities in these two States opened.

The CFPA estimates that since Foxwoods and Mohegan Sun opened Massachusetts residents have spent $5.7 billion on gambling in these Connecticut facilities. Additionally, the CFPA estimates that Massachusetts residents spent more than $1.6 billion in the Connecticut resorts' hotels, restaurants, retail stores, theatres, cabarets, spas and other entertainment and recreation outlets. The CFPA estimates that Massachusetts residents have spent approximately $2.2 billion on gambling in Rhode Island since the start of VLT operations in that State. According to the CFPA, Massachusetts residents have contributed more than $1.5 billion in gambling privilege taxes to Connecticut's and Rhode Island's State treasuries ($1 billion to Connecticut and about $542 million to Rhode Island) since slot machines and VLTs were introduced in these States. [5]

[5] University of Massachusetts Dartmouth Center for Policy Analysis, "New England Casino Gaming Update 2006", press release, November 9, 2005.

Exhibits 1.8 and 1.9 present the results of market research conducted for the Massachusetts Lottery by Schneiders Della Volpe Schulman (SDS) regarding patronage of Massachusetts residents of casinos or racinos in other jurisdictions. This survey was conducted in January of 2005. Therefore, this data concerns the calendar year 2004. In order to determine the equivalent of the total Massachusetts population, we took the percentage of the total surveyed for each variable and multiplied that by 6.4 million, or the approximate total population of the state of Massachusetts.

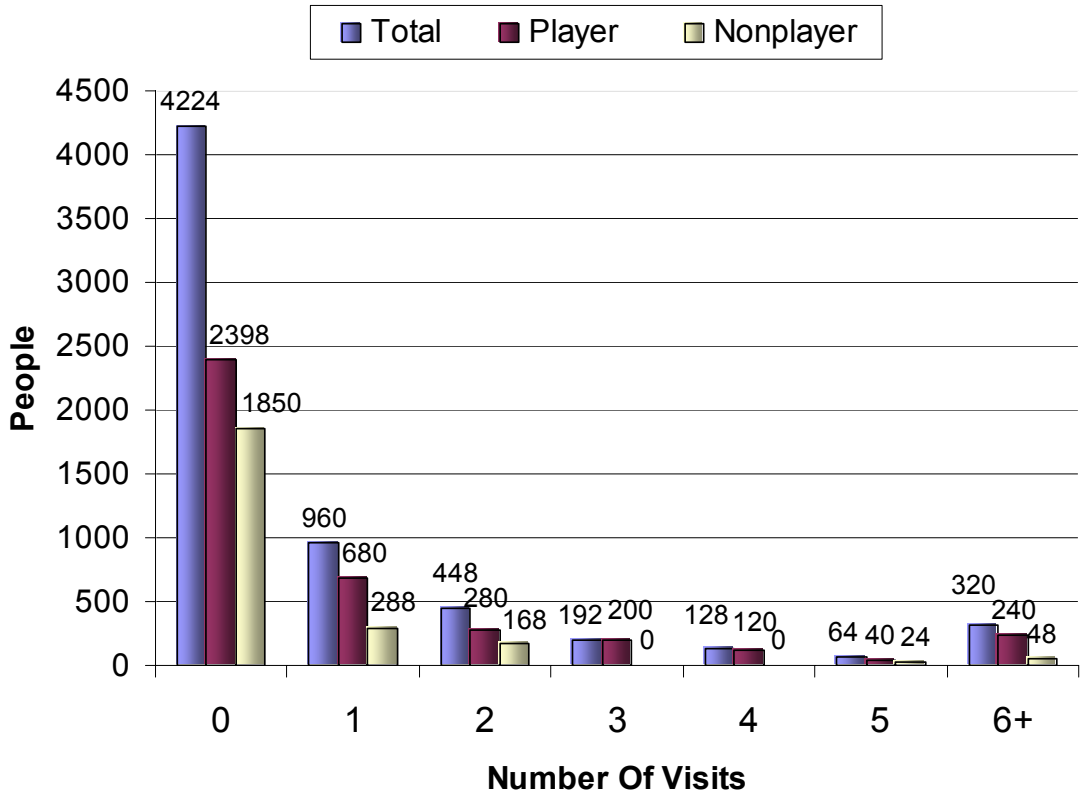
Exhibit 1.8: Visits by Massachusetts Residents to Casinos or Racinos in Other States (000s)



Source: Schneiders Della Volpe Schulman

An estimated 33% of Massachusetts residents, or approximately 2,126 thousand people, visited a casino outside Massachusetts in 2004. Persons describing themselves as players were more likely to visit casinos than persons describing themselves as non-players, but both categories visited casinos, the latter probably to shop, dine in restaurants, stay at casino hotels and other similar reasons. Exhibit 1.8 shows the approximate number of Massachusetts residents to visit a casino in Connecticut, Nevada, New Jersey, or elsewhere, broken out by total and whether or not the person considered themselves a player or not. Connecticut casinos were the first choice of Massachusetts residents, attracting approximately 1,637 visits in 2004. Nevada was next, attracting 489 visits. New Jersey attracted 106 visits, with the balance, 298 visits, to casinos in other locations. Though SDS did not include Rhode Island racinos in its questions, the Boston metropolitan area is a principal market for these Rhode Island gaming facilities.

Exhibit 1.9: Number of Casino Visits A Massachusetts Resident Made in 2004 (000's)



Source: Schneiders Della Volpe Schulman

Exhibit 1.9 shows the total number of visits to casinos made by Massachusetts residents. Sixty-six percent of Massachusetts residents made 0 visits to a casino in the last year. Therefore, the casino visits by Massachusetts residents summarized in Exhibit 1.5 were made by 33% of the population, or approximately 2.1 million Massachusetts residents (Exhibit 1.8).

II. The Current State of the Massachusetts Lottery

This chapter evaluates the performance of the Massachusetts State Lottery's current games and the performance of charitable gambling in Massachusetts.

SECTION 1: CURRENT LOTTERY PRODUCT PORTFOLIO

The Massachusetts Lottery currently offers nine different games. [6] These nine games and the dates they were introduced are Instant Ticket Games (introduced in 1974), keno (introduced in 2003), the Daily Numbers Game (introduced in 1976), Mega Millions (introduced in 1996) Mega Bucks (introduced in 1982), Mass Cash (introduced 1991), CashWinFall (introduced 2004), Mass Millions (a.k.a. Big Money, introduced in 1987), and Pull Tabs (introduced in1992). Five of these games, Megabucks, Mega Millions, Mass Cash, Mass Millions and CashWinFall, are lotto family games.

Lottery tickets are distributed through a network of approximately 7,500 retail agents. About 7,363 of these are on-line agents who sell the Numbers Game, the lotto family games (Megabucks, Mass Millions, Mega Millions, CashWinFall, and Mass Cash), and Instant Game tickets. Keno is sold in 1,767 establishments. [7] Pull Tab tickets are sold in 526 bars and taverns.

Exhibit 2.1 presents Massachusetts Lottery sales by game in fiscal 2004 together with percentage changes from the previous year.

Exhibit 2.1: Massachusetts Lottery Sales by Game, FY 2004 ($000)

Game	Sales FY2004	% Change FY2004	% Total FY2004
Instant Games	$2,977,732	3.21%	68.17%
Mega Millions (aka Big Game)	95,997	4.90%	2.20%
Numbers Game	362,524	-2.45%	8.30%
Mass Cash	46,198	0.62%	1.06%
Keno	775,523	9.77%	17.75%
Megabucks	48,283	4.47%	1.11%
Mass Millions (Big Money)	59,889	43.45%	1.37%
Pull Tabs	2,245	-12.61%	0.05%
Total Sales	**$4,368,391**	**4.23%**	**100.00%**

Source: Massachusetts Lottery

[6] Lottery games are generally classified as "on-line" games and "off-line" games. "On-line games" (lotto, daily numbers, and keno) does not mean Internet games; rather, on-line games are distributed through a network of computer terminals installed at retail locations. These terminals are connected to a main data processing center *via* dedicated telephone lines. Instant ticket games and pull tabs are off-line paper ticket games; sales of these paper products are not transacted through an on-line terminal system.

[7] Currently only "pouring" or liquor-licensed establishments can qualify as keno agents; some non-liquor-licensed establishments which had keno prior to this restriction were grandfathered in and retain keno.

Total sales were $4.4 billion. Instant games accounted for $3.0 billion, or 68.2% of total sales. Keno accounted for $775.5 million or 17.8%. Instant ticket games and keno thus accounted for $3.75 billion or 86% of the Massachusetts Lottery's total FY 2004 sales. The numbers game accounted for $362.5 million or 8.3%. Mega Millions accounted for $96 million or 2.2%. Megabucks accounted for $48 million or 1.1%. Mass Cash accounted for $46.2 million or 1%. Mass Millions accounted for $60 million or 1.4%. Lotto family games (Megabucks, Mass Millions, Mega Millions, and Mass Cash) accounted for $250 million or 5.7%. Pull Tabs accounted for $2.2 million or 0.1%.

Exhibit 2.2 presents a simplified income statement for the Massachusetts Lottery.

Exhibit 2.2: Massachusetts Lottery Simplified Income Statement

	FY 2004	%Sales
Total Sales	$4,381,777,796	100.0%
Total Prize Expense	$3,148,457,466	71.9%
Agent Expenses:		
Commissions	$218,278,120	5.0%
Bonuses	$29,806,169	0.7%
Net Operating Revenue	*$985,236,041*	*22.5%*
Total Admin. Expenses	$73,225,659	1.7%
Net Revenue Before Distributions	**$912,010,381.8**	**20.8%**

Source: Massachusetts Lottery

Agent expenses totaled $248.1 million in FY 2004, about 5.7 % of sales. Averaged among the 7,363 retail agents this figure works out to $33,693 per agent in FY 04. Administrative expenses were 1.7% of sales. Net revenue after agent expenses and administrative expenses, which directly benefits the Commonwealth's 351 cities and towns, totaled $912 million in fiscal 2004. The Lottery is by far the largest contributor of government revenues of the legal gambling activities permitted in the Commonwealth.

Total Sales

Exhibit 2.3 presents total Massachusetts Lottery sales for the last three calendar years. During this period sales growth slowed from 4.23% in FY 2004 to 2.23% in FY 2005.

Exhibit 2.3: Massachusetts Lottery Total Sales, FY 2003, FY 2004, and FY 2005 ($000)

Game	Sales FY2003	Sales FY2004	% Change FY2004	Sales FY2005	% Change FY2005
Total Sales	**$4,191,142**	**$4,368,391**	**4.23%**	**$4,465,715**	**2.23%**

Source: Massachusetts Lottery

Sales by Game

Exhibit 2.4 presents sales by game for the last three fiscal years. Sales of six of the eight lottery games increased in FY 2004. Only the numbers game (-2.45%) and pull tabs (-12.61%) had sales declines in that year. In contrast, sales in six of the nine lottery games (CashWinFall was introduced in September 2004) declined in FY 2005. Instant games (+5.3%) and Mega Millions (+1.1%) were the only games with sales increases in this year. The biggest sales declines were in Megabucks (-7.71%) and Mass Cash (-5.02). Sales in the numbers game also declined—for the second consecutive year—by 2.8%.

Exhibit 2.4: Massachusetts Lottery Sales by Game, FY 2003, FY 2004, and FY 2005 ($000)

Game	FY2003	FY2004	% Change FY2004	Sales FY2005	% Change FY2005
Instant Games	$2,885,050	$2,977,732	3.21%	$3,135,418	5.30%
Mega Millions (aka Big Game)	91,510	95,997	4.90%	97,066	1.11%
Numbers Game	371,645	362,524	-2.45%	352,453	-2.78%
Mass Cash	45,915	46,198	0.62%	43,880	-5.02%
Keno	706,487	775,523	9.77%	742,007	-4.32%
CashWinFall	-	-	0.00%	41,797	0.00%
Megabucks	46,216	48,283	4.47%	44,559	-7.71%
Mass Millions (Big Money)	41,750	59,889	43.45%	6,727	-88.77%
Pull Tabs	2,569	2,245	-12.61%	1,808	-19.47%
Total Sales	**$4,191,142**	**$4,368,391**	**4.23%**	**$4,465,715**	**2.23%**

Source: Massachusetts Lottery

Instant Tickets

Exhibit 2.5 presents instant ticket sales for each month and the percentage change in sales compared with the corresponding month of the previous year from July 2003 through June 2005.

Instant ticket sales increased nine out of twelve months (*versus* the same month in the previous year) from July 2003 through June 2005. FY 2004 vs. FY 2003 saw year over year monthly increases in 7 of the 12 months, and FY 2005 *vs*. FY 2004 saw monthly increases in 8 of the 12 months.

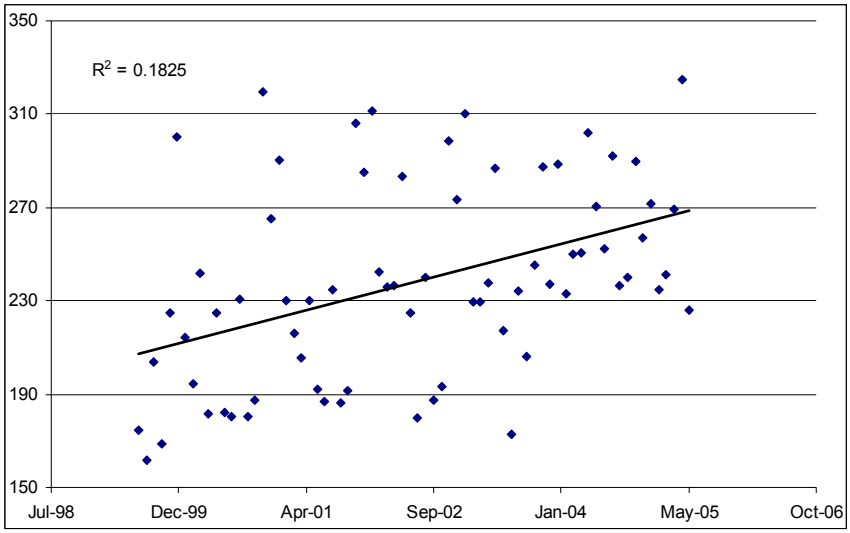
Exhibit 2.5: Monthly Instant Ticket Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	180.0	173.0	-3.91%	252.3	45.83%	40.1%
August	240.3	234.4	-2.49%	291.8	24.52%	21.4%
September	187.2	206.0	10.03%	236.3	14.74%	26.2%
October	193.2	245.4	27.03%	239.8	-2.26%	24.2%
November	298.7	287.4	-3.78%	289.7	0.79%	-3.0%
December	273.2	237.2	-13.17%	257.3	8.44%	-5.8%
January	310.4	288.4	-7.11%	271.9	-5.70%	-12.4%
February	229.8	232.8	1.32%	234.7	0.80%	2.1%
March	229.8	249.9	8.74%	241.2	-3.46%	5.0%
April	238.0	250.5	5.25%	269.3	7.50%	13.1%
May	287.0	301.9	5.19%	324.9	7.64%	13.2%
June	217.4	270.6	24.50%	226.2	-16.41%	4.1%
FY Total	**$2,885**	**$2,978**	**3.21%**	**$3,135**	**5.30%**	**8.7%**

Source: Massachusetts Lottery

Moreover, a regression analysis [8] of monthly Instant Ticket sales from July 2003 through June 2005 shows a healthy upward trend (slope = $28,319) per month (Exhibit 2.6).

Exhibit 2.6: Regression Analysis of Monthly Instant Ticket Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Other things being equal, including, among other material variables, no increase in the supply of casino machine (including VLTs) or table games in the Massachusetts market, this rising sales trend implies that given continued effective marketing of instant game products of the quality of those offered by the Lottery in recent years sales of instant games are likely to continue to increase at the rate of $28,319 per month in the near term. This conclusion is supported by national trends in sales of instant games (Section 3).

[8] Extrapolations of recent trends into the future are generally of limited value for long term projections, since market conditions can change (in the case of the Massachusetts gambling market casino machine or table games, including VLTs, might be introduced, for example), patterns of leisure consumption may shift, and changes in the general economy may occur. For the near term, however, simple extrapolations of recent trends are often a reliable guide.

The Numbers Game

Exhibit 2.9 presents numbers game sales for each month and the percentage change in sales compared with the corresponding month of the previous year from July 2003 through June 2005.

Numbers games sales are in steady decline. Sales slipped in eleven of twelve months in FY 2005 compared with the same month in FY 2003.

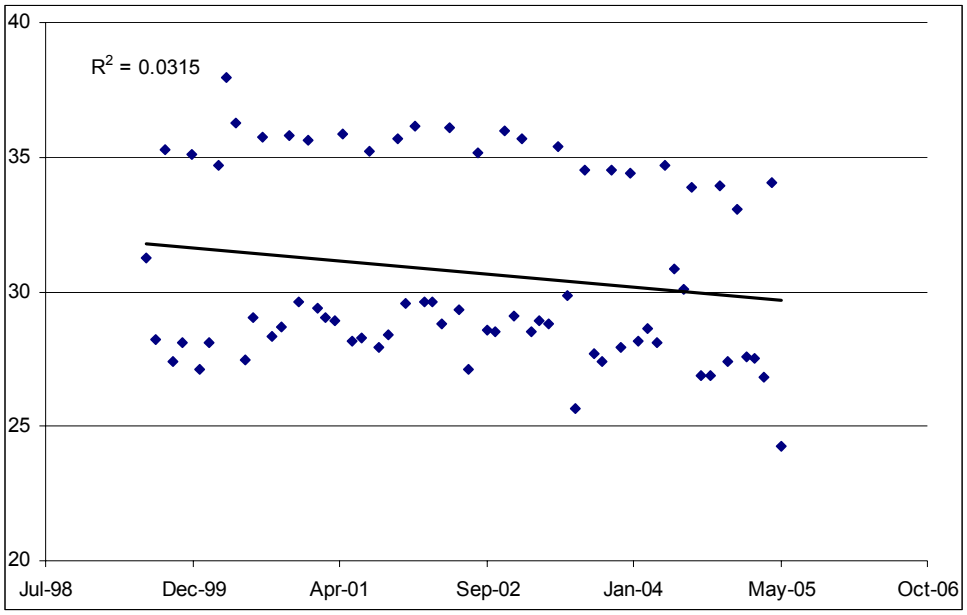
Exhibit 2.9: Numbers Game Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	271.4	256.4	-5.54%	301.0	17.43%	10.9%
August	351.7	345.3	-1.82%	338.7	-1.93%	-3.7%
September	285.7	277.1	-3.01%	269.1	-2.88%	-5.8%
October	285.1	274.1	-3.88%	269.1	-1.83%	-5.6%
November	359.9	345.4	-4.03%	339.6	-1.67%	-5.6%
December	291.2	279.2	-4.12%	274.1	-1.84%	-5.9%
January	356.8	343.8	-3.66%	330.7	-3.80%	-7.3%
February	285.2	281.8	-1.22%	275.7	-2.13%	-3.3%
March	288.9	286.1	-0.98%	275.3	-3.79%	-4.7%
April	288.0	280.9	-2.49%	268.2	-4.50%	-6.9%
May	354.0	347.0	-1.98%	340.7	-1.81%	-3.7%
June	298.4	308.3	3.31%	242.3	-21.40%	-18.8%
FY Total	**371,645**	**362,524**	**-2.45%**	**352,453**	**-2.78%**	**-5.2%**

Source: Massachusetts Lottery

Exhibit 2.10 presents a regression analysis of numbers game sales from June 1999 through June 2005. This analysis yields a downward slope of -$976.53 per month. Other things being equal, numbers games sales are likely to continue to decrease at the rate of -$976.53 per month in the near term.

Exhibit 2.10: Regression Analysis of Monthly Numbers Game Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Megabucks

Megabucks sales typically exhibit dramatic weekly (and monthly) fluctuations resulting from the size of lotto jackpots: as the jackpot grows, so do sales; conversely, when jackpots are small sales decline. In other words, in lotto family games sales and jackpot size are positively correlated. As a result, in lotto games an exceptionally strong sales month in one year is often followed by a sales drop in the comparable month of the subsequent year—due solely to the absence of a major jackpot in the subsequent year. This pattern is typical of all lotto-style games, in which chances of winning are small but prizes are large in relation to amounts wagered.

Exhibit 2.11 presents monthly sales data for Megabucks for the last three years. Megabucks sales increased in FY 2004 by 4.47% but dropped in FY 2005 by 7.71%. Moreover, year over year monthly sales declines occurred in 9 of the 12 months from January through June 2005. Overall, Megabucks sales fell 3.6% in FY 2005 compared with FY 2003.

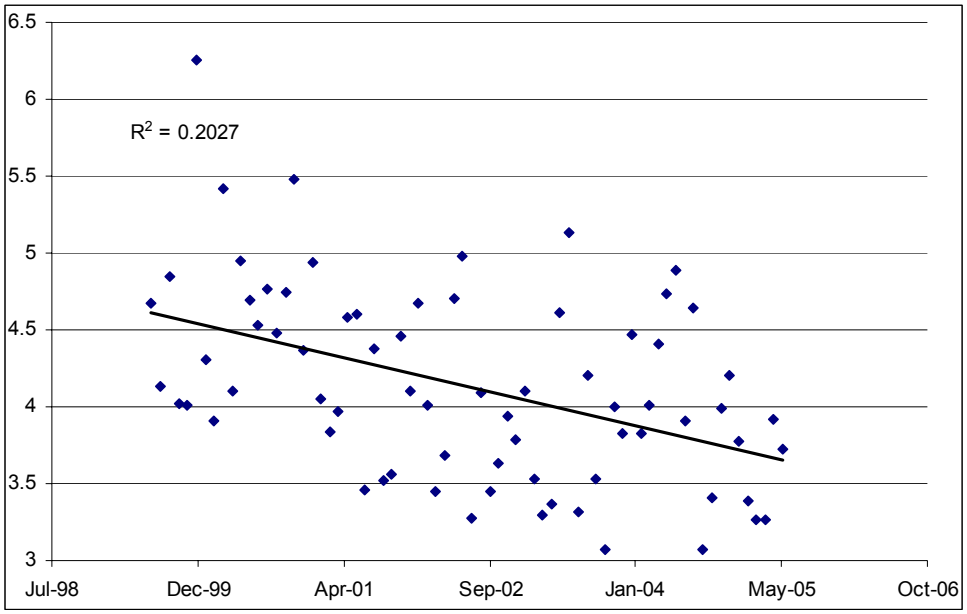
Exhibit 2.11: Megabucks Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	32.8	33.2	1.22%	39.1	17.73%	19.2%
August	40.9	42.0	2.80%	46.4	10.38%	13.5%
September	34.5	35.3	2.34%	30.7	-13.08%	-11.1%
October	36.3	30.7	-15.35%	34.1	10.97%	-6.1%
November	39.4	40.0	1.55%	39.9	-0.38%	1.2%
December	37.9	38.3	1.09%	42.0	9.78%	11.0%
January	41.0	44.7	8.92%	37.8	-15.45%	-7.9%
February	35.3	38.2	8.34%	33.9	-11.25%	-3.8%
March	32.9	40.1	21.76%	32.6	-18.63%	-0.9%
April	33.6	44.1	30.97%	32.6	-25.99%	-3.1%
May	46.1	47.3	2.53%	39.2	-17.15%	-15.1%
June	51.4	48.9	-4.85%	37.3	-23.69%	-27.4%
FY Total	**46,216**	**48,283**	**4.47%**	**44,559**	**-7.71%**	**-3.6%**

Source: Massachusetts Lottery

Exhibit 2.12 presents a regression analysis of Megabucks sales from June 1999 through June 2005. The widely scattered data points reflect the wide monthly fluctuations in sales characteristic of lotto games. The regression analysis evens these fluctuations out, yielding a downward slope of -$442.52 per month. Other things being equal, Megabucks sales are likely to continue to decrease at the rate of -$442.52 per month in the near term.

Exhibit 2.12: Regression Analysis of Monthly Megabucks Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Mass Millions

Exhibit 2.13 shows monthly sales for the last three years for Mass Millions. Sales data for Mass Millions exhibit the typical lotto game pattern, characterized by sales peaks and valleys associated with jackpot size. During FY 2004, year over year monthly sales fluctuations varied from +93.38% (August) to -32.3% (May) from FY 2003, with annual sales in that period up by 43.45%. Early in FY 2005 Mass Millions was cancelled and a new game (CashWinFall) was introduced in its place.

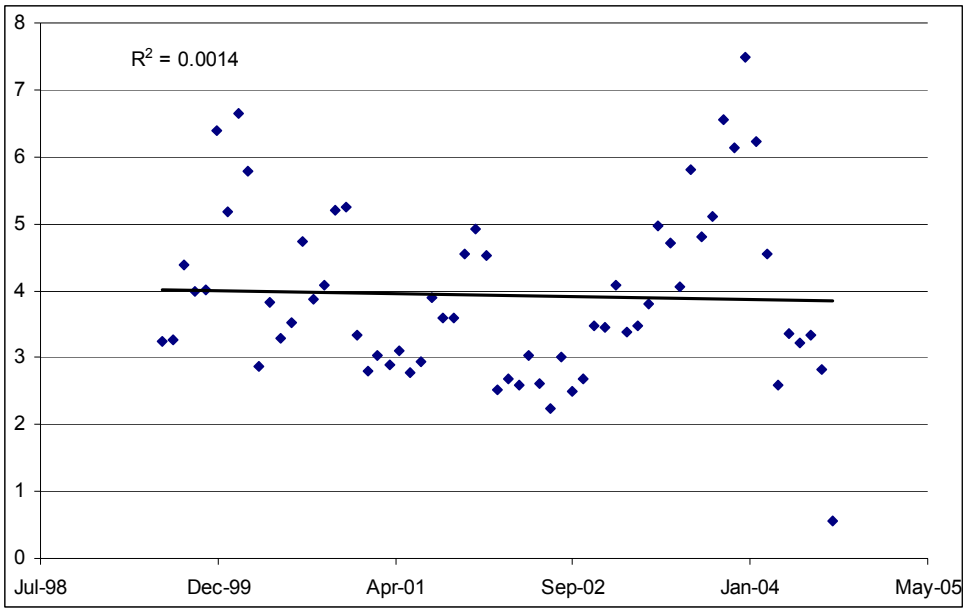
Exhibit 2.13: Mass Millions Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	22.4	40.7	81.73%	33.3	-18.23%	48.6%
August	30.0	58.0	93.38%	28.2	-51.39%	-6.0%
September	25.1	48.0	91.76%	5.7	-88.23%	-77.4%
October	26.7	51.2	91.64%	0.1	-99.80%	-99.6%
November	34.7	65.6	89.11%	0.0	-99.98%	-100.0%
December	34.6	61.2	77.19%	0.0	-100.00%	-100.0%
January	40.9	74.8	83.03%	0.0	-99.96%	-99.9%
February	33.7	62.3	84.66%	0.0	-99.98%	-100.0%
March	34.6	45.4	30.99%	0.0	-100.00%	-100.0%
April	38.1	25.8	-32.23%	0.0	-100.00%	-100.0%
May	49.8	33.7	-32.30%	0.0	-99.99%	-100.0%
June	47.0	32.2	-31.48%	0.0	-99.98%	-100.0%
FY Total	**41,750**	**59,889**	**43.45%**	**6,727**	**-88.77%**	**-83.9%**

Source: Massachusetts Lottery

Exhibit 2.14 presents a regression analysis of Mass Millions sales from June 1999 through its cancellation in early FY05. This analysis yields a downward slope of -$86.2 per month.

Exhibit 2.14: Regression Analysis of Monthly Mass Millions Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Mass Cash

Exhibit 2.15 provides monthly sales data for Mass Cash. Mass Cash sales growth was positive throughout 11 of the 12 months in FY 2004, ranging from a high of 5.36% in December to a low of -3.77% in September. Sales of Mass Cash in FY 2005 turned downward, declining by 5% compared with FY 2004. Year over year monthly sales of Mass Cash declined in three out of twelve months in FY 2005 year over year.

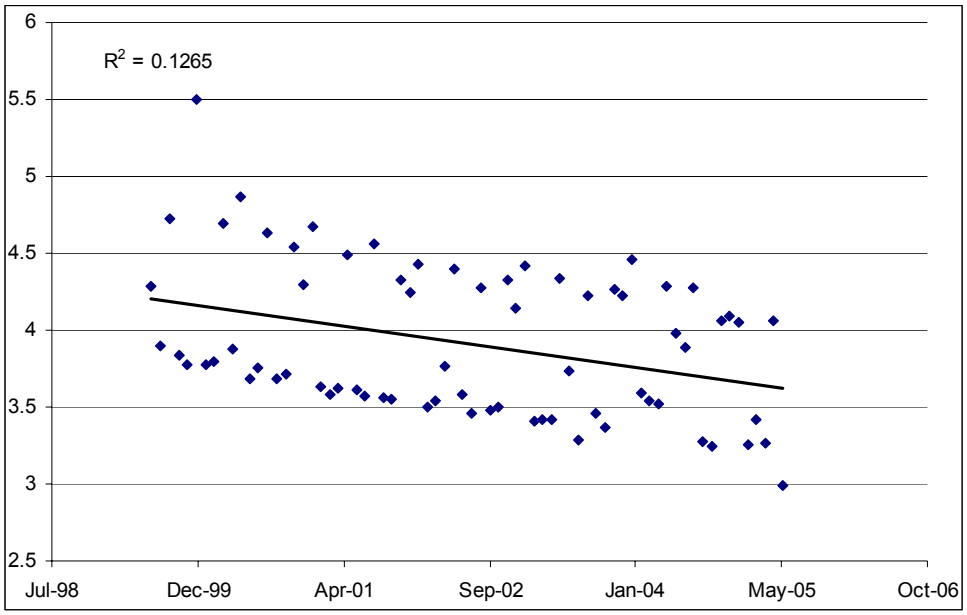
Exhibit 2.15: Mass Cash Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	35.8	36.1	0.79%	36.8	1.82%	2.6%
August	44.0	44.9	1.99%	48.6	8.34%	10.5%
September	37.7	36.2	-3.77%	38.8	7.04%	3.0%
October	35.4	35.8	1.19%	46.9	31.07%	32.6%
November	35.0	36.3	3.63%	37.9	4.60%	8.4%
December	44.3	46.7	5.36%	37.7	-19.20%	-14.9%
January	42.4	42.9	1.22%	55.0	28.24%	29.8%
February	43.3	45.4	4.87%	37.7	-16.91%	-12.9%
March	35.5	37.1	4.42%	38.4	3.43%	8.0%
April	35.6	36.9	3.59%	47.2	28.08%	32.7%
May	45.6	46.4	1.73%	39.0	-15.88%	-14.4%
June	35.8	37.5	4.99%	42.9	14.27%	20.0%
FY Total	**45,915**	**46,198**	**0.62%**	**43,880**	**-5.02%**	**-4.4%**

Source: Massachusetts Lottery

Exhibit 2.16 presents a regression analysis of Mass Cash sales from June 1999 through June 2005. This analysis yields a downward slope of -$270.28 per month. Other things being equal, Mass Cash sales are likely to continue to decrease at the rate of -$270.28 per month in the near term.

Exhibit 2.16: Regression Analysis of Monthly Mass Cash Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Mega Millions

Exhibit 2.17 presents monthly sales for the last three years for Mega Millions, a multi-state lotto game that is the Massachusetts Lottery's biggest jackpot lotto game. Mega Millions sales exhibit the typical lotto game pattern, characterized by sales peaks and valleys. During FY 2004, year over year monthly sales fluctuated from +123.05% in February 04 to -65.48% in July 04. During FY 2005, year over year monthly sales fluctuated from +178.2% (July 05) to -71.6% (June 05). Following a sales gain of 4.9% in FY 2004 sales growth slowed to 1.11% in FY 2005. FY 2005 monthly changes from FY 2003 ranged from an increase of 210.8% (April 05) to a decline of 66.7% (June 05).

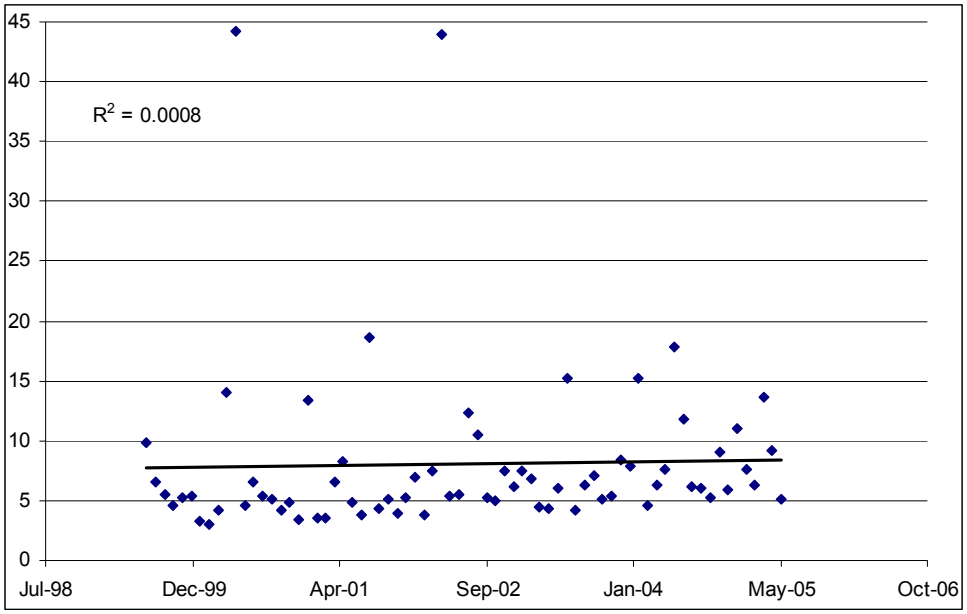
Exhibit 2.17: Mega Millions Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	122.8	42.4	-65.48%	117.9121	178.20%	-4.0%
August	105.2	62.8	-40.35%	61.29248	-2.37%	-41.8%
September	52.6	71.3	35.75%	60.90228	-14.64%	15.9%
October	50.3	50.8	0.98%	52.03079	2.47%	3.5%
November	74.8	53.7	-28.26%	90.95301	69.53%	21.6%
December	62.2	84.0	34.93%	59.27306	-29.43%	-4.8%
January	74.7	78.8	5.50%	110.8418	40.72%	48.5%
February	68.5	152.7	123.05%	76.66852	-49.79%	12.0%
March	44.1	45.8	3.87%	62.36427	36.06%	41.3%
April	43.7	63.1	44.26%	135.9663	115.43%	210.8%
May	60.8	75.5	24.19%	91.51625	21.22%	50.5%
June	152.0	178.1	17.18%	50.67615	-71.55%	-66.7%
FY Total	**91,510**	**95,997**	**4.90%**	**97,066**	**1.11%**	**6.1%**

Source: Massachusetts Lottery

Exhibit 2.18 presents a regression analysis of Mega Millions sales from June 1999 through June 2005. This analysis yields a moderately positive (upward) slope of $309.66 per month. Other things being equal, Mega Millions sales are likely to continue to increase at the rate of $309.66 per month in the near term; as noted, however, the pattern of wide monthly fluctuations in sales will almost certainly continue. The positive outlook for Mega Millions sales is in contrast to the declining sales outlook for Mass Cash, Mass Millions, Megabucks, Numbers Game and Pull Tabs sales. (Instant ticket and keno sales are also likely to increase.)

Exhibit 2.18: Regression Analysis of Monthly Mega Millions Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Keno

Exhibit 2.19 presents monthly sales data for keno since July 1999. Keno sales increased in each month of FY 2004, slowing to 9.03% in June of that year. Sales in eleven of the twelve months of FY 2005 declined. This reversal of the upward trend in keno in FY 2005 probably indicates that this game has reached its natural limit in the Massachusetts marketplace, and implies that keno would be vulnerable to the introduction of machine gaming in the Commonwealth, with further declines in sales likely to occur.

Perhaps relevantly, keno sales in neighboring Rhode Island (where the game is offered by the Rhode Island Lottery) have declined by 17.3% since July 1, 2005 compared to the preceding year; the decline appears to be due in part to Rhode Island's smoking ban, which took effect on March 1, 2005. (Most Rhode Island keno games are played in bars.) Similar declines in racetrack slot machine and/or VLT win occurred in Delaware following the imposition of smoking bans in those States.

Keno is a time-consuming activity that has more in common with casinos and similar gambling pastimes than do purchases of ticket lottery games in newsstands and other sales agencies. As such, keno is subject to somewhat different marketplace pressures and influences than lottery ticket games. While the introduction of slot machines or video lottery terminals (VLTs) in Massachusetts would affect all Massachusetts Lottery games to some degree, the impacts on keno (and possibly bingo, another gambling pastime) are likely to be more pronounced (Section 7). The degree of these impacts would depend greatly on the number of machines authorized, their kind (i.e., reel-spinning slot machines, central determination system VLTs and so forth), their location (at racetracks only, in new casino facilities, etc.), the number and location of machine gaming facilities and other factors.

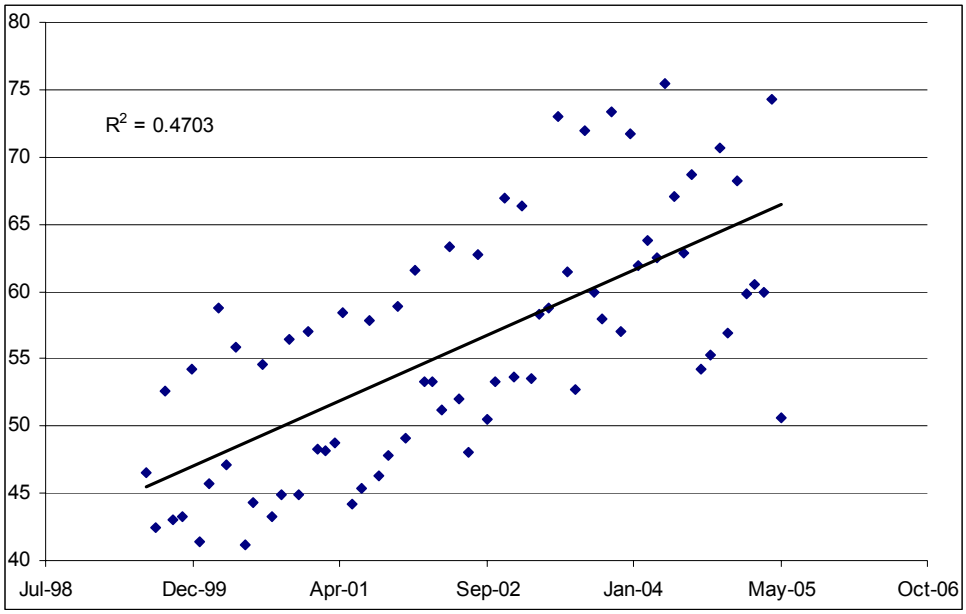
Exhibit 2.19: Keno Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	481.0	527.1	9.58%	628.7	19.27%	30.7%
August	627.0	719.0	14.68%	686.7	-4.50%	9.5%
September	504.6	599.8	18.86%	542.0	-9.62%	7.4%
October	532.5	579.7	8.88%	552.6	-4.68%	3.8%
November	669.3	733.9	9.66%	706.8	-3.69%	5.6%
December	536.1	570.5	6.42%	569.5	-0.18%	6.2%
January	664.0	717.3	8.03%	681.8	-4.95%	2.7%
February	535.1	619.2	15.70%	598.7	-3.31%	11.9%
March	582.9	638.2	9.48%	605.2	-5.17%	3.8%
April	587.6	625.2	6.39%	599.8	-4.06%	2.1%
May	729.9	755.0	3.43%	742.6	-1.64%	1.7%
June	614.8	670.4	9.03%	505.6	-24.57%	-17.8%
FY Total	**706,487**	**775,523**	**9.77%**	**742,007**	**-4.32%**	**5.0%**

Source: Massachusetts Lottery

Exhibit 2.20 presents a regression analysis of keno sales from June 1999 through June 2005. As is the case for instant games and Mega Millions, this analysis yields a positive (upward) slope, of $969.40 per month. Note, however, that monthly keno sales declined on a year over year basis in eleven out of twelve months in FY 2005. This recent downtrend probably indicates that the 1999-2005 regression analysis trend shown in Exhibit 2.19 may not continue in FY 2006, particularly if machine gaming is introduced in Massachusetts.

Exhibit 2.20: Regression Analysis of Monthly Keno Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

Pull Tabs

Exhibit 2.21 presents pull tab sales for each month and the percentage change in sales compared with the corresponding month of the previous year from July 2003 through June 2005.

Exhibit 2.21: Pull Tabs Sales, FY 2003, FY 2004, and FY 2005 ($000)

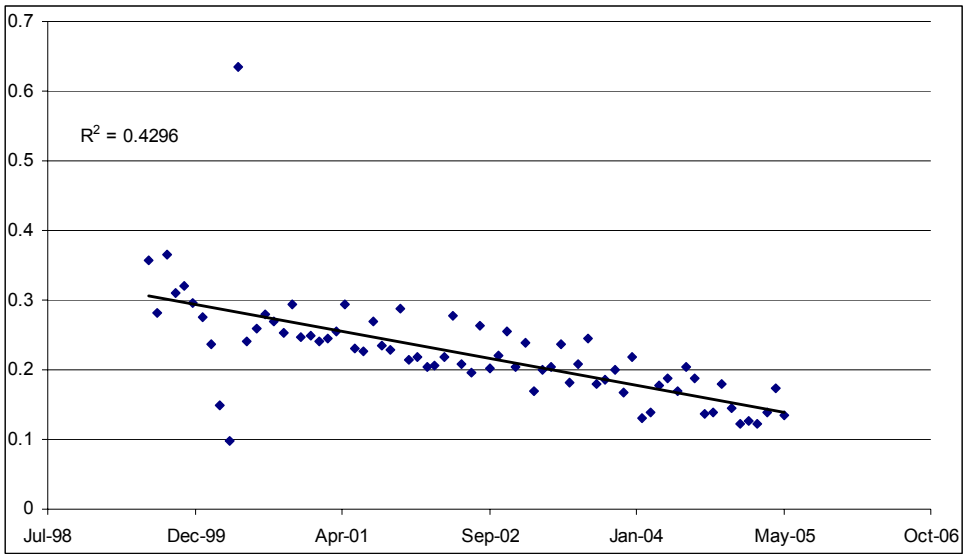
Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July	2.0	2.1	6.03%	2.0	-1.96%	3.9%
August	2.6	2.4	-7.01%	1.9	-22.75%	-28.2%
September	2.0	1.8	-11.32%	1.4	-24.18%	-32.8%
October	2.2	1.9	-15.96%	1.4	-25.46%	-37.4%
November	2.5	2.0	-20.95%	1.8	-10.96%	-29.6%
December	2.0	1.7	-17.78%	1.4	-14.02%	-29.3%
January	2.4	2.2	-9.07%	1.2	-43.26%	-48.4%
February	1.7	1.3	-22.44%	1.3	-4.05%	-25.6%
March	2.0	1.4	-30.36%	1.2	-12.19%	-38.8%
April	2.0	1.8	-12.36%	1.4	-22.63%	-32.2%
May	2.4	1.9	-20.57%	1.7	-7.21%	-26.3%
June	1.8	1.7	-6.54%	1.3	-20.86%	-26.0%
FY Total	**2,569**	**2,245**	**-12.61%**	**1,808**	**-19.47%**	**-29.6%**

Source: Massachusetts Lottery

Total pull tab sales decreased 19.47% in FY 2005. In eleven of twelve months in FY 2005, Pull Tab sales declined compared with the corresponding month in FY 2003, with month-over-month declines from FY03 to FY05 ranging from -48.4% (January) to 3.9% (July).

Exhibit 2.22 presents a regression analysis of pull tab sales from June 1999 through June 2005. This analysis yields a slope of -$77.10 per month, suggesting that, other things being equal and absent changes in the Massachusetts market, pull tab sales are likely continue to decrease at the rate of -$77.10 per month over the near term.

Exhibit 2.22: Regression Analysis of Monthly Pull Tabs Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

CashWinFall

Exhibit 2.23 presents monthly sales data for CashWinFall since its introduction on September 30, 2004. Month-over-month sales growth of CashWinFall has ranged from 61.34% in May 2005 to -25.34% in December 2005; in other words, this game exhibits the peaks-and-valleys sales pattern of lotto-style games.

Exhibit 2.23: CashWinFall Sales, FY 2003, FY 2004, and FY 2005 ($000)

Sales ($000)	FY2003	FY2004	% Change	FY2005	% Change	FY03-FY05 % Change
July			0.00%	0.0	0.00%	0.00%
August			0.00%	0.0	0.00%	0.00%
September			0.00%	38.5	100.00%	100.00%
October			0.00%	44.4	100.00%	100.00%
November			0.00%	53.2	100.00%	100.00%
December			0.00%	39.7	100.00%	100.00%
January			0.00%	44.3	100.00%	100.00%
February			0.00%	35.6	100.00%	100.00%
March			0.00%	39.1	100.00%	100.00%
April			0.00%	32.2	100.00%	100.00%
May			0.00%	51.9	100.00%	100.00%
June			0.00%	39.0	100.00%	100.00%
FY Total	**-**	**-**	**0.00%**	**41,797**	**100.00%**	**100.00%**

Source: Massachusetts Lottery

Summary

The Massachusetts Lottery's portfolio of games consists of five long-established products (Instant Tickets, Numbers Game, and three lotto games), one product which appears to be stale and in decline (Pull Tabs), and one non-ticket game, keno, whose explosive initial growth is easing into maturity. Exhibit 2.24 summarizes the results of the recent sales trends for all the games in the Massachusetts Lottery's current product portfolio.

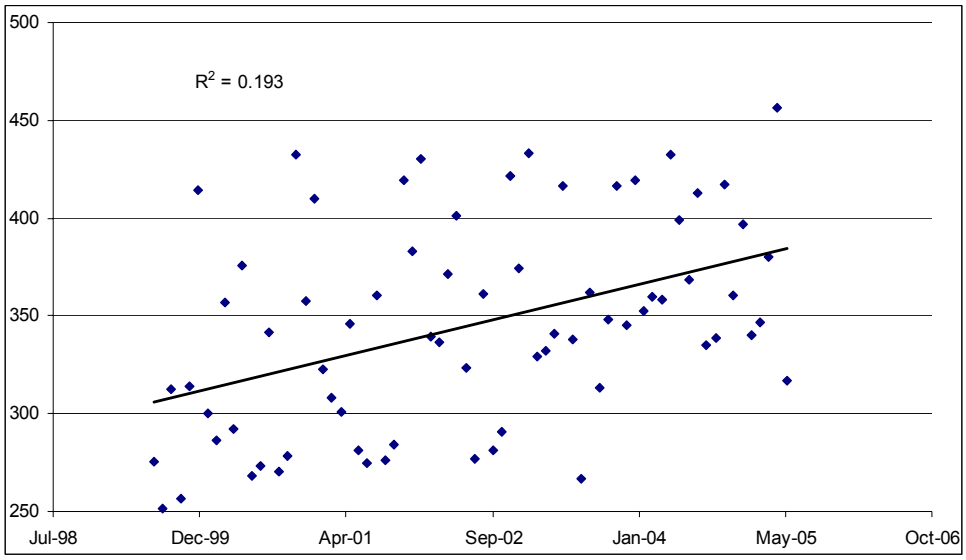
Exhibit 2.24: Massachusetts Lottery Sales by Game, FY 1996 – FY 2005 ($000)

Sales ($000)	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Instant Games	$1,973,491	$2,071,628	$2,085,330	$2,161,154	$2,472,876	$2,728,791	$2,924,769	$2,885,050	$2,977,732	$3,135,418
Mega Millions	0	56,262	55,233	96,034	110,448	69,533	114,010	91,510	95,997	97,066
Numbers Game	382,313	378,852	385,018	376,730	376,952	374,332	374,720	371,645	362,524	352,453
Mass Cash	76,283	67,398	59,758	53,674	50,709	48,225	47,040	45,915	46,198	43,880
Keno	380,835	432,530	470,213	538,346	572,442	593,252	640,045	706,487	775,523	742,007
CashWinFall	0	0	0	0	0	0	0	0	0	41,797
Pull Tabs	4,605	3,165	3,342	3,910	3,563	3,116	2,793	2,569	2,245	1,808
Clean Fun	0	0	0	0	0	2	1	6	0	1
Megabucks	94,287	83,600	74,752	64,603	55,314	54,338	48,977	46,216	48,283	44,559
Mass Millions	117,740	95,577	65,694	63,517	52,874	44,577	41,476	41,750	59,889	6,727
Total Revenue	**$3,029,554**	**$3,189,013**	**$3,199,340**	**$3,357,969**	**$3,695,181**	**$3,916,166**	**$4,193,831**	**$4,191,148**	**$4,368,392**	**$4,465,717**

Source: Massachusetts Lottery

Exhibit 2.25 presents a regression analysis of sales of all Massachusetts Lottery products from July 1999 through June 2005. The regression analysis indicates that despite the fact that five of the games in the Massachusetts Lottery's current product portfolio had declining sales, the combined strength of Instant Ticket games and keno will likely increase total sales at the rate of $969,938 per month going forward at least in the near term, which would translate into an increase in sales of $11.6 million per year. This is, however, only a .04% annual increase, and moreover assumes no increase in competition (from machine gaming or any other source), no change in marketing (advertising budget), and no change in economic conditions from the *status quo*.

Exhibit 2.25: Regression Analysis of Total Massachusetts Lottery Sales, July 1999 to June 2005 ($M)



Source: Christiansen Capital Advisors

A Mature Lottery

The recent trends in Massachusetts Lottery game sales indicate that the Massachusetts Lottery's products are mature. Demand for the games the Lottery currently offers has been satisfied. Tweaking and tactical improvements to these products, in marketing and themes, adjusting the consumer price of individual games, adjusting the matrix of lotto-style games, introducing similar games at new price points and so forth, can increase the sales of individual games and if effectively managed of the Lottery overall, but sales and revenue increases from such measures will not be easy to maintain and are likely to be confined to single digits. Sustained double-digit sales gains in the games the Lottery currently offers, or in similar products should they be introduced, are unlikely, and the Lottery and the Commonwealth of Massachusetts should not expect dramatic increases in revenues from the existing menu of games. Latent, unsatisfied demand for these and similar games, which produced double-digit sales increases in many State lotteries in the 1980s and early 1990s, is no longer present in Massachusetts, and will not be a source in increased Lottery revenues in the years ahead.

This section compares Massachusetts Lottery sales with the sales of similar traditional lottery games in other States to provide perspectives on the Massachusetts Lottery's overall strengths, weaknesses, and relative performance.

All US Lotteries

Sales for each Massachusetts Lottery game are compared with traditional lottery game sales in other States (excluding VLTs) in Exhibit 2.26 (total sales) and Exhibit 2.27 (*per capita* sales).

Exhibit 2.26: State Lottery Sales by Game (Excluding VLTs) FY 2004

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
North East								
Massachusetts	6.4	2,977.7	2.3	$362.5	$250.4	$775.5	$0.0	$4,368.4
Connecticut	3.5	558.0	0.0	178.3	171.3	0.0	0.0	907.7
Delaware	0.8	25.0	0.0	44.7	38.9	0.0	0.0	108.6
D.C.	0.6	38.9	0.0	141.1	50.7	9.7	0.7	241.1
Maine	1.3	150.5	0.0	11.0	24.4	0.0	0.0	185.9
Maryland	5.6	355.0	0.0	500.0	147.7	389.8	2.9	1,395.4
New Hampshir	1.3	157.0	0.0	11.3	68.7	0.0	0.0	237.0
New Jersey	8.7	973.6	0.0	714.3	497.5	0.0	3.0	2,188.4
New York	19.3	2,733.9	0.0	1,350.3	1,194.0	534.3	13.2	5,825.7
Pennsylvania	12.4	989.2	0.0	703.6	659.3	0.0	0.0	2,352.1
Rhode Island	1.1	76.5	0.0	29.7	54.6	88.3	0.2	249.4
Vermont	0.6	68.8	0.0	2.9	20.7	0.0	0.0	92.4
Midwest								
Illinois	12.7	759.6	0.0	475.6	443.4	0.0	9.0	1,687.6
Indiana	6.2	422.1	19.0	61.6	232.2	0.0	0.0	734.9
Kentucky	4.1	357.0	28.7	159.7	177.6	0.0	2.2	725.3
Michigan	10.1	690.2	25.1	733.4	305.8	219.4	0.1	1,973.9
Ohio	11.5	1,166.0	0.0	562.0	402.2	0.0	24.5	2,154.7
West Virginia	1.8	109.8	0.0	13.9	72.1	11.0	0.0	206.9
Wisconsin	5.5	266.6	3.7	34.0	178.6	0.0	0.0	482.9
Plains								
Iowa	3.0	95.3	25.5	8.0	78.1	0.0	1.6	208.5
Kansas	2.7	87.5	4.2	5.3	87.5	39.7	0.2	224.5
Minnesota	5.1	215.7	0.0	13.3	152.5	0.0	5.4	386.9
Missouri	5.8	434.8	21.8	72.4	206.6	51.5	4.0	791.2
Nebraska	1.7	46.3	0.0	0.0	46.3	0.0	0.0	92.6
North Dakota	0.6	0.0	0.0	0.0	5.8	0.0	0.0	5.8
South Dakota	0.8	15.3	0.0	0.0	18.9	0.0	0.0	34.1
South								
Florida	17.4	1,358.1	0.0	541.8	1,045.1	0.0	125.9	3,071.0
Georgia	8.8	1,556.7	0.0	768.8	336.8	47.2	1.0	2,710.5
Louisiana	4.5	111.4	0.0	71.1	157.5	0.0	0.0	340.1
South Carolina	4.2	537.3	0.0	157.7	255.0	0.0	0.0	950.0
Tennessee	5.9	361.9	0.0	26.0	39.8	0.0	0.0	427.7
Texas	22.5	2,323.9	0.0	277.3	835.6	0.0	49.2	3,485.9
Virginia	7.5	630.9	0.0	398.4	233.1	0.0	0.0	1,262.4
Mountain								
Arizona	5.7	183.3	0.0	6.9	176.5	0.0	0.0	366.6
Colorado	4.6	260.9	0.0	0.0	140.3	0.0	0.0	401.3
Idaho	1.4	68.6	1.2	1.2	38.4	0.0	0.0	109.3
Montana	0.9	10.4	0.0	0.0	25.9	0.0	0.4	36.7
New Mexico	1.9	87.0	0.0	2.1	59.5	0.0	0.0	148.7
Far West								
California	35.9	1,339.0	0.0	124.9	1,283.4	168.0	8.6	2,924.0
Oregon	3.6	132.7	2.6	1.4	92.4	116.5	16.6	362.3
Washington	6.2	278.0	0.0	17.3	167.1	6.7	12.4	481.4
Total US	**264.3**	**$23,010.6**	**$134.1**	**$8,583.7**	**$10,472.4**	**$2,457.6**	**$281.1**	**$44,939.5**

Source: TLF Publications, Inc.

Total FY 2004 lottery sales (including keno but excluding VLTs) ranged from highs of $5,825.7 million in New York to a low of $5.8 million in North Dakota. Massachusetts, with total sales of $4,368.4 million, ranked second in total sales. Massachusetts is a medium-sized State in terms of population (6.43 million), but its total lottery sales exceeded those of Texas and approximated New York's, States with populations of about 20 million. In other words, as measured by total sales the Massachusetts Lottery is comparable to lotteries in much larger States.

Exhibit 2.26a presents in-State lotto game sales and multi-State lotto game sales compared to total lotto game sales in FY 2004.

Exhibit 2.26a: In-State Lotto Game Sales and Multi-State Lotto Game Sales Compared to Total Lotto Game Sales FY 2004

State	Pop (M)	In-State Lotto Games	Multi-State Lotto Games	Total Lotto
North East				
Massachusetts	6.4	$154.4	$96.0	**$250.4**
Connecticut	3.5	75.5	95.9	**171.3**
Delaware	0.8	8.9	30.0	**38.9**
D.C.	0.6	8.5	42.2	**50.7**
Maine	1.3	3.4	20.9	**24.4**
Maryland	5.6	57.4	90.3	**147.7**
New Hampshir	1.3	13.7	54.9	**68.7**
New Jersey	8.7	246.2	251.3	**497.5**
New York	19.3	719.5	474.4	**1,194.0**
Pennsylvania	12.4	351.4	307.9	**659.3**
Rhode Island	1.1	3.8	50.9	**54.6**
Vermont	0.6	1.4	19.3	**20.7**
Midwest				
Illinois	12.7	216.9	226.5	**443.4**
Indiana	6.2	78.1	154.1	**232.2**
Kentucky	4.1	43.8	133.9	**177.6**
Michigan	10.1	99.1	206.6	**305.8**
Ohio	11.5	210.4	191.8	**402.2**
West Virginia	1.8	6.2	66.0	**72.1**
Wisconsin	5.5	70.7	108.0	**178.6**
Plains				
Iowa	3.0	4.4	73.7	**78.1**
Kansas	2.7	30.7	56.8	**87.5**
Minnesota	5.1	24.6	127.9	**152.5**
Missouri	5.8	59.4	147.2	**206.6**
Nebraska	1.7	11.7	34.7	**46.3**
North Dakota	0.6	0.0	5.8	**5.8**
South Dakota	0.8	3.2	15.7	**18.9**
South				
Florida	17.4	1,045.1	0.0	**1,045.1**
Georgia	8.8	150.8	186.0	**336.8**
Louisiana	4.5	39.2	118.3	**157.5**
South Carolina	4.2	22.8	232.2	**255.0**
Tennessee	5.9	0.0	39.8	**39.8**
Texas	22.5	600.2	235.4	**835.6**
Virginia	7.5	101.0	132.0	**233.1**
Mountain				
Arizona	5.7	43.7	132.8	**176.5**
Colorado	4.6	55.3	85.0	**140.3**
Idaho	1.4	2.8	35.6	**38.4**
Montana	0.9	6.5	19.4	**25.9**
New Mexico	1.9	8.1	51.5	**59.5**
Far West				
California	35.9	1,283.4	0.0	**1,283.4**
Oregon	3.6	46.5	46.0	**92.4**
Washington	6.2	111.9	55.2	**167.1**
Total US	**264.3**	**$6,020.6**	**$4,451.8**	**$10,472.4**

Source: TLF Publications, Inc.

Exhibit 2.27: State Lottery *Per Capita* Sales by Game (Excluding VLTs) FY 2004

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales per Person
North East								
Massachusetts	6.4	$464.0	$0.4	$56.5	$39.0	$120.9	$0.0	$680.8
Connecticut	3.5	159.3	0.0	50.9	48.9	0.0	0.0	259.0
Delaware	0.8	30.1	0.0	53.8	46.9	0.0	0.0	130.9
D.C.	0.6	70.3	0.0	254.7	91.6	17.5	1.2	435.3
Maine	1.3	114.3	0.0	8.3	18.5	0.0	0.0	141.1
Maryland	5.6	63.9	0.0	90.0	26.6	70.1	0.5	251.1
New Hampshir	1.3	120.8	0.0	8.7	52.8	0.0	0.0	182.4
New Jersey	8.7	111.9	0.0	82.1	57.2	0.0	0.3	251.6
New York	19.3	141.8	0.0	70.0	61.9	27.7	0.0	302.2
Pennsylvania	12.4	79.7	0.0	56.7	53.1	0.0	0.0	189.6
Rhode Island	1.1	70.8	0.0	27.5	50.5	81.7	0.2	230.7
Vermont	0.6	110.8	0.0	4.7	33.3	0.0	0.0	148.8
Midwest								
Illinois	12.7	59.7	0.0	37.4	34.9	0.0	0.0	132.7
Indiana	6.2	67.7	3.0	9.9	37.2	0.0	0.0	117.8
Kentucky	4.1	86.1	6.9	38.5	42.9	0.0	0.5	175.0
Michigan	10.1	68.2	2.5	72.5	30.2	21.7	0.0	195.2
Ohio	11.5	101.8	0.0	49.0	35.1	0.0	2.1	188.0
West Virginia	1.8	60.5	0.0	7.7	39.7	6.0	0.0	114.0
Wisconsin	5.5	48.4	0.7	6.2	32.4	0.0	0.0	87.7
Plains								
Iowa	3.0	32.2	8.6	2.7	26.4	0.0	0.6	70.6
Kansas	2.7	32.0	1.6	1.9	32.0	14.5	0.1	82.1
Minnesota	5.1	42.3	0.0	2.6	29.9	0.0	1.1	75.8
Missouri	5.8	75.6	3.8	12.6	35.9	9.0	0.7	137.5
Nebraska	1.7	26.5	0.0	0.0	26.5	0.0	0.0	53.0
North Dakota	0.6	0.0	0.0	0.0	9.1	0.0	0.0	9.1
South Dakota	0.8	19.8	0.0	0.0	24.5	0.0	0.0	44.3
South								
Florida	17.4	78.1	0.0	31.1	60.1	0.0	7.2	176.5
Georgia	8.8	176.3	0.0	87.1	38.2	5.3	0.1	307.0
Louisiana	4.5	24.7	0.0	15.8	34.9	0.0	0.0	75.3
South Carolina	4.2	128.0	0.0	37.6	60.7	0.0	0.0	226.3
Tennessee	5.9	61.3	0.0	4.4	6.7	0.0	0.0	72.5
Texas	22.5	103.3	0.0	12.3	37.2	0.0	2.2	155.0
Virginia	7.5	84.6	0.0	53.4	31.2	0.0	0.0	169.2
Mountain								
Arizona	5.7	31.9	0.0	1.2	30.7	0.0	0.0	63.8
Colorado	4.6	57.3	0.0	0.0	30.8	0.0	0.0	88.2
Idaho	1.4	49.3	0.8	0.8	27.6	0.0	0.0	78.5
Montana	0.9	11.2	0.0	0.0	28.0	0.0	0.5	39.6
New Mexico	1.9	45.7	0.0	1.1	31.3	0.0	0.0	78.1
Far West								
California	35.9	37.3	0.0	3.5	35.8	4.7	0.2	81.5
Oregon	3.6	36.9	0.7	0.4	25.7	32.4	4.6	100.8
Washington	6.2	44.8	0.0	2.8	26.9	1.1	2.0	77.6
Total US	**264.3**	**$87.1**	**$0.5**	**$32.5**	**$39.6**	**$9.3**	**$1.1**	**$170.1**

Source: TLF Publications, Inc.

Exhibit 2.27 presents *per capita* sales of lottery games (including keno but excluding VLTs) by State for FY 2004.

- Massachusetts ($680.8) had the highest total *per capita* sales. North Dakota ($9.1) had the lowest.

- Massachusetts had the highest *per capita* instant game sales ($464).

- Massachusetts *per capita* numbers game sales ($56.5) ranked 8th of 35 State lotteries offering these games. Seven of the top 10 numbers game sales were in Northeast States.

- Massachusetts *per capita* lotto sales ($39) ranked 13th among the 40 lotteries selling lotto games.

- Massachusetts *per capita* rapid-draw keno sales ($120.7) were the highest of the thirteen lotteries offering this game.

- Massachusetts *per capita* pull tab sales ($0.3) ranked 9th of the 10 lotteries selling pull tabs.

With the exception of pull tabs, the Massachusetts Lottery was the best-performing lottery in the United States or ranked among the leading State lotteries on a *per capita* sales basis. *Per capita* sales of Massachusetts lotto family games, while ranking 13 among the 40 States selling lotto games, were not as impressive as *per capita* Massachusetts Instant Game and keno sales, in both of which categories Massachusetts ranked 1st. This is an indication that there is room for improvement in the Massachusetts Lottery's lotto game portfolio.

Exhibit 2.27a presents p*er capita* in-State lotto game sales and *per* c*apita* multi-State lotto game sales compared to *per capita* total lotto game sales in FY 2004. The Massachusetts Lottery's in-State lotto games perform well in comparison with other U.S. lotteries, though not as well as Massachusetts instant ticket games (which are the top-performing instant games in the country). The Lottery's multi-State lotto game (Mega Millions), however, doesn't do very well in this comparison on a *per capita* sales basis. Massachusetts ranks 7th of the 39 States with in-State lotto tickets in *per capita* sales. Massachusetts ranks 34th of the 39 States with multi-State lotto tickets in *per capita* sales.

Exhibit 2.27a: *Per Capita* In-State Lotto Game Sales and *per Capita* Multi-State Lotto Game Sales Compared to Total *Per Capita* Lotto Sales FY 2004

State	Pop (M)	In-State Lotto Games	Multi-State Lotto Games	Total Lotto
North East				
Massachusetts	6.4	$24.1	$15.0	**$39.0**
Connecticut	3.5	21.5	27.4	**48.9**
Delaware	0.8	10.7	36.2	**46.9**
D.C.	0.6	15.4	76.2	**91.6**
Maine	1.3	2.6	15.9	**18.5**
Maryland	5.6	10.3	16.2	**26.6**
New Hampshir	1.3	10.6	42.3	**52.8**
New Jersey	8.7	28.3	28.9	**57.2**
New York	19.3	37.3	24.6	**61.9**
Pennsylvania	12.4	28.3	24.8	**53.1**
Rhode Island	1.1	3.5	47.1	**50.5**
Vermont	0.6	2.2	31.1	**33.3**
Midwest				
Illinois	12.7	17.1	17.8	**34.9**
Indiana	6.2	12.5	24.7	**37.2**
Kentucky	4.1	10.6	32.3	**42.9**
Michigan	10.1	9.8	20.4	**30.2**
Ohio	11.5	18.4	16.7	**35.1**
West Virginia	1.8	3.4	36.3	**39.7**
Wisconsin	5.5	12.8	19.6	**32.4**
Plains				
Iowa	3.0	1.5	24.9	**26.4**
Kansas	2.7	11.2	20.8	**32.0**
Minnesota	5.1	4.8	25.1	**29.9**
Missouri	5.8	10.3	25.6	**35.9**
Nebraska	1.7	6.7	19.8	**26.5**
North Dakota	0.6	0.0	9.1	**9.1**
South Dakota	0.8	4.2	20.3	**24.5**
South				
Florida	17.4	60.1	0.0	**60.1**
Georgia	8.8	17.1	21.1	**38.2**
Louisiana	4.5	8.7	26.2	**34.9**
South Carolina	4.2	5.4	55.3	**60.7**
Tennessee	5.9	0.0	6.7	**6.7**
Texas	22.5	26.7	10.5	**37.2**
Virginia	7.5	13.5	17.7	**31.2**
Mountain				
Arizona	5.7	7.6	23.1	**30.7**
Colorado	4.6	12.2	18.7	**30.8**
Idaho	1.4	2.0	25.6	**27.6**
Montana	0.9	7.0	20.9	**28.0**
New Mexico	1.9	4.2	27.0	**31.3**
Far West				
California	35.9	35.8	0.0	**35.8**
Oregon	3.6	12.9	12.8	**25.7**
Washington	6.2	18.0	8.9	**26.9**
Total US	**264.3**	**$22.8**	**$16.8**	**$39.6**

Source: TLF Publications, Inc.

Comparable State Lotteries

Many of the States included in these nationwide tabulations are not particularly comparable to Massachusetts. The degree of urbanization, stage of the product life cycle, the balance between supply and demand for various games, and the availability of alternative kinds of gambling available all influence the sales of traditional lottery games.

Exhibit 2.28 presents sales by game (including keno but excluding VLTs) for State lotteries that are comparable to the Massachusetts Lottery in terms of demographic profile and lottery game portfolio for FY 2004. These comparable lotteries include all the non-rural lottery States from Maryland (inclusive) to the north and from Illinois (inclusive) to the east. The rural States within this geographic region that are excluded are West Virginia, Maine, New Hampshire, and Vermont. Rhode Island is excluded because its lottery offerings include electronic gaming devices (VLTs, or video lottery terminals) at pari-mutuel facilities. West Virginia and Delaware likewise allow lottery VLTs at pari-mutuel racetracks. VLTs restructure lottery markets, affecting demand curves for the various traditional lottery games in complex ways that may vary considerably from lottery to lottery. Moreover, Delaware, with a population of 700,000, is excluded since its small population makes lottery game sales particularly sensitive to minor environmental influences or variations. Indiana is excluded since its lottery began in late 1989; the comparable lotteries all started up between 1967 and 1974. Also included are Florida, Georgia, California, Texas and Michigan, large States with urban populations.

Exhibit 2.28: Comparable State Lottery Sales by Game FY 2004

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
California	35.9	$1,339.0	$0.0	$124.9	$1,283.4	$168.0	$8.6	$2,924.0
Connecticut	3.5	558.0	-	178.3	171.3	-	-	907.7
Florida	17.4	1,358.1	-	541.8	1,045.1	-	125.9	3,071.0
Georgia	8.8	1,556.7	-	768.8	336.8	47.2	1.0	2,710.5
Illinois	12.7	759.6	-	475.6	443.4	-	9.0	1,687.6
Maryland	5.6	355.0	-	500.0	147.7	389.8	2.9	1,395.4
Massachusetts	6.4	2,977.7	2.3	362.5	250.4	775.5	-	4,368.4
Michigan	10.1	690.2	25.1	733.4	305.8	219.4	0.1	1,973.9
New Jersey	8.7	973.6	-	714.3	497.5	-	3.0	2,188.4
New York	19.3	2,733.9	-	1,350.3	1,194.0	534.3	13.2	5,825.7
Ohio	11.5	1,166.0	-	562.0	402.2	-	24.5	2,154.7
Pennsylvania	12.4	989.2	-	703.6	659.3	-	-	2,352.1
Texas	22.5	2,323.9	-	277.3	835.6	-	49.2	3,485.9
Total	**174.8**	**17,780.9**	**27.3**	**7,292.7**	**7,572.6**	**2,134.2**	**237.4**	**35,045.1**

Source: TLF Publications, Inc.

Exhibit 2.28 presents sales for these comparable State lotteries by game and in total for FY 2004.

- Massachusetts ranked eleventh among these thirteen States in population, but Massachusetts total lottery sales ($4,368.4 million) ranked second only to New York ($5,825.7 million). In other words, as measured by total sales, the Massachusetts Lottery outperforms most comparable lotteries, even lotteries in States with larger populations.

- Massachusetts instant game sales ($2,977.7 million) ranked first.

- Massachusetts numbers game sales ($362.5 million) ranked eleventh, a reflection of Massachusetts's relatively small population.

- Massachusetts lotto game sales ($250.4 million) ranked eleventh, likewise a reflection of Massachusetts's relatively small population.

- Massachusetts rapid-draw keno sales ($775.5) ranked first of the six States offering this game in FY 2004.

- Massachusetts pull tabs sales ranked second of the two States offering pull tabs.

Massachusetts Lottery instant games sales were by far the strongest of any comparable State. Massachusetts keno sales were also strong. Sales of Massachusetts Lottery numbers game and lotto family games were about average for this group of States.

Exhibit 2.28a presents in-State lotto and multi-State lotto game sales for comparable State lotteries for FY 2004. Two large States, California and Florida, had no multi-State lotto game in FY 2004. Of the remaining eleven States, Massachusetts ranked 9th in total lotto sales, 7th in In-State lotto sales, and 9th in multi-State lotto sales.

Exhibit 2.28a: Comparable State Lotto Sales: In-State Lotto Game Sales and Multi-State Lotto Game Sales for FY 2004

State	Pop (M)	In-State Lotto Games	Multi-State Lotto Games	Total Lotto
California	35.9	$1,283.4	$0.0	**$1,283.4**
Connecticut	3.5	75.5	95.9	**171.3**
Florida	17.4	1,045.1	0.0	**1,045.1**
Georgia	8.8	150.8	186.0	**336.8**
Illinois	12.7	216.9	226.5	**443.4**
Maryland	5.6	57.4	90.3	**147.7**
Massachusetts	6.4	154.4	96.0	**250.4**
Michigan	10.1	99.1	206.6	**305.8**
New Jersey	8.7	246.2	251.3	**497.5**
New York	19.3	719.5	474.4	**1,194.0**
Ohio	11.5	210.4	191.8	**402.2**
Pennsylvania	12.4	351.4	307.9	**659.3**
Texas	22.5	600.2	235.4	**835.6**
Total US	**174.8**	**$5,210.4**	**$2,362.2**	**$7,572.6**

Source: TLF Publications, Inc.

Exhibit 2.29: Comparable State Lottery *Per Capita* Sales by Game FY 2004

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
California	35.9	$37.3	$0.0	$3.5	$35.8	$4.7	$0.2	$81.5
Connecticut	3.5	159.3	0.0	50.9	48.9	0.0	0.0	259.0
Florida	17.4	78.1	0.0	31.1	60.1	0.0	7.2	176.5
Georgia	8.8	176.3	0.0	87.1	38.2	5.3	0.1	307.0
Illinois	12.7	59.7	0.0	37.4	34.9	0.0	0.7	132.7
Maryland	5.6	63.9	0.0	90.0	26.6	70.1	0.5	251.1
Massachusetts	6.4	464.0	0.4	56.5	39.0	120.9	0.0	680.8
Michigan	10.1	68.2	2.5	72.5	30.2	21.7	0.0	195.2
New Jersey	8.7	111.9	0.0	82.1	57.2	0.0	0.3	251.6
New York	19.3	141.8	0.0	70.0	61.9	27.7	0.7	302.2
Ohio	11.5	101.8	0.0	49.0	35.1	0.0	2.1	188.0
Pennsylvania	12.4	79.7	0.0	56.7	53.1	0.0	0.0	189.6
Texas	22.5	103.3	0.0	12.3	37.2	0.0	2.2	155.0
Total	**174.8**	**$101.7**	**$0.2**	**$41.7**	**$43.3**	**$12.2**	**$1.4**	**$200.5**

Source: TLF Publications, Inc.

Exhibit 2.29 presents *per capita* sales for the Massachusetts Lottery and for similar lottery games in comparable States in FY 2004.

- Massachusetts ($680.8) ranked first in *per capita* total sales.
- Massachusetts ($464) ranked first in *per capita* instant game sales, more than three times the level of any other State.
- Massachusetts ($56.5) ranked seventh out of thirteen in *per capita* numbers game sales.
- Massachusetts ($39) ranked sixth in *per capita* lotto sales, after New York ($61.9), Florida ($61.4), New Jersey ($57.9), Pennsylvania ($53.4), and Connecticut ($49.2).
- Massachusetts had the highest *per capita* rapid-draw keno sales of the six States offering this game.
- Massachusetts Lottery *per capita* pull tab sales were about equal to Michigan's, the only other State selling pull tabs in FY 2004.

In summary, on a *per capita* sales basis Massachusetts ranked first among the subset of comparable lotteries and had by far the strongest *per capita* instant game sales of the comparable States in FY 2004. Massachusetts Lottery *per capita* keno sales were also strong. Massachusetts Lottery *per capita* sales of numbers game and of big-jackpot lotto games were about average for this group of comparable States.

Exhibit 2.29a: Comparable State Lottery *Per Capita* Lotto Sales FY 2004 – *Per Capita* In-State Lotto Game Sales and *Per Capita* Multi-State Lotto Game Sales

State	Pop (M)	In-State Lotto Games	Multi-State Lotto Games	Total Lotto
California	35.9	$35.8	$0.0	**$35.8**
Connecticut	3.5	21.5	27.4	**48.9**
Florida	17.4	60.1	0.0	**60.1**
Georgia	8.8	17.1	21.1	**38.2**
Illinois	12.7	17.1	17.8	**34.9**
Maryland	5.6	10.3	16.2	**26.6**
Massachusetts	6.4	24.1	15.0	**39.0**
Michigan	10.1	9.8	20.4	**30.2**
New Jersey	8.7	28.3	28.9	**57.2**
New York	19.3	37.3	24.6	**61.9**
Ohio	11.5	18.4	16.7	**35.1**
Pennsylvania	12.4	28.3	24.8	**53.1**
Texas	22.5	26.7	10.5	**37.2**
Total US	**174.8**	**$29.8**	**$13.5**	**$43.3**

Source: TLF Publications, Inc.

Exhibit 2.29a presents *per capita* in-State lotto game sales, *per capita* multi-State lotto sales and *per capita* total lotto sales for this subset of comparable States. Two large States, California and Florida, had no multi-State lotto game in FY 2004. Of the remaining eleven States, Massachusetts ranked 11th in *per capita* total lotto sales, 10th in *per capita* in-State lotto sales, and 11th in *per capita* multi-State lotto sales.

Product Contributions to Sales

Exhibit 2.30 calculates the proportion of sales generated by individual games as a percentage of total sales in FY 2004. The exhibit provides a measure of the relative importance of individual games (as, for example, instant games) to a lottery's total sales.

Exhibit 2.30: Comparable State Lottery Product Contribution to Total Sales FY 2004

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
California	35.89	45.8%	0.0%	4.3%	43.9%	5.7%	0.3%	100.00%
Connecticut	3.50	61.5%	0.0%	19.6%	18.9%	0.0%	0.0%	100.00%
Florida	17.40	44.2%	0.0%	17.6%	34.0%	0.0%	4.1%	100.00%
Georgia	8.83	57.4%	0.0%	28.4%	12.4%	1.7%	0.0%	100.00%
Illinois	12.71	45.0%	0.0%	28.2%	26.3%	0.0%	0.5%	100.00%
Maryland	5.56	25.4%	0.0%	35.8%	10.6%	27.9%	0.2%	100.00%
Massachusetts	6.42	68.2%	0.1%	8.3%	5.7%	17.8%	0.0%	100.00%
Michigan	10.11	35.0%	1.3%	37.2%	15.5%	11.1%	0.0%	100.00%
New Jersey	8.70	44.5%	0.0%	32.6%	22.7%	0.0%	0.1%	100.00%
New York	19.28	46.9%	0.0%	23.2%	20.5%	9.2%	0.2%	100.00%
Ohio	11.46	54.1%	0.0%	26.1%	18.7%	0.0%	1.1%	100.00%
Pennsylvania	12.41	42.1%	0.0%	29.9%	28.0%	0.0%	0.0%	100.00%
Texas	22.49	66.7%	0.0%	8.0%	24.0%	0.0%	1.4%	100.00%
Total	**174.8**	**50.7%**	**0.1%**	**20.8%**	**21.6%**	**6.1%**	**0.7%**	**100.0%**

Source: TLF Publications, Inc.

The Massachusetts Lottery has the highest proportion of instant game sales to total sales (68%) of any lottery in this group. The proportion of instant game sales to total sales in Texas is almost as high (66.7%). Connecticut (61.5%), Georgia (57.4%) and Ohio (54.1%) all derive more than 50% of their total sales from instant games. In contrast, numbers (8.3%) and Lotto (5.7%) contribute markedly smaller percentages of total sales in the Massachusetts Lottery than these games do in most comparable States. In part, this difference reflects the substantial contribution to Massachusetts Lottery total sales made by keno (17.7%).

Exhibit 2.30a presents in-State lotto game sales and multi-State lotto game sales as percentages of total lotto sales for the subset of comparable lotteries in FY 2004. Two large States, California and Florida, had no multi-State lotto game in FY 2004. Of the remaining eleven States, Massachusetts in-State lotto made the second-highest highest percentage contribution to total lotto sales of any comparable State (61.7%), only Texas (71.8%) ranking higher in this respect. As noted, population size and in-State lotto sales are positively correlated: other things being equal, lotto games in States with large populations generate large jackpots, and jackpot size and sales are positively correlated in lotto games. The fact that Massachusetts, with only the third-largest population in this subset of comparable States, had the second-highest contribution to total lotto sales from its in-State lotto games indicates that while Massachusetts lotto games overall are not performing as well as Massachusetts instant games and keno, they are performing comparatively well in relation to lotto games in States that are Massachusetts's peers.

Exhibit 2.30a: Comparable State Lotto Product Contributions – In-State Lotto Game Sales and Multi-State Lotto Game Sales as a Percentage of Total Lotto Sales FY 2004

State	Pop (M)	In-State Lotto Games	Multi-State Lotto Games	Total Lotto
California	35.9	100.0%	0.0%	**100.0%**
Connecticut	3.5	44.1%	55.9%	**100.0%**
Florida	17.4	100.0%	0.0%	**100.0%**
Georgia	8.8	44.8%	55.2%	**100.0%**
Illinois	12.7	48.9%	51.1%	**100.0%**
Maryland	5.6	38.9%	61.1%	**100.0%**
Massachusetts	6.4	61.7%	38.3%	**100.0%**
Michigan	10.1	32.4%	67.6%	**100.0%**
New Jersey	8.7	49.5%	50.5%	**100.0%**
New York	19.3	60.3%	39.7%	**100.0%**
Ohio	11.5	52.3%	47.7%	**100.0%**
Pennsylvania	12.4	53.3%	46.7%	**100.0%**
Texas	22.5	71.8%	28.2%	**100.0%**
Total US	**174.8**	**68.8%**	**31.2%**	**100.0%**

Source: TLF Publications, Inc.

Exhibit 2.31 summarizes sales changes by game category for FY 2004 *versus* FY 2003 for all 41 lottery jurisdictions. This exhibit shows the number of States where sales increased, decreased, or remained stable for total sales, instant games, numbers games, big-jackpot lotto, Cash/Little Lotto, fast draw keno, and pull tabs. The bottom row of the table indicates whether the Massachusetts Lottery's total sales and sales for each game increased or decreased.

Exhibit 2.31: Performance Changes by Game Category for U.S. Lotteries FY 2004 vs. FY 2003

04 vs. 03	Instant	Pull Tab	Numbers	Lotto	Keno	Total Sales
Increased	38	0	18	34	9	39
No Change	1	0	4	0	0	0
Decreased	0	9	13	5	4	0
# States	39	9	35	39	13	39
Massachusetts	↑	↓	↓	↑	↑	↑

** Note: North Dakota is excluded from our FY04 FY03 comparative data because the lottery began operation on March 23rd, 2004. Likewise, Tennessee is excluded from our FY04 FY03 comparative data because the lottery began operation in January 2004.

Source: TLF Publications, Inc.

- Massachusetts Lottery total sales increased, in line with the national trend: All 39 jurisdictions had sales increases.

- Sales of Massachusetts instant tickets increased, in line with the nationwide trend (38 of 39 lotteries).

- Sales of Massachusetts numbers games decreased; in contrast, sales of numbers games increased in 18 of the 35 States where these games were available, and held constant in four more of the States where numbers games were available.

- Massachusetts lotto game sales rose, in line with national trends (lotto game sales increased in 34 of the 39 States in which lotto games were available).

- Massachusetts pull tab sales dropped, in line with trends in all nine of the States selling these games.

- Massachusetts keno sales increased, in line with trends in nine of thirteen jurisdictions where keno was available.

Exhibit 2.32 presents percentage changes for each game in FY 2004 compared with FY 2003 for each of the 41 U.S. lotteries and calculates total percentage changes by game for all 41 U.S. lotteries. The data set reflected in Exhibits 2.32 and 2.33 is different than the data set used to create the exhibits in part II, section 1; despite some resulting inconsistencies these two exhibits are included to provide an overall comparison of all percentage changes in game sales for all U.S. lotteries in FY 2004 and FY 2003.

Exhibit 2.32: Percentage Changes by Game FY 2004 vs. FY 2003

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
North East								
Massachusetts	6.4	3.2%	-12.4%	-2.5%	11.1%	9.8%		4.2%
Connecticut	3.5	5.1%		-1.9%	12.1%			4.9%
Delaware	0.8	12.0%		4.9%	3.9%			6.1%
D.C.	0.6	5.5%		-0.7%	-5.0%	156.1%	-59.8%	1.4%
Maine	1.3	20.5%		3.5%	-16.3%			12.9%
Maryland	5.6	12.1%		-0.1%	15.6%	3.3%		5.5%
New Hampshir	1.3	4.0%		3.0%	15.9%			7.1%
New Jersey	8.7	8.0%		-2.6%	17.1%		-81.5%	5.4%
New York	19.3	14.5%		1.3%	4.1%	4.7%	-19.8%	8.0%
Pennsylvania	12.4	24.2%		-4.0%	9.2%			10.3%
Rhode Island	1.1	1.0%		0.1%	13.9%	3.2%		4.4%
Vermont	0.6	2.6%		3.8%	116.3%			16.3%
Midwest								
Illinois	12.7	12.2%		-0.1%	11.2%		-30.2%	7.8%
Indiana	6.2	9.3%	-1.9%	-0.7%	18.9%		-100.0%	10.6%
Kentucky	4.1	11.6%	-8.8%	1.3%	11.3%		-55.0%	7.7%
Michigan	10.1	1.1%		3.1%	17.3%	1528.5%	-99.3%	17.4%
Ohio	11.5	7.1%		1.1%	-0.9%		-10.0%	3.7%
West Virginia	1.8	4.2%		-4.9%	20.0%	-8.2%		7.7%
Wisconsin	5.5	8.8%	-15.0%	-0.7%	20.4%		-100.0%	11.0%
Plains								
Iowa	3.0	12.1%	-10.0%	33.0%	14.9%		204.9%	11.0%
Kansas	2.7	10.1%	-11.7%	-5.3%	21.6%	2.0%	-91.2%	10.6%
Minnesota	5.1	2.3%		-5.7%	20.4%			10.0%
Missouri	5.8	10.4%	-12.8%	3.8%	16.9%	21.0%		11.7%
Nebraska	1.7	14.4%			14.5%			14.4%
North Dakota	0.6							
South Dakota	0.8	14.9%			22.9%			19.2%
South								
Florida	17.4	26.5%		5.7%	-11.8%		31.3%	7.1%
Georgia	8.8	16.7%		0.5%	16.3%	-16.9%	-85.7%	10.5%
Louisiana	4.5	8.7%		8.5%	9.9%			9.2%
South Carolina	4.2	26.0%		33.0%	42.1%			31.2%
Tennessee	5.9							
Texas	22.5	9.1%		6.2%	25.2%		-32.1%	11.3%
Virginia	7.5	16.1%		2.9%	13.7%			11.1%
Mountain								
Arizona	5.7	15.1%		3.3%	12.8%			13.8%
Colorado	4.6	2.6%			2.3%			2.5%
Idaho	1.4	12.4%	-6.3%	-8.7%	10.9%			11.4%
Montana	0.9	2.4%			5.6%			5.9%
New Mexico	1.9	8.4%		9.1%	8.6%			8.5%
Far West								
California	35.9	10.5%		10.7%	1.5%	-6.8%	-29.4%	5.1%
Oregon	3.6	-0.3%	-20.1%	-13.2%	3.2%	4.6%	4.9%	2.1%
Washington	6.2	14.9%		-4.8%	-5.7%	-7.9%	-22.0%	4.6%
Total	**264.3**	**12.9%**	**11.3%**	**1.5%**	**8.5%**	**14.5%**	**-11.7%**	**9.4%**

** Note: North Dakota is excluded from our FY04 FY03 comparative data because the lottery began operation on March 23rd, 2004. Likewise, Tennessee is excluded from our FY04 FY03 comparative data because the lottery began operation in January 2004.

Source: TLF Publications, Inc.

Exhibit 2.33: Percentage Changes by Game in Comparable States FY 2004 vs. FY 2003

State	Pop (M)	Instant	Pull Tab	Numbers	Lotto	Keno	Other	Total Sales
Michigan	10.1	1.1%	0.0%	3.1%	17.3%	1528.5%	-99.3%	17.4%
Georgia	8.8	16.7%	0.0%	0.5%	16.3%	-16.9%	-85.7%	10.5%
Pennsylvania	12.4	24.2%	0.0%	-4.0%	9.2%	0.0%	0.0%	10.3%
Florida	17.4	26.5%	0.0%	5.7%	-11.8%	0.0%	31.3%	7.1%
Illinois	12.7	12.2%	0.0%	-0.1%	11.2%	0.0%	-30.2%	7.8%
New York	19.3	14.5%	0.0%	1.3%	4.1%	4.7%	-19.8%	8.0%
California	35.9	10.5%	0.0%	10.7%	1.5%	-6.8%	-29.4%	5.1%
Maryland	5.6	12.1%	0.0%	-0.1%	15.6%	3.3%	0.0%	5.5%
New Jersey	8.7	8.0%	0.0%	-2.6%	17.1%	0.0%	-81.5%	5.4%
Connecticut	3.5	5.1%	0.0%	-1.9%	12.1%	0.0%	0.0%	4.9%
Massachusetts	6.4	3.2%	-12.4%	-2.5%	11.1%	9.8%	0.0%	4.2%
Ohio	11.5	7.1%	0.0%	1.1%	-0.9%	0.0%	-10.0%	3.7%
Texas	22.5	9.1%	0.0%	6.2%	25.2%	0.0%	-32.1%	11.3%
Total	174.8	**12.9%**	**11.3%**	**1.5%**	**8.5%**	**14.5%**	**-11.7%**	**9.4%**

Source: TLF Publications, Inc.

Exhibit 2.33 presents FY 2004 *versus* FY 2003 sales by game for the 13 comparable State lotteries, all of which have a similar game portfolio. State lotteries are ranked according to the size of their increase in total sales in FY 2004 *versus* 2003. In this ranking the Massachusetts Lottery ranks close to the bottom (11th). In other words, while the Massachusetts Lottery ranks at or near the top of comparable lotteries in terms of sales in relation to population, and in this sense is the best-performing lottery in the United States, it among the slowest-growing comparable lotteries in FY 2004. The comparatively slow growth of the Massachusetts Lottery in FY 2004 is almost certainly a consequence of its high performance: in many respects the Massachusetts Lottery is optimized compared to its peers.

In terms of growth rates in individual games:

- All of these comparable States but one (Texas) reported total sales increases in FY 2004. Massachusetts, with an increase in total sales of only 4.2%, was (with New Jersey and Connecticut) third lowest.

- Ten of the thirteen States out-performed Massachusetts in instant game sales growth.

- Massachusetts was one of five States with reduced growth in numbers games sales (-2.0%).

- Massachusetts tied with Illinois for the sixth highest growth (11%) in lotto games.

Summary

Despite its best-in-the-nation performance compared to both all U.S. lotteries and the subset of lotteries most comparable to Massachusetts, the Massachusetts Lottery's FY 2004 performance *vs*. its performance in FY 2003 presents something of a mixed picture. Sales of instant games, which accounted for 68.2% of all Massachusetts Lottery sales, increased by only 3.2% in FY 2004. This may be an indication that the Massachusetts market for instant games is saturated. If so, given the Massachusetts Lottery's dependence on instant games, this is a cause for concern: if the Massachusetts market for instant games is saturated the Commonwealth cannot expect substantial revenue growth from the Massachusetts Lottery's most important game in coming years. While both keno and lotto games showed reasonably healthy sales increases (11% and 10% respectively), numbers games sales declined by 2%. Overall, these results suggest that the Massachusetts Lottery is pushing the limits of market demand for the games it currently offers.

Market Penetration and Revenue Efficiency

Two additional ways to measure lottery performance is to compare them with respect to market penetration and their efficiency in generating government revenue.

Market penetration is measured by the percentage of personal income spent on lottery games.

Efficiency in generating revenue is measured in three ways:

1. Lottery profits (governmental revenue) as a percentage of personal income,

2. Lottery profits as a percentage of total sales, and

3. Operating expenses as a percentage of sales (i.e., the cost of generating a sales dollar).

Market Penetration

Exhibit 2.34 provides State personal income and percentage of personal income represented by total sales, gross revenues, and government profits for 41 lotteries.

Exhibit 2.35 provides total FY 2004 sales, total prizes, gross revenues, operating expenses, and government profits for these same 41 lotteries. Exhibit 2.35 also calculates three ratios: prizes, expenses, and profits as a percentage of sales, and provides *per capita* profits.

In terms of market penetration, Massachusetts ranked first (1.62%) in total sales as a percentage of personal income (Exhibit 3.9). Georgia (1.02%) ranked second. North Dakota (0.03%) was last. Well over half of U.S. lotteries had market penetration rates (i.e., sales as a percentage of State personal income) of 0.60% or less, and the majority measured 0.90% or less. By this measure, the Massachusetts Lottery is two to three times as effective as the majority of U.S. lotteries.

Exhibit 2.34 also shows gross revenues, defined as total sales minus prizes, as a percentage of personal income. This measure is relevant because while lottery consumer pricing is roughly similar variations in the consumer price of playing lotteries do exist from one State to another (with Massachusetts having the lowest consumer prices of all U.S. lotteries, due to the low price, 23.7%, of its instant ticket games). With respect to this measure the Massachusetts Lottery (0.45%) ranked a close second after Georgia (0.46%).

Efficiency

A lottery's efficiency in generating government revenue is a complex function of multiple variables, including the competitive landscape, marketing, promotions, and the distribution of its products. By all the measures we employed the Massachusetts Lottery is a very efficient generator of government revenue. Overall, the Massachusetts Lottery is the most efficient lottery in the United States.

A lottery's profits can be expressed in two ways: as a percentage of gross sales, or as *per capita* profits. As Exhibit 2.35 shows, New Jersey brought the highest percentage of sales (36.3%) down to its bottom line in FY 2004. California (35.7%) and Louisiana (35.6%) were second and third in this ranking. Massachusetts did considerably less well in this respect, returning 20.9% of sales to government in FY 2004, significantly less (in percentage of sales terms) than lotteries in other States with large populations. In part this is due to the low consumer price of the Massachusetts Lottery's most important game, instant tickets. Both Massachusetts and its neighbor, Vermont, which rank near the bottom in terms of percentage of sales returned to government, allocate very large percentages of sales to prizes (72.07% in Massachusetts, 62.3% in Vermont), i.e., have low consumer prices (see following subsection).

Government Profits as Percentage of Personal Incomes is a measure of how efficient a lottery is in relation to State personal income. The last column of Exhibit 2.34 presents this measure for each of the 41 State lotteries in FY 2004.

The last column of Exhibit 2.35 presents *per capita* lottery profits (i.e., profits divided by population). Massachusetts, with *per capita* lottery profits of $142, ranked 1st. The District of Columbia ($131) ranked second. North Dakota ($2.50) ranked last.

Operating Expense as a Percentage of Sales measures the cost (how many cents) of generating one dollar of sales. Exhibit 2.35 shows that in fiscal 2004, the percentage of sales allocated to expenses ranged from a low of 7.02% (or 7 cents) in New Jersey to high of 24.4% in North Dakota and 22.8% in New Mexico. On average, states allocated 14.2% of sales to expenses, excluding the States that had a negative expense/sales ratio. The Massachusetts Lottery compares very favorably by this measure of efficiency at 7.05% of sales allocated to expenses, essentially the same as New Jersey.

Exhibit 2.34: Lottery Effectiveness FY 2004

State	Personal Income ($ Millions)	Total Sales (as a % of personal income)	Gross Revenue (as a % of personal income)	Gov't Profits (as a % of personal income)
North East				
Massachusetts	270,145	1.62%	0.45%	0.34%
Connecticut	159,435	0.57%	0.23%	0.18%
Delaware	39,482	0.28%	0.14%	0.10%
D.C.	28,839	0.84%	0.41%	0.25%
Maine	39,482	0.47%	0.18%	0.11%
Maryland	220,261	0.63%	0.27%	0.21%
New Hampshire	47,661	0.50%	0.21%	0.15%
New Jersey	362,190	0.60%	0.26%	0.22%
New York	737,039	0.79%	0.34%	0.26%
Pennsylvania	412,591	0.57%	0.25%	0.20%
Rhode Island	36,936	0.68%	0.27%	0.17%
Vermont	19,721	0.47%	0.18%	0.10%
Midwest				
Illinois	441,485	0.38%	0.16%	0.13%
Indiana	187,565	0.39%	0.16%	0.10%
Kentucky	112,566	0.64%	0.25%	0.17%
Michigan	324,134	0.61%	0.27%	0.20%
Ohio	356,774	0.60%	0.25%	0.18%
Wisconsin	176,636	0.27%	0.12%	0.07%
West Virginia	46,619	0.02%	0.18%	0.06%
Plains				
Iowa	91,500	0.23%	0.10%	0.06%
Kansas	84,810	0.26%	0.12%	0.08%
Minnesota	184,515	0.21%	0.09%	0.05%
Missouri	175,611	0.45%	0.17%	0.13%
Nebraska	56,393	0.16%	0.07%	0.04%
North Dakota	18,553	0.03%	0.02%	0.01%
South Dakota	23,602	0.14%	3.72%	0.03%
South				
Florida	547,312	0.56%	0.25%	0.19%
Georgia	265,538	1.02%	0.46%	0.29%
Louisiana	122,913	0.28%	0.14%	0.10%
South Carolina	113,988	0.83%	0.35%	0.25%
Tennessee	175,885	0.24%	0.12%	0.07%
Texas	690,376	0.50%	0.21%	0.15%
Virginia	269,862	0.47%	0.20%	0.15%
Mountain				
Arizona	164,324	0.22%	0.10%	0.06%
Colorado	166,153	0.24%	0.10%	0.06%
Idaho	37,394	0.29%	0.12%	0.07%
Montana	25,643	0.14%	0.07%	0.03%
New Mexico	49,778	0.30%	0.14%	0.07%
Far West				
California	1,262,454	0.23%	0.11%	0.08%
Oregon	41,176	0.88%	0.40%	0.14%
Washington	217,240	0.22%	0.09%	0.05%
Total	**8,804,581**	**0.51%**	**0.21%**	**0.16%**

Source: TLF Publications, Inc.

Exhibit 2.35: U.S. Lotteries FY 2004 Prizes, Expenses, and Government Profits

State	Total Sales	Prizes	Gross Revenue ($ Millions)	Op. Expenses	Gov't Profits	Prizes	Expenses	Gov't Profits	Per Cap Profits ($)
						(as a % of sales)			
North East									
Massachusetts	$4,368.4	$3,148.5	$1,219.9	$307.9	$912.0	72.1%	7.0%	20.9%	$141.9
Connecticut	907.7	538.3	369.3	88.6	280.8	59.3%	9.8%	30.9%	80.6
Delaware	108.6	53.2	55.4	*17.6*	*38.1*	49.0%	16.2%	35.1%	38.1
D.C.	241.1	122.3	118.8	45.3	73.5	50.7%	18.8%	30.5%	130.6
Maine	185.9	114.9	71.0	28.5	42.5	61.8%	15.3%	22.9%	32.9
Maryland	1,395.4	795.2	600.2	141.9	458.4	57.0%	10.2%	32.8%	84.0
New Hampshire	237.0	137.2	99.9	26.1	73.7	57.9%	11.0%	31.1%	57.8
New Jersey	2,188.4	1,239.7	948.7	153.7	795.0	56.7%	7.0%	36.3%	92.5
New York	5,825.7	3,306.3	2,519.4	*578.5*	*1,893.6*	56.8%	9.9%	32.5%	98.8
Pennsylvania	2,352.1	1,305.9	1,046.2	229.0	817.3	55.5%	9.7%	34.7%	66.3
Rhode Island	249.4	148.4	101.0	*38.1*	*63.7*	59.5%	15.3%	25.5%	58.9
Vermont	92.4	57.6	34.8	15.2	19.6	62.3%	16.4%	21.2%	31.8
Midwest									
Illinois	1,687.6	973.8	713.8	137.7	576.1	57.7%	8.2%	34.1%	45.5
Indiana	734.9	436.5	298.3	102.6	195.8	59.4%	14.0%	26.6%	31.6
Kentucky	725.3	439.2	286.1	92.6	193.5	60.6%	12.8%	26.7%	47.3
Michigan	1,973.9	1,099.7	874.2	229.4	644.9	55.7%	11.6%	32.7%	64.2
Ohio	2,154.7	1,276.0	878.7	223.1	655.6	59.2%	10.4%	30.4%	57.4
Wisconsin	482.9	275.2	207.8	76.2	131.6	57.0%	15.8%	27.2%	24.2
West Virginia	206.9	123.3	83.6	*35.6*	*28.0*	59.6%	17.2%	13.5%	5.1
Plains									
Iowa	208.5	114.5	94.1	38.3	55.8	54.9%	18.4%	26.8%	9.0
Kansas	224.5	120.8	103.7	33.5	70.2	53.8%	14.9%	31.3%	25.9
Minnesota	386.9	225.5	161.4	60.7	100.7	58.3%	15.7%	26.0%	20.1
Missouri	791.2	484.8	306.3	76.9	229.4	61.3%	9.7%	29.0%	40.4
Nebraska	92.6	52.6	40.0	19.4	20.6	56.8%	21.0%	22.2%	11.9
North Dakota	5.8	2.8	3.0	1.4	1.6	48.4%	24.4%	27.2%	2.5
South Dakota	34.1	19.1	15.0	*7.3*	*7.8*	56.0%	21.3%	22.8%	12.3
South									
Florida	3,071.0	1,724.5	1,346.5	294.8	1,051.7	56.2%	9.6%	34.2%	61.8
Georgia	2,710.5	1,480.3	1,230.2	447.4	782.7	54.6%	16.5%	28.9%	90.1
Louisiana	340.1	169.8	170.3	49.1	121.2	49.9%	14.4%	35.6%	27.0
South Carolina	950.0	552.3	397.7	111.0	286.8	58.1%	11.7%	30.2%	69.8
Tennessee	427.7	217.0	210.7	87.4	123.3	50.7%	20.4%	28.8%	21.1
Texas	3,485.9	2,068.6	1,417.3	366.2	1,051.0	59.3%	10.5%	30.2%	48.3
Virginia	1,262.4	720.2	542.2	134.5	407.7	57.1%	10.7%	32.3%	55.9
Mountain									
Arizona	366.6	202.2	164.4	58.5	105.9	55.2%	16.0%	28.9%	19.0
Colorado	401.3	236.6	164.7	60.6	104.1	59.0%	15.1%	25.9%	22.9
Idaho	109.3	64.7	44.6	19.6	25.0	59.2%	17.9%	22.9%	18.3
Montana	36.7	18.7	18.1	9.9	8.1	50.8%	27.1%	22.1%	8.9
New Mexico	148.7	78.9	69.8	33.8	35.9	53.1%	22.8%	24.2%	19.4
Far West									
California	2,924.0	1,566.0	1,357.9	313.9	1,044.1	53.6%	10.7%	35.7%	29.4
Oregon	362.3	232.1	130.2	*59.7*	*59.0*	64.1%	16.5%	16.3%	1.7
Washington	481.4	295.5	186.0	68.4	117.6	61.4%	14.2%	24.4%	19.4
Total	**$44,939.5**	**$26,238.6**	**$18,700.8**	**$4,919.7**	**$13,703.6**	**58.4%**	**10.9%**	**30.5%**	**$44.5**

Source: TLF Publications, Inc.

Consumer Price

The consumer price of playing lotteries is the percentage of sales retained by the lottery, or, in other terms, the percentage of sales returned to players as prizes. Other things being equal consumer price and sales are inversely related, i.e., as consumer prices rise sales fall. Exhibit 2.35 provides ratios of prizes, expenses, and government profits to total lottery sales for 41 lotteries in FY 04.

In fiscal 2004, Massachusetts led all lotteries with respect to consumer pricing by returning 72.1% of sales to players as prizes. This is due to the low consumer price (23.7%) of Massachusetts instant tickets (Exhibit 2.36). The Vermont lottery ranked second, returning 62.3%, and Maine (61.8%) was third. The low consumer price of the Massachusetts Lottery is one important reason for the Massachusetts Lottery's robust sales. As noted above, the reciprocal of this is that the Massachusetts Lottery's comparatively low profit as a percentage of sales is due to the high proportion of sales allocated to prizes.

Exhibit 2.36: Consumer Price of Massachusetts Lottery Games in FY 2004

Game	Sales FY2004	Prizes FY2004	Takeout FY2004	Revenue FY2004
Instant Games	$2,977,732	$2,272,133	23.7%	$705,599
Mega Millions (aka Big Gam	95,997	45,568	52.5%	50,429
Numbers Game	362,524	214,571	40.8%	147,953
Mass Cash	46,198	26,037	43.6%	20,161
Keno	775,523	534,182	31.1%	241,341
Megabucks	48,283	23,450	51.4%	24,833
Mass Millions (Big Money)	59,889	32,514	45.7%	27,375
Pull Tabs	2,245			2,245
Total Sales	**$4,368,391**	**$3,148,455**	**27.93%**	**$1,219,936**

Note: Pull tab game sales are accounted for by the sale of the ticket rolls. No prize data was available.

Source: Massachusetts Lottery

The high prize payout (or low consumer price) in Massachusetts is primarily a function of the 70% prize allocation for instant ticket sales, this game being the dominant contributor to total sales. This makes a great deal of sense: instant game players are much more price-sensitive than lotto players.

Exhibit 2.37: Massachusetts State Lottery Relative Performance FY2004

		Rank
Total Sales ($M)	$4,368.4	2 / 41
Per Capita Sales	$682.6	1 / 41
Total Prizes ($M)	$3,211.5	2 / 41
Government Profits ($M)	*$912.0*	5 / 41
Per Capita Government Profits	*$142.5*	1 / 41

Source: Massachusetts Lottery, TLF Publications, Inc.

III. Potential New Lottery Games

We evaluated the revenue potential of four games which the Massachusetts Lottery might consider adding to its product portfolio. These four games are a $20 instant ticket game; an electronic game card; an "online" bingo television/ticket game; and a daily race monitor game.

SECTION 1: THE REVENUE POTENTIAL OF A $20 INSTANT GAME

The Massachusetts Lottery asked CCA to assess the revenue potential of a $20 instant game. To assess this revenue potential, we reviewed instant game sales in the United States at various price points, reviewed instant ticket game sales in some comparable State lotteries, including Pennsylvania, Illinois, and Florida, reviewed Massachusetts instant game sales by price point and compared Massachusetts in this respect to national trends and to trends in comparable States, reviewed market survey research conducted by Schneiders Della Volpe Schulman on the preferences of Massachusetts Lottery players regarding the hit frequency and pay table (prize amounts) of instant ticket games, reviewed the prize structures and hit frequencies of Massachusetts Lottery instant ticket games, and reviewed the experience with $20 instant tickets in States comparable to Massachusetts.

Instant Ticket Sales in the United States

Exhibit 3.1 presents population, instant ticket sales, instant ticket sales as a percentage of total sales, total sales, *per capita* instant sales, and personal income for all U.S. State lotteries in FY 2004. While Massachusetts ranks 10th in personal income, it ranks 2nd in total sales and 1st in instant sales. These are good measures of just how impressively the Massachusetts Lottery currently performs.

Exhibit 3.1 Instant Ticket Sales by State FY 2004

State	Pop (M)	Instant Sales	% of Total Sales	Total Sales	Per Capita Instant Sales	Personal Income
Massachusetts	6.4	$2,977.7	68.2%	$4,368.4	$464.0	$270,145.0
New York	19.3	2,733.9	46.9%	5,825.7	141.8	737,039.0
Texas	22.5	2,323.9	66.7%	3,485.9	103.3	690,376.0
Georgia	8.8	1,556.7	57.4%	2,710.5	176.3	265,538.0
Florida	17.4	1,358.1	44.2%	3,071.0	78.1	547,312.0
California	35.9	1,339.0	45.8%	2,924.0	37.3	1,262,454.0
Ohio	11.5	1,166.0	54.1%	2,154.7	101.8	356,774.0
Pennsylvania	12.4	989.2	42.1%	2,352.1	79.7	412,591.0
New Jersey	8.7	973.6	44.5%	2,188.4	111.9	362,190.0
Illinois	12.7	759.6	45.0%	1,687.6	59.7	441,485.0
Michigan	10.1	690.2	35.0%	1,973.9	68.2	324,134.0
Virginia	7.5	630.9	50.0%	1,262.4	84.6	269,862.0
Connecticut	3.5	558.0	61.5%	907.7	159.3	159,435.0
South Carolina	4.2	537.3	56.6%	950.0	128.0	113,988.0
Missouri	5.8	434.8	55.0%	791.2	75.6	175,611.0
Indiana	6.2	422.1	57.4%	734.9	67.7	187,565.0
Tennessee	5.9	361.9	84.6%	427.7	61.3	175,885.0
Kentucky	4.1	357.0	49.2%	725.3	86.1	112,566.0
Maryland	5.6	355.0	25.4%	1,395.4	63.9	220,261.0
Washington	6.2	278.0	57.7%	481.4	44.8	217,240.0
Wisconsin	5.5	266.6	55.2%	482.9	48.4	176,636.0
Colorado	4.6	260.9	65.0%	401.3	57.3	166,153.0
Minnesota	5.1	215.7	55.8%	386.9	42.3	184,515.0
Arizona	5.7	183.3	50.0%	366.6	31.9	164,324.0
New Hampshir	1.3	157.0	66.3%	237.0	120.8	47,661.0
Maine	1.3	150.5	81.0%	185.9	114.3	39,482.0
Oregon	3.6	132.7	36.6%	362.3	36.9	41,176.0
Louisiana	4.5	111.4	32.8%	340.1	24.7	122,913.0
West Virginia	1.8	109.8	53.1%	206.9	60.5	46,619.0
Iowa	3.0	95.3	45.7%	208.5	32.2	91,500.0
Kansas	2.7	87.5	39.0%	224.5	32.0	84,810.0
New Mexico	1.9	87.0	58.5%	148.7	45.7	49,778.0
Rhode Island	1.1	76.5	30.7%	249.4	70.8	36,936.0
Vermont	0.6	68.8	74.5%	92.4	110.8	19,721.0
Idaho	1.4	68.6	62.8%	109.3	49.3	37,394.0
Nebraska	1.7	46.3	50.0%	92.6	26.5	56,393.0
D.C.	0.6	38.9	16.1%	241.1	70.3	28,839.0
Delaware	0.8	25.0	23.0%	108.6	30.1	39,482.0
South Dakota	0.8	15.3	44.7%	34.1	19.8	23,602.0
Montana	0.9	10.4	28.3%	36.7	11.2	25,643.0
North Dakota	0.6	0.0	0.0%	5.8	0.0	18,553.0
Total	**264.3**	**$23,010.6**	**51.2%**	**$44,939.5**	**$87.1**	**$8,804,581.0**

Source: Christiansen Capital Advisors, LLC, TLF Publications, Inc., State lottery agencies, Bureau of Economic Analysis (BEA.gov).

The national average ratio of instant ticket sales to total sales is 51.2/100; that is, for the U.S. as a whole, instant ticket sales comprise 51.2% of total sales of traditional (excluding VLTs) lottery sales. The national average *per capita* instant ticket sales is $87.10. Massachusetts ranks above the national average with respect to both of these measures. The ratio of instant ticket sales to total sales in Massachusetts is 68.2/100; that is, in Massachusetts, instant ticket sales comprise 68.2% of total sales of traditional (excluding VLTs) lottery sales. Massachusetts ranks fourth in the ratio of instant ticket sales to total sales, below Tennessee (a new lottery), Maine, and Vermont, all small lotteries in States that do not have large enough populations to generate large lotto jackpots (Exhibit 3.2). Five States, one large and four small (Texas, Connecticut, Colorado, New Hampshire and Idaho), had percentages of instant tickets to total sales in the 60% range, roughly comparable to Massachusetts. In contrast, Massachusetts Lottery *per capita* instant ticket sales, $464, are much higher than the national average of $87.10 and are by far the highest of any State lottery (Georgia, with *per capita* instant ticket sales of $176.30, ranks second).

Exhibit 3.2 ranks States by instant ticket sales as a percentage of total sales. Massachusetts ranks 4th, after Tennessee, Maine and Vermont, in instant ticket sales as a percentage of total sales.

Exhibit 3.2 Instant Ticket Sales Ranked as a Percentage of Total Lottery Sales by State FY 2004

% of Total Sales Rank	State	Pop (M)	Instant Sales	% of Total Sales	Total Sales	Per Capita Instant Sales	Personal Income
1	Tennessee	5.9	$361.9	84.6%	$427.7	$61.3	$175,885.0
2	Maine	1.3	150.5	81.0%	185.9	114.3	39,482.0
3	Vermont	0.6	68.8	74.5%	92.4	110.8	19,721.0
4	Massachusetts	6.4	2,977.7	68.2%	4,368.4	464.0	270,145.0
5	Texas	22.5	2,323.9	66.7%	3,485.9	103.3	690,376.0
6	New Hampshire	1.3	157.0	66.3%	237.0	120.8	47,661.0
7	Colorado	4.6	260.9	65.0%	401.3	57.3	166,153.0
8	Idaho	1.4	68.6	62.8%	109.3	49.3	37,394.0
9	Connecticut	3.5	558.0	61.5%	907.7	159.3	159,435.0
10	New Mexico	1.9	87.0	58.5%	148.7	45.7	49,778.0
11	Washington	6.2	278.0	57.7%	481.4	44.8	217,240.0
12	Indiana	6.2	422.1	57.4%	734.9	67.7	187,565.0
13	Georgia	8.8	1,556.7	57.4%	2,710.5	176.3	265,538.0
14	South Carolina	4.2	537.3	56.6%	950.0	128.0	113,988.0
15	Minnesota	5.1	215.7	55.8%	386.9	42.3	184,515.0
16	Wisconsin	5.5	266.6	55.2%	482.9	48.4	176,636.0
17	Missouri	5.8	434.8	55.0%	791.2	75.6	175,611.0
18	Ohio	11.5	1,166.0	54.1%	2,154.7	101.8	356,774.0
19	West Virginia	1.8	109.8	53.1%	206.9	60.5	46,619.0
20	Arizona	5.7	183.3	50.0%	366.6	31.9	164,324.0
21	Virginia	7.5	630.9	50.0%	1,262.4	84.6	269,862.0
22	Nebraska	1.7	46.3	50.0%	92.6	26.5	56,393.0
23	Kentucky	4.1	357.0	49.2%	725.3	86.1	112,566.0
24	New York	19.3	2,733.9	46.9%	5,825.7	141.8	737,039.0
25	California	35.9	1,339.0	45.8%	2,924.0	37.3	1,262,454.0
26	Iowa	3.0	95.3	45.7%	208.5	32.2	91,500.0
27	Illinois	12.7	759.6	45.0%	1,687.6	59.7	441,485.0
28	South Dakota	0.8	15.3	44.7%	34.1	19.8	23,602.0
29	New Jersey	8.7	973.6	44.5%	2,188.4	111.9	362,190.0
30	Florida	17.4	1,358.1	44.2%	3,071.0	78.1	547,312.0
31	Pennsylvania	12.4	989.2	42.1%	2,352.1	79.7	412,591.0
32	Kansas	2.7	87.5	39.0%	224.5	32.0	84,810.0
33	Oregon	3.6	132.7	36.6%	362.3	36.9	41,176.0
34	Michigan	10.1	690.2	35.0%	1,973.9	68.2	324,134.0
35	Louisiana	4.5	111.4	32.8%	340.1	24.7	122,913.0
36	Rhode Island	1.1	76.5	30.7%	249.4	70.8	36,936.0
37	Montana	0.9	10.4	28.3%	36.7	11.2	25,643.0
38	Maryland	5.6	355.0	25.4%	1,395.4	63.9	220,261.0
39	Delaware	0.8	25.0	23.0%	108.6	30.1	39,482.0
40	D.C.	0.6	38.9	16.1%	241.1	70.3	28,839.0
41	North Dakota	0.6	0.0	0.0%	5.8	0.0	18,553.0
	Total	**264.3**	**$23,010.6**	**51.2%**	**$44,939.5**	**$87.1**	**$8,804,581.0**

Source: Christiansen Capital Advisors, LLC, TLF Publications, Inc., State lottery agencies.

Exhibit 3.3 presents population, instant ticket sales, instant ticket sales as a percentage of total sales, total sales, *per capita* instant sales, and personal income for ten U.S. State lotteries that are roughly comparable to Massachusetts in FY 2004. While Massachusetts ranks 8th in personal income, it ranks 2nd in total sales and 1st in instant sales among this group of roughly comparable States.

Exhibit 3.3 Instant Ticket Sales as a Percentage of Total Lottery Sales in Comparable States FY 2004

State	Pop (M)	Instant Sales	% of Total Sales	Total Sales	Per Capita Instant Sales	Personal Income
Massachusetts	6.4	$2,977.7	68.2%	$4,368.4	$464.0	$270,145.0
Texas	22.5	2,323.9	66.7%	3,485.9	103.3	690,376.0
Connecticut	3.5	558.0	61.5%	907.7	159.3	159,435.0
Georgia	8.8	1,556.7	57.4%	2,710.5	176.3	265,538.0
Ohio	11.5	1,166.0	54.1%	2,154.7	101.8	356,774.0
New York	19.3	2,733.9	46.9%	5,825.7	141.8	737,039.0
California	35.9	1,339.0	45.8%	2,924.0	37.3	1,262,454.0
New Jersey	8.7	973.6	44.5%	2,188.4	111.9	362,190.0
Florida	17.4	1,358.1	44.2%	3,071.0	78.1	547,312.0
Pennsylvania	12.4	989.2	42.1%	2,352.1	79.7	412,591.0
Total	**146.4**	**$15,976.2**	**53.3%**	**$29,988.3**	**$109.1**	**$5,063,854.0**

Note: Comparable States in this exhibit are the top 10 States according to a formula that calculates a weighted average rank using the variables shown.

Source: TLF Publications Inc., Christiansen Capital Advisors, LLC, State lottery agencies.

Exhibit 3.4 presents instant ticket sales by price point ($1, $2, $3, $5, $7, $10, and $20), *per capita* instant ticket sales, and total sales for comparable States. Massachusetts leads most of these rankings, because Massachusetts instant ticket sales outperform other lotteries by such a wide margin. The only exceptions are $1 instant tickets, where Massachusetts ranks 4th, and $2 instant tickets, where Massachusetts ranks 2nd.

Some other noteworthy observations emerge from Exhibit 3.3. First, all of these lotteries offer instant tickets in $1, $2, $5 and $10 denominations. Seven of these lotteries offer a $3 instant ticket; three offer a $7 instant ticket; seven offer a $20 instant ticket; and four offer instant tickets in other denominations, generally $30. Of the lotteries offering instant tickets in denominations of $20 or more, only Texas sells more than $200 million of these high-denomination instant games, in *per capita* instant ticket sales, however, Texas ranks only 8th. Perhaps more relevant, given Texas's size and population, is Connecticut, a neighboring State. Connecticut's lottery sells instant tickets in every one of these denominations, generates substantial sales at every price point, and ranks 3rd in *per capita* instant sales, below Georgia and Massachusetts. These data suggest that a distinct market for large-denomination ($20 and higher) instant tickets exists; that this market isn't large compared to the market for instant tickets of smaller denominations; and demonstrate that a northeastern lottery can offer instant tickets at every price point from $1 to $30 and rank 3rd in *per capita* instant ticket sales.

Exhibit 3.4 Instant Ticket Sales by Price Point in Comparable States FY 2004

	$1 Sales	$2 Sales	$3 Sales	$5 Sales	$7 Sales	$10 Sales	$20 Sales	Other Sales	Per Capita Instant Sales	Total Sales
Massachusetts	$173.6	$698.6	$0.0	$875.5	$0.0	$1,230.1	$0.0	$0.0	$464.0	$2,977.7
Georgia	249.1	529.3	109.0	280.2	0.0	373.6	0.0	15.6	176.3	1,556.7
Connecticut	49.9	70.1	88.3	94.1	23.4	128.6	68.4	35.1	159.3	558.0
New York	493.7	1,021.7	0.0	606.1	0.0	612.4	0.0	0.0	141.8	2,733.9
South Carolina	80.4	154.3	37.5	101.6	0.0	163.6	0.0	0.0	128.0	537.4
New Hampshire	22.0	25.9	28.3	30.1	18.7	32.0	0.0	0.0	120.8	157.0
New Jersey	74.2	315.4	344.5	181.8	0.0	54.4	0.0	3.4	111.9	973.6
Texas	312.3	632.1	148.7	544.0	63.2	267.0	142.2	214.3	103.3	2,323.9
Michigan	9.6	30.7	2.7	13.0	0.0	6.8	5.5	0.0	6.7	72.3
Pennsylvania	8.7	15.0	7.5	19.4	0.0	16.3	12.8	0.0	6.4	89.1
Florida	9.0	17.1	0.0	14.7	0.0	15.8	21.5	0.0	4.5	94.3
Illinois	13.9	13.3	7.4	12.4	0.0	10.2	2.6	0.0	4.7	61.7
Ohio	22.8	26.9	4.2	29.5	0.0	10.0	8.5	0.0	8.9	107.8
Totals	**$1,519.2**	**$3,550.3**	**$778.0**	**$2,802.5**	**$105.3**	**$2,920.8**	**$261.5**	**$268.3**	**$88.2**	**$12,243.6**

Source: TLF Publications Inc., Christiansen Capital Advisors, LLC

Exhibit 3.5 presents payouts (prizes) as a percentage of instant ticket sales for each denomination for these comparable lotteries. In other words, Exhibit 3.4 presents the inverse of the consumer price of playing these instant ticket games (consumer price = 1- prize payout percentage). Consumer prices generally fall as ticket denominations increase, from an average 37.8 cents for $1 tickets to 28 cents for $10 tickets. Massachusetts instant tickets overall are less expensive for consumers than any other State's: 23.6 cents. Massachusetts's $10 ticket costs consumers only 20 cents to play, making it the cheapest instant ticket in the United States.

Exhibit 3.5 Instant Ticket Payout Percentages by Price Point in Comparable States FY 2004

	$1 Payout %	$2 Payout %	$3 Payout %	$5 Payout %	$7 Payout %	$10 Payout %	$20 Payout %	$30 Payout %	Total Payout %
Massachusetts	69.0%	73.0%	0.0%	75.5%	0.0%	80.0%	0.0%	0.0%	76.4%
Georgia	58.8%	67.5%	67.8%	68.5%	0.0%	72.4%	0.0%	0.0%	66.8%
Connecticut	63.1%	63.6%	68.3%	67.2%	68.0%	69.3%	70.8%	72.5%	59.2%
New York	65.0%	65.0%	0.0%	65.0%	0.0%	75.0%	0.0%	0.0%	67.2%
South Carolina	57.5%	60.0%	63.0%	65.0%	0.0%	75.0%	0.0%	0.0%	65.3%
New Hampshire	62.8%	63.0%	63.3%	65.0%	66.0%	66.0%	0.0%	0.0%	64.4%
New Jersey	55.0%	65.0%	65.0%	65.0%	0.0%	65.0%	0.0%	0.0%	64.0%
Texas	60.0%	65.0%	66.0%	68.0%	68.0%	70.0%	72.0%	0.0%	55.8%
Michigan	55.0%	61.0%	61.0%	65.0%	0.0%	69.0%	75.0%	0.0%	59.3%
Pennsylvania	56.1%	63.9%	63.7%	69.0%	0.0%	72.9%	72.7%	0.0%	60.5%
Florida	58.0%	66.0%	0.0%	68.0%	0.0%	74.0%	75.0%	0.0%	57.6%
Illinois	58.5%	63.0%	64.5%	66.0%	0.0%	74.0%	77.0%	0.0%	63.1%
Ohio	61.0%	64.5%	65.0%	67.6%	0.0%	68.8%	69.9%	0.0%	61.9%
Average Payout %	**62.2%**	**66.6%**	**65.8%**	**69.4%**	**0.0%**	**75.7%**	**72.0%**	**0.0%**	**66.3%**

Note: Massachusetts had partial year $3 dollar instant game sales which are not represented in this exhibit. The Massachusetts Lottery discontinued the $3 dollar instant game early in 2004.

Source: Scientific Games, Inc., TLF Publications, Inc., Christensen Capital Advisors

Hit Frequency and Prize Amounts (Pay Tables) for Massachusetts Lottery Instant Ticket Games.

Appendix A presents prize amounts and hit frequencies, expressed as percentages of tickets per roll of tickets that are winners, for Massachusetts Lottery instant ticket games. The exhibits in this appendix show that prize amount and hit frequency are inversely related; that is, as prize amounts increase hit frequency falls. The exhibits in this appendix also show that instant ticket maximum prizes vary greatly with denomination: for example, the maximum prize for a $1 instant ticket is $2,500, while the maximum prize for a $5 instant ticket is either $1 million or $100,000 per year for life.

Hit Frequency, Pay Table and Consumer Price

Hit frequency, the number of winners per a given number of trials of a gambling game or device, *pay table*, the amount paid for a winning bet, and *consumer price* or *takeout*, sales or gross wagers less prizes or payouts, are the three basic variables in the design of any gambling game. Lotteries, including the Massachusetts Lottery, typically offer products that differ greatly in the values assigned to these three basic variables. [9]

Exhibit 3.6 shows how different Massachusetts Lottery games compare with respect to hit frequency, pay table (prize in relation to amount wagered) and consumer price. Massachusetts Lottery instant games have high hit frequencies, pay tables where amounts won are low in relation to amounts wagered, and a consumer price of about 23.6%, the lowest of any instant ticket games in the United States. Lotto games have very low hit frequencies, pay tables where amounts won are very large in relation to amounts wagered, and a consumer price of about 49%, lower than the consumer price of many U.S. lotto games but roughly comparable to the consumer price of lotto games in States comparable to Massachusetts (Exhibit 3.10).

[9] A fourth variable in gambling game design is *speed of play*, or, in other terminology, the relative velocity of dollars circulating through a game. A weekly lottery drawing is characterized by a low speed of play (the device is tried once a week), while a blackjack game is characterized by high speed of play, perhaps 65 hands an hour. Instant tickets can be played very rapidly. In general, consumer price and speed of play are inversely related: games that can be played rapidly, including most casino table and machine games, are characterized by low consumer prices, about 1.2% for basic strategy blackjack dealt from an eight deck shoe and 6% to 8% for slot machines. Lotto games, which are generally tried two or three times a week, have much higher consumer prices, typically in the 40% to 50% range. The consumer price of more rapidly played instant ticket games is usually lower than lotto games. The most important consideration in setting consumer prices in rapidly played games is stimulating *churn* or re-betting of winnings.

Exhibit 3.6: Hit Frequency, Pay Table and Consumer Price for Massachusetts Lottery Games

Game	Hit Frequency	Pay Table	Consumer Price
Instant Games	High	Low	23.6%
Numbers Games	Low	High	40.8%
Lotto Games	Very Low	Very High	49.0%
Keno	Low	Medium	31.1%

Source: Massachusetts Lottery, Christiansen Capital Advisors

Instant ticket games and lotto games are fundamentally different products that satisfy different consumer appetites. Lotto games satisfy the fantasy of winning a life-changing prize; lotteries offering lotto games are sometimes said to be selling hope. Jackpot size is the most important driver of lotto family game sales. Lotto game players may be relatively insensitive to consumer price. Instant ticket games provide play value, of which the most important element is the player's experience of winning, which reinforces the experience and stimulates more instant ticket play. High hit frequencies are the most important driver of instant ticket sales (that is, instant ticket players like to win), with low consumer prices being an additional significant instant ticket sales driver.

CCA reviewed market research by Schneiders Della Volpe Schulman that supports these statements with respect to Massachusetts Lottery players. This survey research is presented in Exhibit 3.7. The survey results say that Massachusetts Lottery customers overwhelmingly prefer instant ticket games with high hit frequencies (i.e., frequent winners) and lower grand prizes to instant ticket games with lower hit frequencies (i.e., less frequent winners) but larger grand prizes.

Exhibit 3.7: Hit Frequency and Pay Table Consumer Preferences

Q:

Which game would you be more likely to play?

Game A:	Game B:
Grand Prize = $10 million Players win at least $5 on average 1 out of 5 times they play	Grand Prize = $5 million Players win at least $5 on average 1 out of 3 times they play
23%	68%
	39% say they're "much" more likely to play Game B; 10% much more likely to play A.

Q:

Generally, would you rather play a scratch ticket that has 1 in 4 odds of winning with bigger prize amounts or 1 in 3 odds of winning with smaller prize amounts?

A:

61% prefer 1 in 3 odds with smaller pay-outs

Source: Schneiders Della Volpe Schulman

What do these data say about the revenue potential of a $20 instant ticket in Massachusetts? Would a $20 instant ticket increase total instant ticket sales? Would it cannibalize sales of instant tickets in other (lower) denominations? And, should it have a relatively high hit frequency and low maximum prize, or relatively low hit frequency and high maximum prize?

The accepted way of answering the first two of these three questions is regression analysis. The analyst writes regression equations (or, today, uses a regression analysis software package) that incorporate the relevant variables, assigns real-world or actual values to these variables where these values are known and dummy values where they are not, and solves for the desired answer

(would a $20 instant ticket increase total instant sales or simply cannibalize sales of tickets in other denominations?). Unfortunately, the time series of most of the data available here is too short to make regression analysis meaningful. Obtaining lengthy time series data from all 41 lotteries within the calendar time constraints of this study wasn't possible. [10]

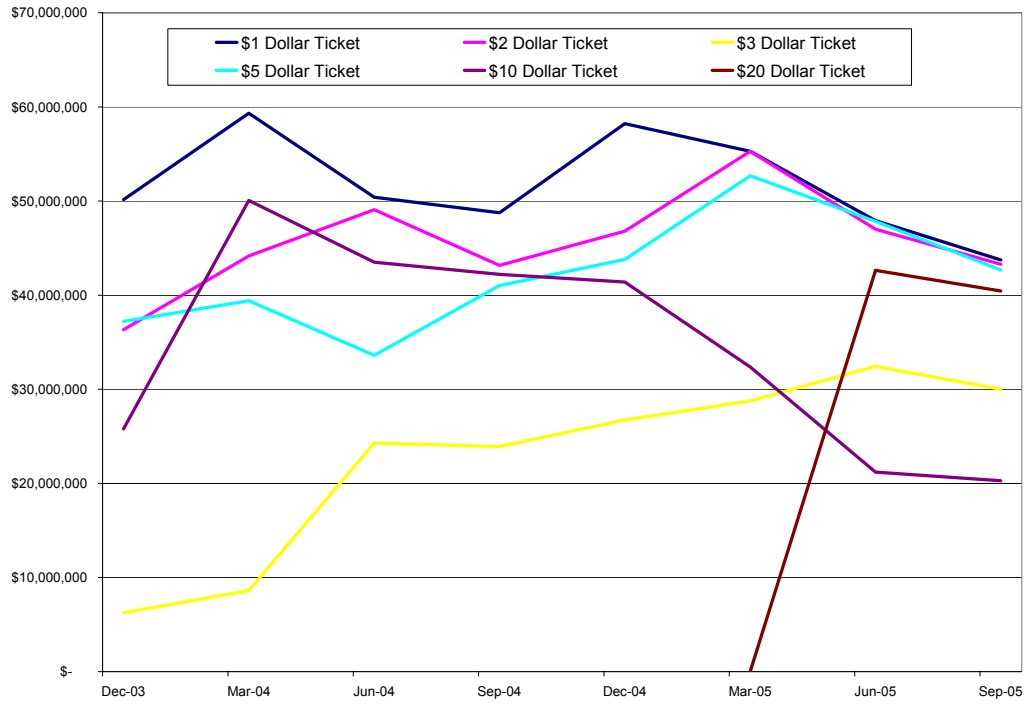
[10] A further difficulty is that we do not know enough about all of the 41 State lottery markets. Suppose, for example, an econometrician took the data set for the Massachusetts Lottery's instant ticket sales over a 15 year period—long enough for meaningful regression analysis. Suppose further that he or she did not know that at some point in the time series advertising dropped to zero, atypically for U.S. lotteries in general. The analysis would be seriously flawed. Changes in sales caused by changes in the advertising budget would be ascribed to other factors.

Experience with $20 Instant Tickets in Other States

To arrive at an evaluation of the revenue potential of a $20 instant ticket game in Massachusetts we reviewed sales data before and after the introduction of a $20 instant ticket in three States: Illinois, Florida and Pennsylvania.

Exhibit 3.8 presents instant ticket sales by price point at quarterly intervals in Illinois for the period December 2003-September 2005.

Exhibit 3.8: Illinois Instant Ticket Sales by Price Point (Quarterly 12/2003 to 9/2005)

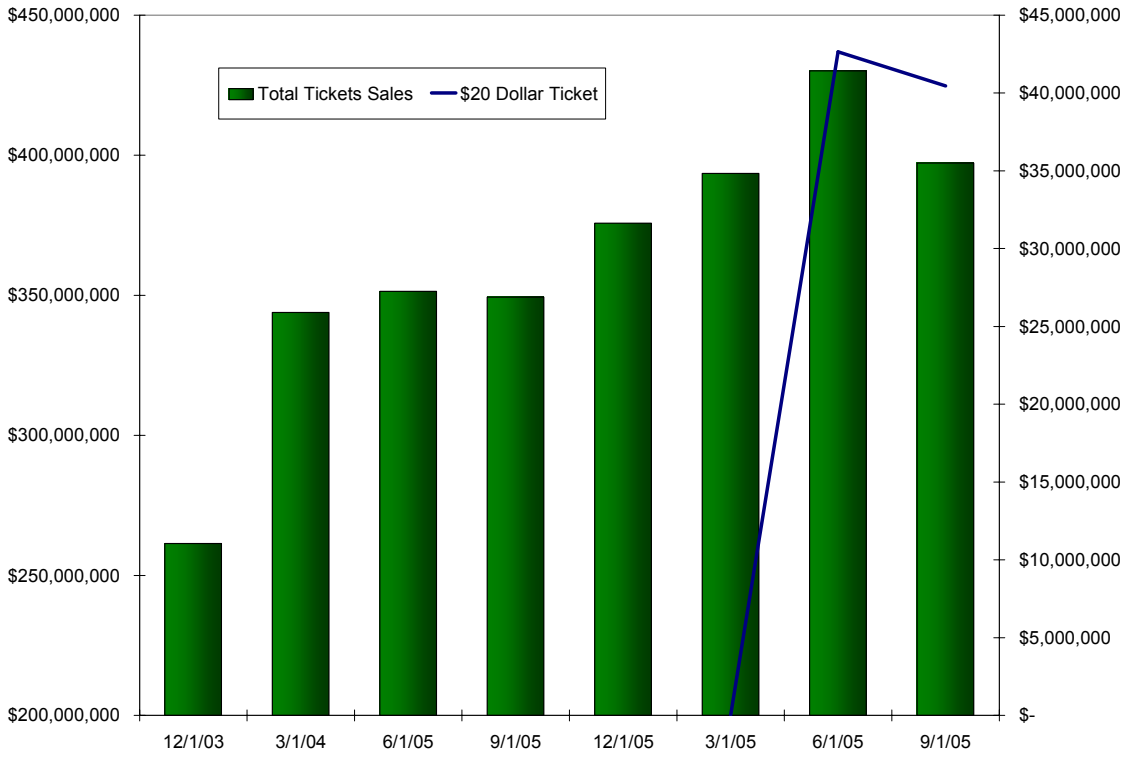


Source: Scientific Games, Inc

Illinois introduced a $20 instant ticket in March 2005. With the exception of its $3 instant ticket, sales of instant ticket games were declining from recent peaks at the time the $20 instant ticket was launched, with the downturn in sales of its $10 dollar ticket, which began in December 2004, being particularly pronounced. Following the $20 instant ticket's introduction in March 2005 sales of this new product rose sharply for approximately two months; then, in June 2005, began to decline. Sales of all other Illinois instant tickets continued to decline following the introduction of a $20 instant ticket. The $20 instant ticket does not appear to have adversely impacted sales of instant tickets of other denominations.

Exhibit 3.9 compares total instant ticket sales in Illinois to sales of the $20 dollar instant ticket at quarterly intervals for the period December 2003-September 2005.

Exhibit 3.9: Illinois Total Instant Sales Compared to Illinois $20 Dollar Game Sales (Quarterly 12/2003 to 9/2005)

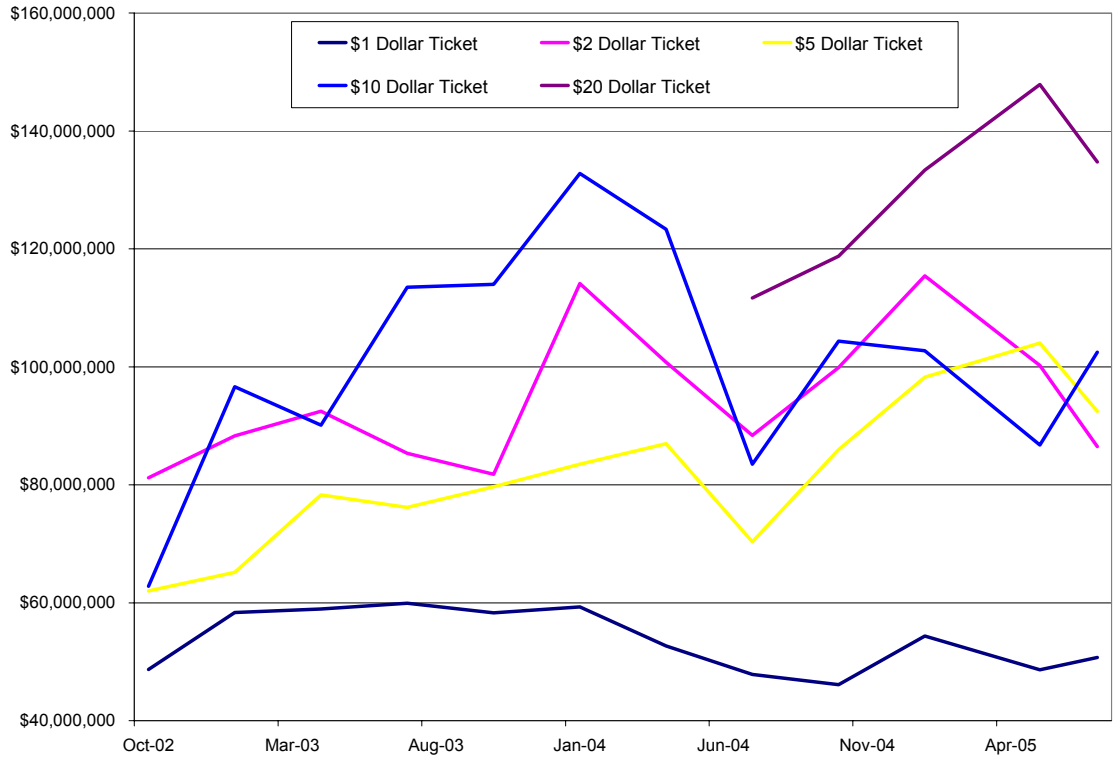


Source: Scientific Games, Inc

Total instant ticket sales increased steadily between December 2003 and March 2005, when a $20 instant ticket was introduced. Between March 2005 and June 2005 sales of both total tickets and the $20 ticket increased. In June 2005 sales of both total tickets and the $20 ticket began to decline.

Exhibit 3.10 presents Florida instant ticket sales by price point at quarterly intervals for the period October 2002 through April 2005.

Exhibit 3.10: Florida Instant Ticket Sales by Price Point (Quarterly 10/2002 to 7/2005)

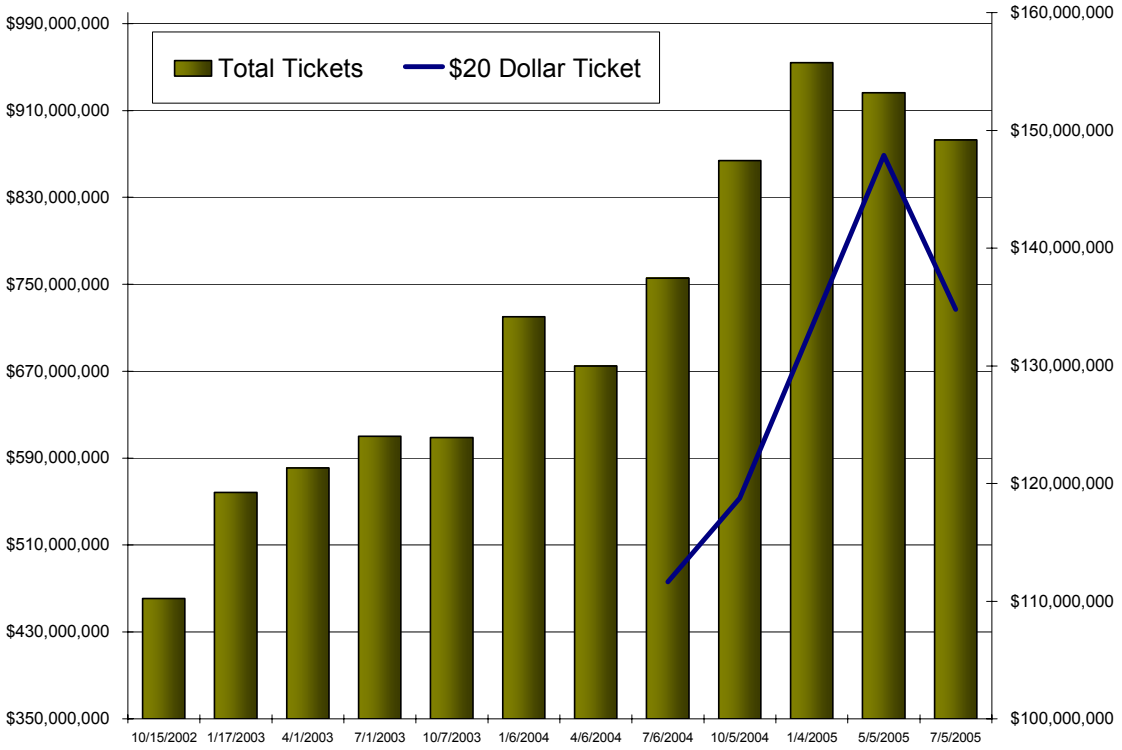


Source: Scientific Games, Inc

Florida introduced a $20 instant ticket in June 2004. At the time the $20 instant ticket was introduced sales of Florida's instant tickets of other denominations were in decline. Following the introduction of a $20 instant ticket, sales of all instant tickets, of every denomination, rose, suggesting that the introduction of the $20 instant ticket (and the advertising attendant on its launch) stimulated renewed interest in Florida's instant games. The increase in instant ticket sales was relatively short-lived, however. By April 2005, a year after the introduction of a $20 ticket, sales of $20, $2 and $5 instant tickets were declining, sales of $10 instant tickets were increasing sharply, and sales of $1 instant tickets were showing a slight increase.

Exhibit 3.11 compares total instant ticket sales in Florida to sales of the $20 dollar instant ticket at quarterly intervals for the period October 2002 through July 2005.

Exhibit 3.11: Florida Total Instant Sales Compared to Florida $20 Dollar Game Sales (Quarterly 10/2002 to 7/2005)

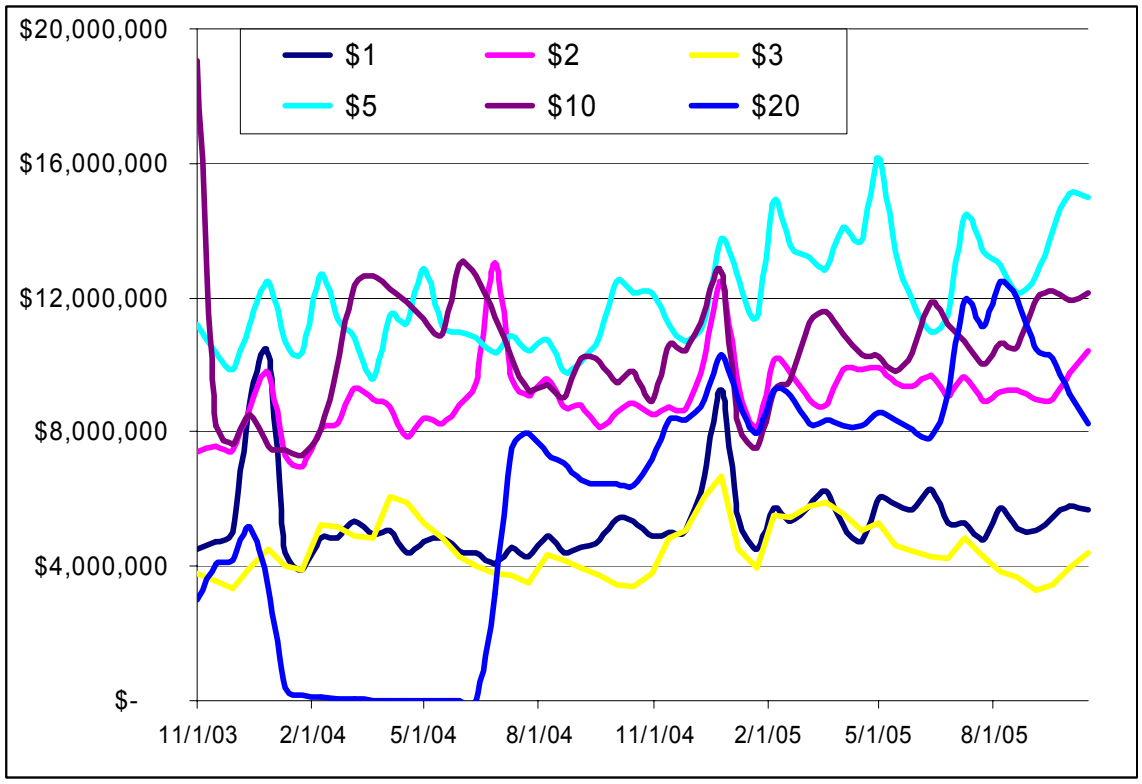


Source: Scientific Games, Inc

The pattern of total instant ticket sales before and after the introduction of a $20 ticket in Florida is similar to the pattern of total instant ticket sales before and after the introduction of a $20 instant ticket in Illinois. Total instant ticket sales increased almost steadily between October 2002 and January 2005, when a $20 instant ticket was introduced. Sales of all instant tickets rose following the introduction of a $20 ticket. In January 2005, however, sales of both total instant tickets and the $20 instant ticket turned downward, continuing to decline through July 2005.

Exhibit 3.12 presents Pennsylvania instant ticket sales by price point at weekly intervals for the period November 2003 through September 2005.

Exhibit 3.12: Weekly Pennsylvania Instant Ticket Sales by Price Point 11/2003 – 9/2005

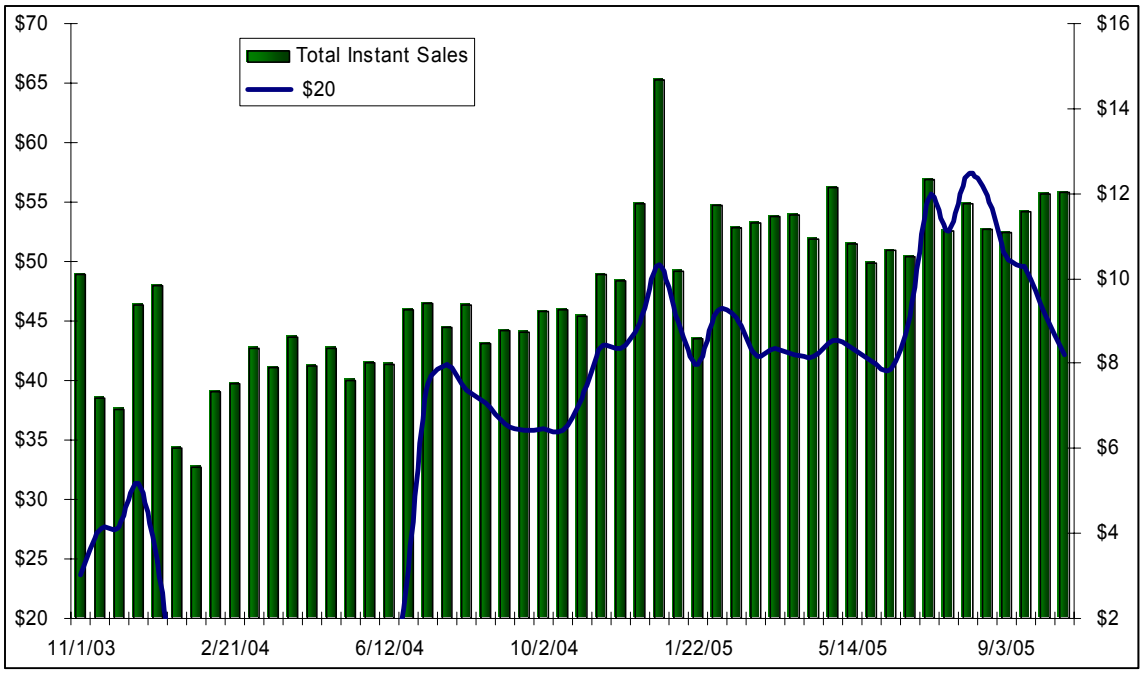


Source: Scientific Games, Inc

Pennsylvania introduced a $20 instant ticket in November 2003. Sales of the $20 instant ticket were discontinued in February 2004, then resumed in June 2004. As in Florida, there was an upward spike in sales on instant tickets of all denominations following the introduction of a $20 instant ticket in November 2003, and a more modest upturn in sales of instant tickets of all denominations following the re-launch of a $20 instant ticket in June 2004. Thereafter sales of instant tickets of all denominations move more or less in tandem.

Exhibit 3.13 compares total instant ticket sales in Pennsylvania to sales of the $20 dollar instant ticket at weekly intervals for the period November 2003 through September 2005.

Exhibit 3.13: Bi-Weekly Pennsylvania Instant Ticket Sales Compared to $20 Dollar Instant Ticket Sales, 11/2003 – 10/2005 ($M)



Source: Scientific Games, Inc.

The pattern of total instant ticket sales before and after the introduction of a $20 ticket in Pennsylvania is roughly similar to the pattern of total instant ticket sales before and after the introduction of a $20 instant ticket in Illinois and Florida. Total instant ticket sales increased, although not steadily, in the weeks prior to the re-launch of the $20 instant ticket in June 2004. Sales of all instant tickets rose in the weeks following the introduction of a $20 ticket. In July 2005 sales of the $20 ticket turned downward, while total instant ticket sales continued to rise. Sales of both the $20 instant ticket and total instant tickets reached a sharp peak in December 2004, the holiday season. Between January and July sales of the $20 instant ticket and total instant tickets moved roughly in tandem. In August, however, sales of the $20 instant ticket again began to decline, while total instant ticket sales continued to increase.

The Revenue Potential of a $20 Instant Ticket in Massachusetts

The data we reviewed indicate that when a $20 instant ticket (and probably a new instant ticket of any other denomination) is introduced sales of instant tickets of all denominations spike upward, and then revert, after a period of some weeks or months, to their general trend prior to the introduction of the $20 game.

The introduction of a $20 instant ticket in Massachusetts is likely to produce similar results. Sales of all Massachusetts instant tickets, of all denominations including the new $20 ticket, will probably rise, with resulting increases in the revenues generated for the Commonwealth from instant tickets. The sales increase is likely to be transitory, however. Some months after the $20 instant ticket is introduced sales of Massachusetts instant games in general are likely to revert to their pattern prior to the introduction of the $20 game. The $20 game will establish its own niche in the Massachusetts market, and will probably not significantly cannibalize sales of instant tickets of other denominations.

Given the clear preferences of Massachusetts ticket lottery players for games with high hit frequencies and relatively low prize amounts as opposed to instant games with lower hit frequencies and higher prize amounts, we would recommend that if a $20 instant ticket is introduced, its the consumer price should not be higher than the consumer price of other Massachusetts Lottery instant tickets, that the hit frequency of a $20 ticket be comparable with the hit frequencies of other Massachusetts instant ticket games, and that the prize structure of a $20 instant ticket be comparable to the prize structures of other Massachusetts Lottery instant ticket games, especially to the Lottery's very low-priced $10 instant ticket.

The Massachusetts Lottery asked CCA to evaluate an electronic game card as a potential Massachusetts Lottery product.

Electronic Game Card

The electronic game card we evaluated is manufactured by Scientific Games. Named the "LC3™" (Lottery Card 3rd Generation), this product is described by Scientific Games as "the first multi-play electronic instant game". The game card is an instant lottery ticket with an LCD screen that displays the game. The card, about the size of a driver's license, is battery powered and can be charged or loaded with any number of plays. Players activate the cards by pulling off a plastic tab on the back of the card. Pushing a "play" button on the front of each card then activates one of the plays on the card. Essentially, the electronic game card is a multi-play instant game. The design intent is to extend the play value of a traditional scratch ticket game by simulating traditional scratch ticket play. A shirt-pocket gaming device, the electronic game card moves instant ticket play a step closer to both electronic video games and casino or VLT gaming devices. Unlike VLTs or casino slot machines, electronic game cards can be sold (State law permitting) through existing lottery ticket retail channels.

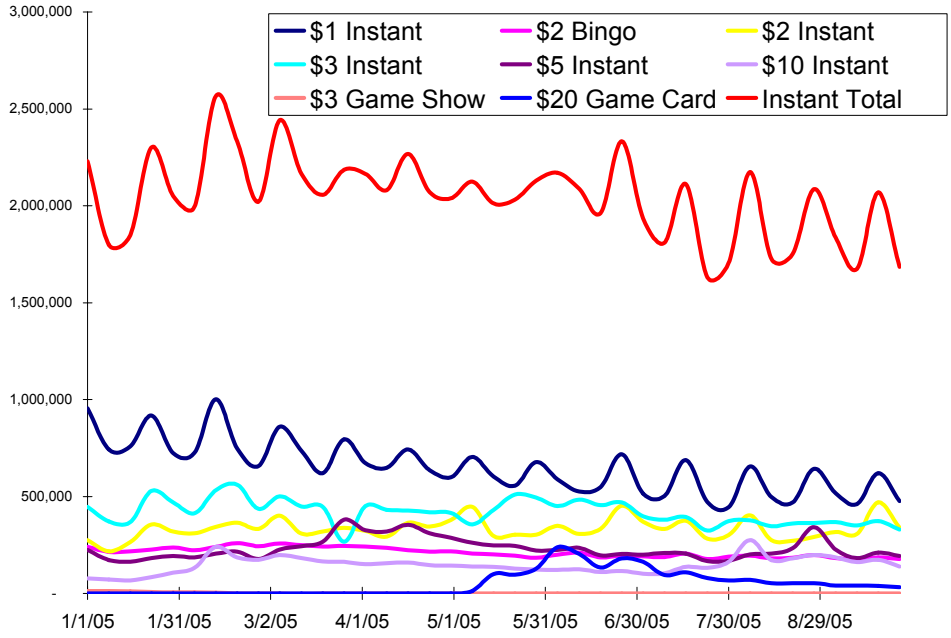
Comparable Experience: Iowa

Iowa launched its version of an electronic game card in May 2005. This device is vended to the Iowa Lottery by Scientific Games. Iowa's electronic game card costs $20. For this $20, the purchaser gets 80 25-cent plays.

The Iowa Lottery launched the first of three scheduled electronic game card variations on May 16, 2005, following successful tests of the game cards in October of 2004 in the Cedar Rapids, Waterloo/Cedar Falls and Dubuque area. The first game was "Quarter Play", each $20 card offering 80 (eighty) 25-cent plays, a minimum prize of $3, and a top prize of $500.

Exhibit 3.14 plots weekly sales data for Iowa's instant tickets from January 2005 through October 2005, i.e., starting five months before the introduction of the electronic game card. The game cards were well-received in the tests and, initially, in the State-wide launch. Total instant ticket sales over this period steadily decreased, however; the decrease in total sales continued following the introduction of the electronic game card.

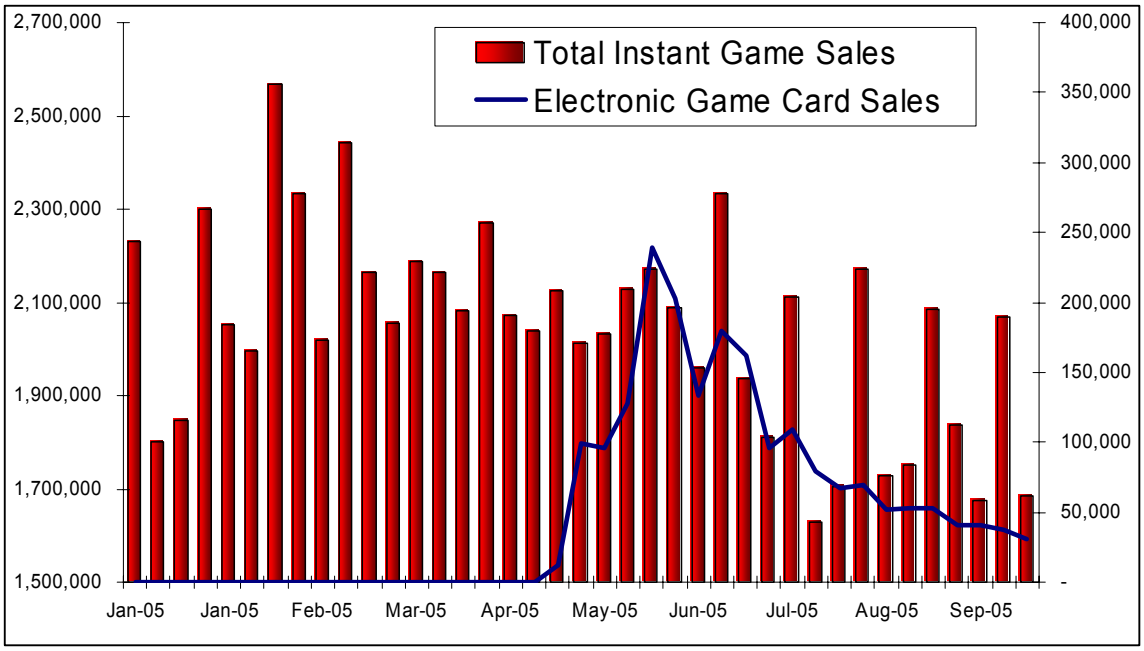
Exhibit 3.14: Weekly Iowa Instant Ticket and Electronic Game Card Sales by Price Point (January 2005 – October 2005)



Source: The Iowa Lottery

Exhibit 3.15 compares Iowa weekly electronic game card sales with weekly instant ticket sales from January 2005 through October 2005.

Exhibit 3.15: Iowa's Weekly Electronic Game Card Sales Compared with Weekly Total Instant Ticket Sales (January 2005 – October 2005)



Source: The Iowa Lottery

According to Scientific Games, electronic game cards are intended to expand a lottery's player base, increase the entertainment value of lottery games, and generate incremental revenue. The Iowa experience presented in Exhibits 3.14 and 3.15 suggests that, in Iowa, the electronic game card is falling short of these goals. The sales curve of the electronic game card shows a sharp upward spike following its introduction, followed by a nearly equally sharp decline. These results are consistent with market research into the electronic game card concept conducted by Schneiders Della Volpe Schulman we reviewed, which showed a high degree of interest in such devices. It appears, from the Iowa experience with electronic game cards to date, that either the initial interest in this device is in the nature of a novelty and is not sustained, and/or that the games offered on this new platform in Iowa do not stimulate sustained play (a likely result in the context of games on other platforms such as casino slot machines or VLTs): that is, players quickly tire of the games offered on this platform in Iowa. Importantly, and for whatever reason, the electronic game card has not measurably increased total instant ticket sales in Iowa.

The Iowa experience suggests that a similar electronic game card programmed with similar games would produce similar results in Massachusetts. In making this observation, however, we also observe that the electronic game card is a new platform and programming it with traditional instant ticket games may not be the optimal programming (or content) for this platform. This in turn suggests that trial and error with other games (or content) on the electronic game card may produce better results in the future. Iowa plans to supplement the "Quarter Play" game initially introduced by marketing a different card each quarter and by developing three new game concepts. The first of these is "Fruit Bonus", similar to the "Quarter Play" game, featuring symbols instead of numerals. The second is "Pocket Poker", a five card stud poker game where players win based on the poker hand's value. The third is "Pocket Blackjack", a blackjack game. The Kansas Lottery is scheduled to introduce electronic game cards programmed with "Triple 7s," essentially the same game as Iowa's "Quarter Play."

Electronic game cards are a new platform for lottery games. The Massachusetts Lottery should therefore view an electronic game card as a new platform for selling lottery products first and as a new instant game second. The game tested on this new platform in Iowa may not be a good indicator of the new platform's ultimate potential. The experience to date, consisting of 10 months of sales of this device programmed with a single game, is not a sufficient basis for drawing long-term conclusions about the new platform's future, in Massachusetts or anywhere else. The device's programmable chip allows virtually any game with any prize structure and any number of plays to be placed on this new platform. Experimentation with different games, different consumer prices, different hit frequencies and different themes may ultimately yield better results than the results in Iowa to date. For example, an electronic game card programmed with a hit game might allow a lottery to justify a higher retail price; alternately, one with a lower price may establish a stronger presence in the marketplace and generate more sales and revenues. Only more trial and error in the marketplace can answer these questions.

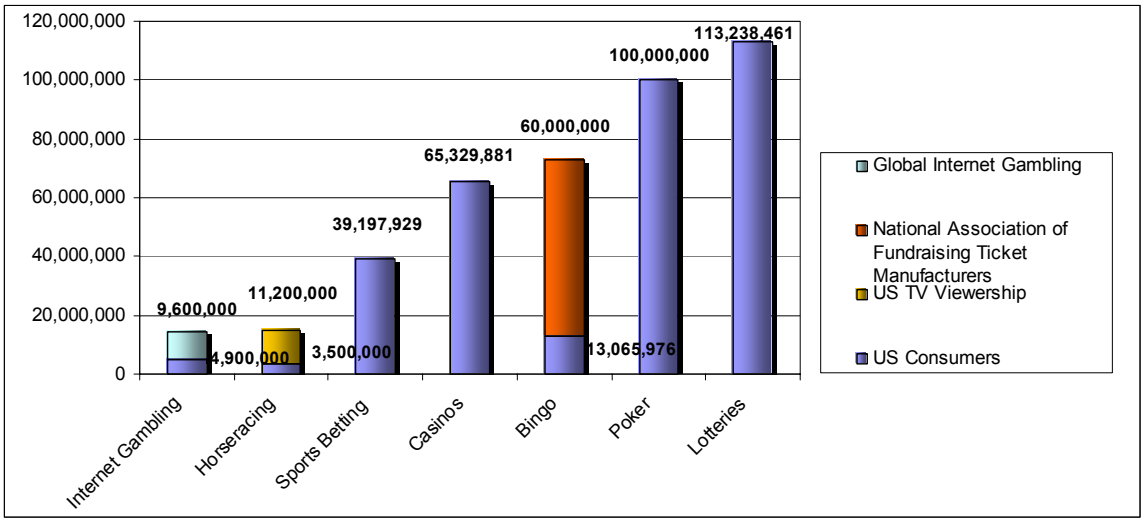
One further observation. Conceptually, a pocket electronic device could emulate cellphones and connect to a central server, either through cellphone networks (which are slow), by using Wi-Fi (802.11b protocol and its descendants) technology, GPRS, or through the Internet. A parallel development in casino slot machines is server-based gaming (SBG), technology pioneered by Cyberview Technology and the subject of much current interest in the casino industry. Downloadable games, or game content downloaded onto open-platform devices, will, in the view of many observers, ultimately replace today's slot machines, with enormous gains in game content flexibility on casino floors. Downloadable games have already proven the concept in fixed-odds betting terminals (FOBTs) in High Street betting shops in the United Kingdom. Electronic game cards could be a precursor of a similar evolutionary development in lottery games.

The Massachusetts Lottery asked CCA to evaluate an on-line television/ticket bingo game as a potential Massachusetts Lottery product ("on-line" here means a retailer-operated closed loop network system as opposed to a paper ticket bingo game, not an Internet bingo game.). The Lottery also asked us what impact a televised/ticket bingo game would have on charitable gaming in Massachusetts.

Bingo

After poker and lotteries, bingo is probably the most widely played gambling game in the United States. At least 13 million Americans play bingo regularly, while as many as 60 million play the game at some point in their lives (Exhibit 3.16). Few communities are without a bingo hall, either in a church or fraternal organization or on Indian land.

Exhibit 3.16: US Consumer Gambling Activities



Sources: Christiansen Capital Advisors, Gemini Research, National Gambling Impact Study Commission, National Association of Fundraising Ticket Manufacturers, *The Blood-Horse*, Population Division, US Census Bureau

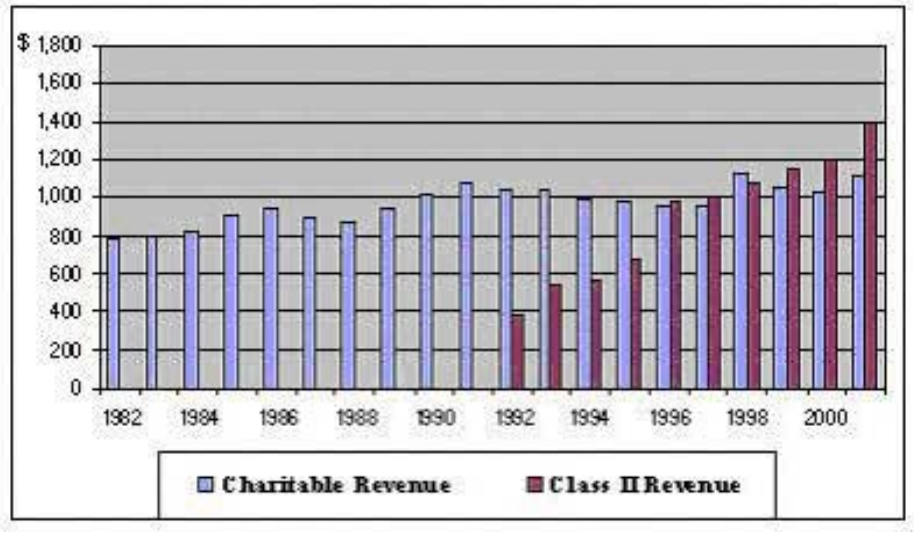
Bingo is a form of lottery. Players purchase cards divided into numbered and blank squares. Randomly chosen numbers (usually up to 75 or 90) are announced by a *caller* or *banker*; players mark ("daub") numbers on their cards as they are called. The first player to complete a line in which all of the numbers have been called shouts "bingo" or "house" or "beano" and collects the prize, less a specified percentage of sales (of bingo cards) for the operator of the game if the bingo game is conducted commercially. In a variation on this simple bingo game the central square on the card is free and the first player with a card showing five numbers appearing in a row, vertically, horizontally, or diagonally, wins. Other variations of the basic bingo game are played in various jurisdictions, including electronic bingo (in which paper cards are replaced by electronic aids) and, on tribal land, machine versions of bingo that for many players approximate

the experience of playing slot machines or video lottery terminals (VLTs). *Keno*, an electronic version of bingo offered in Nevada casinos, and *machine keno* offered by some State lotteries including the Massachusetts Lottery, are variants of bingo. Bingo is a substantial presence on the Internet. Numerous websites offer play-for-free or play-for-money bingo. While the legal status of commercial bingo on the Internet in the United States is unclear, as a practical matter any American who wants to play bingo on the Internet may easily do so. As a result of the abundant supply of bingo halls and websites, there is probably little unsatisfied demand for bingo in the United States.

When played for money bingo is gambling. In much of the United States bingo conducted for the benefit of charities, churches and synagogues, or fraternal organizations is allowed pursuant to licenses granted to charitable organizations under State laws exempting charitable bingo from statutory or constitutional gambling prohibitions. On tribal land, bingo is conducted by federally recognized tribes pursuant to the Indian Gaming Regulatory Act (IGRA) of 1988. [11] IGRA classifies bingo as Class II gaming (Class III gaming includes lotteries, casino tables, and machine games). Federally recognized tribes may conduct commercial bingo games on tribal land pursuant to this law without entering into a compact within the State their lands are located. Class III games may only be conducted on tribal land pursuant to a compact between the tribe and the State. Bingo is allowed in approximately 45 States for charitable purposes, and may be conducted as of right by Federally recognized Indian tribes on tribal land as a Class II game under IGRA. Although not currently numbered among gambling's growth industries, consumer spending on bingo (and by extension bingo's consumer base) is remarkably stable. Consumer spending on charitable bingo totaled approximately $1.1 billion in 2000. Consumer spending on Class II bingo in tribal bingo halls totaled approximately $1.4 billion, bringing total consumer spending on bingo in 2000 to $2.5 billion (Exhibit 3.17). Reliable estimates of consumer spending by Americans on Internet bingo do not exist, but currently this certainly amounts to some hundreds of millions of dollars annually.

[11] Pub. L. 100-497, codified at 25 U.S.C. 2701-2721.

Exhibit: 3.17 United State Charitable and Class II Bingo Gross Gaming Revenues 1982-2000



Source: Christiansen Capital Advisors LLC

Bingo ("Beano") in Massachusetts

Massachusetts charitable bingo (or "beano") is overseen by the Massachusetts Lottery. [12] Exhibit 3.18 presents overall Massachusetts charitable bingo results for calendar 2003.

Exhibit 3.18: Massachusetts Bingo in 2003

		% of Sales
# of Counties	14	N/A
Population	6,349,097	N/A
# of Licenses	404	N/A
Bingo Sales	$88,208,825	100.0%
Bingo Prizes	$68,623,696	77.8%
Bingo Gross Revenues	$19,585,129	22.2%
Bingo OpEx	$9,787,641	11.1%
Bingo 5% Tax	$4,410,441	5.0%
Bingo Revenue Available to Charities	$5,387,047	6.1%

Source: Massachusetts Lottery Commission *2003 Annual Report*

In 2003 404 charitable bingo licensees in 14 counties conducted bingo games on which $88.2 million was wagered ("bingo sales"). Bingo prizes totaled $68.6 million, or 77.8% of the amount wagered (sales). Gross gaming revenue (or the amount consumers spent) was $19.8

[12] Bingo was legalized in the Commonwealth of Massachusetts in 1971 and placed under the regulation of the Department of Public Safety. In 1973, oversight was transferred to the Charitable Gaming Division of the Massachusetts State Lottery Commission.

million, or 22.2% of the amount wagered. Of this $19.8 million in gross revenue, $9.8 million, or 11.1%, was allocated to bingo operating costs. Bingo tax of $4.4 million, or 5% of the amount wagered, was collected, leaving a residual of $5.4 million, or 6.1% of the amount wagered, for charities.

In preparing this report we reviewed survey and focus group market research conducted for the Massachusetts Lottery by Schneider Della Volpe Schulman (SDS). While useful as respects players of Massachusetts Lottery ticket and online games, SDS does not appear to have been asked to conduct market research on the consumer base for Massachusetts bingo. Before deciding whether or not to add an online bingo game to its product offerings we recommend the Massachusetts Lottery to conduct such research in order to satisfy itself that sufficient demand for an online bingo game exists in Massachusetts.

Bingo on Television

While bingo has established itself on the Internet, poker, an even more widely played "evergreen" gambling game, has in recent years exploded into a major television programming category, somewhat eclipsing bingo television programs in the United States. A brief review of the domestic experience with bingo television follows.

EchoStar BingoTV

The most important experience with domestic bingo television programming to date is Bingo TV. In March 2004 EchoStar Communications Corporation and its DISH Network(TM) (NASDAQ: DISH), a leading satellite television service provider, launched BingoTV, a television game show. Bingo TV was founded in 2002 by President Ira Bahr, currently Bingo TV's president. [13] Bingo TV is programmed on EchoStar Channel 104 on Wednesdays from 9:00PM to 11:00PM Eastern Standard Time.

In some States BingoTV is legally a sweepstakes, not gambling; in others, BingoTV is considered to be illegal. [14] Viewers participate during live broadcasts using free game cards to win prizes ranging from cash prizes to a new car to cookware to home theater equipment. On launching this program, EchoStar called BingoTV "the first network of its kind to deliver "True Home Play," where viewers actively participate in the game with players across the nation". EchoStar appears to have been motivated to launch BingoTV by the success of Travel Channel's World Poker Tour, and by the longer-term consideration of a need for programming that will keep channel-switching and/or TiVO subscribers from surfing away from its programming. Subsequently BingoTV, although successful as a counter to viewer tendencies to channel-switching, has been somewhat eclipsed as a form of television programming utilizing a gambling game by poker. Bingo and poker are distinct games, however, and there is clearly a distinct, definable viewer-ship for bingo television programming.

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[13] Mr. Bahr is an advertising and marketing veteran, having spent 12 years at BBDO Worldwide working with clients including GE, Pepsi, and FedEx. In the late 1990s Mr. Bahr was Senior VP Marketing at Sirius Satellite Radio. Most recently Mr. Bahr was senior vice president for marketing for DISH Network.

[14] That is, of the three elements that must be present for an activity to constitute gambling, chance, consideration and prize, consideration is absent from BingoTV, since viewers play for free. Games of this kind are generally sweepstakes. Currently, Connecticut, Delaware, Georgia, Iowa, Kentucky, Maine, New Hampshire, New York, North Carolina, Ohio, Oregon and Texas consider BingoTV to be illegal, and television viewers in these States cannot play Bingo TV. EchoStar BingoTV apparently did not attract attention from the Federal Department of Justice (DOJ), which has an institutional bias against interactive gambling of any kind and categorically maintains that all interactive gambling violates Federal law. The absence of consideration from EchoStar BingoTV may explain the Justice Department's lack of interest in this television program.

Play-Along Games

In the 1980s and early 1990s proposals for play-along television games circulated within media companies, some involving State lotteries. In general, these proposals required viewers to purchase (or otherwise acquire, in some cases for free) a card, paper or device, take it home, tune into a regular television program, and play along with the studio audience at whatever game the television program used.

Interest in 1980s play-along television games was, from the lotteries' perspective, a natural extension of televised lottery drawings, then and since a common form of television programming. The television industry's willingness to explore play-along games (lottery and otherwise) was their conviction that the transformation of one-way passive viewing to two-way interactive television is inevitable. Interactive television, or iTV, is a goal to which television companies have been deeply committed for twenty-five years. Despite the expenditure of hundreds of millions, if not billions, of dollars, iTV today remains a *niche* service in the American television landscape. Only a very small percentage of domestic television households have access to interactive television in any form, and even in markets where interactive service is available the offerings are often only weakly interactive. In some other countries, notably the United Kingdom and France, interactive television has been much more widely adopted, with household penetration rates exceeding 30% in some markets. Interactive television platforms in these countries include gambling among their offerings. BSkyB's interactive satellite television service in the U.K. includes a full suite of betting services and gaming (casino) games (BSkyB is controlled by News Corporation). Viewers can participate in national lotteries through interactive television in a growing number of European markets. With the exception of pari-mutuel betting on horseracing conducted under the authority of the Interstate Horseracing Act of 1978, interactive television gambling is prohibited in the United States due to Justice Department opposition.

Gambling as well as non-gambling games (such as Trivia Pursuit) were the subject of these 1980s-era play along game proposals; a number of State and Canadian Provincial lotteries were approached by promoters of such play along games. CCA was consulted concerning several of these initiatives, most of which failed to progress beyond the talking stage. One State, Minnesota, proposed to put its lottery games on Nintendo platforms; this suggestion was hastily withdrawn under fire from the media and Minnesota elected officials as an inappropriate, and probably illegal, extension of State-sponsored gambling to a children's toy. Entrepreneurs seeking to promote interactive lottery television shows made the rounds of cable and broadcast television companies; the Buena Vista unit of Walt Disney Company briefly contemplated lottery television programming.

None of the pre-Internet era play-along television game show proposals proved commercially viable. Aside from their sometimes unclear legality, play-along television games suffered from two defects.

First, carriage was difficult to secure. Cable channel capacity in the 1980s and early 1990s was extremely tight. Carriage of any programming was difficult, if not impossible, to obtain, even for programs in proven categories. Play-along games, which lacked a track record, were speculative; and in that event most cable companies declined to experiment with them. Without guarantees of carriage, many play-along television game proposals collapsed. The subsequent advent of digital television and the increase in the number of channels made possible by digital cable has relaxed this constraint, but securing carriage for untried programming even on a digital tier remains difficult. Through consulting relationships CCA is aware of several non-game programs in proven programming categories that have failed to secure carriage.

Second, the interactive process of pre-Internet era play-along games was cumbersome. Would-be players were required to (in the case of a lottery play-along game) buy a card or ticket at a lottery agency or outlet, or obtain one by mail; take it home; remember to tune into a television show that might occur only once a week some days later; sit through the entire show in order to play along; and see the entire effort wasted if he or she happened to miss that week's television show. As a lottery product, the concept was never proved in practice.

The BIS LLC Play-Along Bingo Game

CCA has been asked to evaluate a play-along television bingo game proposed to the Massachusetts Lottery by BIS LLC.

We reviewed a DVD demo of the bingo game BIS LLC proposes, a description of BIS LLC and its software provided by BIS LLC, revenue estimates from the computer bingo game provided by BIS LLC, [15] and discussed the proposed game with Paul Foster, of BIS LLC, at length.

In our understanding, BIS LLC has patented bingo software comparable to the computer bingo game the Rhode Island Lottery attempted to conduct in 1996, using the lottery's existing agent-operated terminals to dispense bingo cards. The bingo cards were sold for two days and, in BIS LLC's account, enjoyed "robust" sales, when Rhode Island's governor halted the game as an unlawful expansion of gambling. BIS LLC was formed in 1997 and acquired all rights and interests in the bingo software from the Rhode Island Lottery and the company that developed the software. Subsequently BIS LLC improved this software and secured patents for it.

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[15] These revenue estimates are based on the following assumption: "If only 15% of the eligible [*sic*] adult population of Mass played (4.9 million [*sic*] x .15 =735,000), the revenues in this scenario would be 7,350,000 per week or $382,000,000 annually. If the Gtech information is accurate, then the number would double to $764,400,000." As far as we are aware, no survey research of the Massachusetts market indicates that 15% of the adult population of Massachusetts would play this bingo game.

In BIS LLC's description, its bingo software:

> "plays real time bingo hall bingo without requiring that the players be present at the drawing to call out bingo. The software can play any pattern or a combination of patterns. It can indicate when someone achieves the designated pattern in order to win and it can identify those players who have achieved lesser patterns or marks on their card in order to award lower level prizes.
>
> This patented technology marks all bingo cards in play within one second of the drawn number being entered into the software."

Further

> "This software is designed to be operated directly by the lottery in order to ensure the security of the lottery system. The lottery would control the sales of the cards and would simply identify the cards sold or in play to our software at the time of play. Our software would be installed on a PC in the lottery's control and they [the lottery] would then select the pattern or patterns to be played on the software and would enter the numbers as the game was played. Our software would then identify the winning cards based upon the criteria designated by the Massachusetts Lottery. There could be as many winning experiences as the lottery wanted there to be."

Further

> "One of the unique features of our software is that we do not have a predetermined deck of [bingo] cards. Each card is created randomly at the time of sale (although we can offer a feature which includes picking favorite numbers on a card). Only those cards created through the POS [point of sale, presumably a computer terminal operated by a Massachusetts Lottery agent], subscription or otherwise, would be played in the games they were created for. The size of the deck is limitless.
>
> At the same time, because we do not limit the deck size, this technology allows for other lotteries to play the same game at the same time. This could be accomplished either by having the Massachusetts Lottery be the host (thereby collecting some "fee" from the sale of each ticket) or by simply having a central collection facility created (presumably by us) to collect all cards for any individual game.
>
> The advantage of this concept is that only cards "sold" and in play for a game are actually played. There is therefore always a real winner and lesser winners if the game is structured so as to award lower prizes for cards who are one away from winning, which achieve a lesser pattern or the like."

The computer bingo game proposed by BIS LLC is predicated on a television show:

> "The Broadcast: Because of the technology, we [BIS LLC] offer a live broadcast of the ball drawing to be broadcast by Comcast, our partner in this venture. We have offered a ½ hour show in primetime on the CN8 network in the early evening. The number of broadcasts can be expanded based upon the success of the game. Streaming video of the broadcast over the internet and other services will also be offered.
>
> We have also offered to provide the lottery with up to two minutes of time (without charge) during which time the lottery can present public service announcements or information reflecting how the lottery works for the betterment of the Commonwealth.
>
> Because of the live nature of the show, public figures and celebrities can be presented by the lottery as either guests or ball callers. The show can also be done live at locations such as the Big E, the Marshfield Fair and the like making it an attraction. Comcast does however have a studio in Norwell, Massachusetts less than 10 miles from the Main lottery offices."

Players would obtain bingo cards from Massachusetts Lottery agents or by other means:

> "The [bingo] cards can be designated from POS sales, subscriptions or any other method and can be combined with give away (promotional) cards such that sales and subscription cards could be used in conjunction with cards given to attendees at sports events or other gatherings. For example, if an advertiser wanted to give away 1000 cards at a sporting event, it could have cards printed through the lottery which bore the advertisers logo and those cards could be played the same time as the conventional lottery players' cards were played. The advertiser would simply pay the lottery for the cards."

In other words, BIS LLC proposes a play-along bingo game: players would obtain bingo cards from Massachusetts Lottery agents or by other means, take them home, watch a televised bingo drawing, and mark their cards as numbers are called. The television audience would thus participate in the televised bingo game.

CCA did not perform a technical review of the BIS LLC bingo software, as this would exceed the scope of our engagement, and accepts that in the absence of such technical evaluation the software performs as BIS LLC represents.

As proved to be the case with the 1980s-era play-along lottery game proposals, carriage is essential to the feasibility of the bingo television game BIS LLC has proposed to the Massachusetts Lottery. BIS LLC represents that Comcast has agreed to carry this bingo program. We asked to see the agreement with Comcast. BIS LLC declined to show us the agreement. In an email, BIS LLC states that:

> "Comcast is unequivocably bound to carry the bingo show in prime time on its network. The contract binds us to them and them to us. Comcast has also agreed to expand the program past the original one 1/2 hour time frame as revenues warrant.

> At present, Comcast covers 76% of the households in Massachusetts. With the aquisition [sic] of Adelphia, that percentage will rise in early 2006 into the ninty [sic] percentile mark. Comcast also has a broad reach in other states bordering on Massachusetts including Ct, Vermont, New Hampshire and Maine.
>
> Comcast has committed to making the broadcast available to other broadcast mediums. Getting carriage is not a question here...is firmly in place as is the commitment to expand the coverage as the game develops."

Other than this statement, we can provide the Massachusetts Lottery with no evaluation of Comcast's commitment to carry the proposed bingo program; that Comcast's commitment to carry is in a binding form; and, importantly, that Comcast's commitment to carry is not contingent, on the participation of the Massachusetts Lottery or another State or Canadian Provincial lottery, or on market research establishing that sufficient viewer-ship for the proposed programming is present in Massachusetts, on the existence of a pilot program that can be test-marketed with viewers, on performance hurdles, or on other factors.

Impact on Charitable Gaming

As far as we are aware, for-money play-along bingo television/lottery ticket games do not operate in the United States. BingoTV, the play-along televised bingo program carried on EchoStar's DISH Network, is a not-for-consideration sweepstakes (i.e., play for free) and consequently not comparable, in terms of participation rates, to a play-for-money television/lottery ticket bingo game. In the absence of real-world experience with play-along television/lottery ticket games the likely impact of such a game on charitable gaming in Massachusetts is impossible to assess. It is worth noting, however, that whatever its legal status Internet bingo is widely available in Massachusetts (and elsewhere in the United States). Massachusetts charitable gaming is already being impacted by Internet bingo, and these impacts are likely to continue. A television/lottery ticket bingo game might exacerbate the impact of Internet bingo on charitable gaming in Massachusetts, or, due to the television exposure a television/lottery ticket bingo game would create, might increase viewers' interest in bingo. A generally accepted way of assessing impacts from an untried good or service on existing businesses is by market research. The Massachusetts Lottery might conduct market research designed to assess the positive or negative impacts a play-along bingo television/lottery ticket game would have on charitable gaming in Massachusetts.

Recommendations

Concerning the play-along television bingo game proposed to the Massachusetts Lottery by BIS LLC we make the following recommendations:

- Given the difficulty in securing carriage for play-along gambling games in earlier decades the Massachusetts Lottery should obtain a copy of Comcast's agreement to carry the proposed bingo television program and have it examined by the Massachusetts Attorney General or by the Lottery's own counsel. In particular, the Commonwealth should satisfy itself that Comcast's commitment to carry is in no way contingent, either upon participation by the Massachusetts Lottery or another State lottery; the creation of a pilot program, market research showing sufficient likely viewer-ship for the programming, or any other performance hurdles that might prove difficult to meet in practice.

- The feasibility of a bingo television program, either non-gambling (sweepstakes) or gambling, may be effectively explored through an RFP process. The Massachusetts Lottery could assess the feasibility of a bingo television game by circulating an RFP to suitable companies, including the world's largest bingo companies, Mecca and Gala; Multimedia Games, cable or satellite television companies that have demonstrated interest in bingo programming (e.g., EchoStar), media companies that have demonstrated an interest in interactive gambling, such as News Corporation; domestic cable companies, such as Comcast; domestic telephone companies with active television service initiatives, lottery suppliers, including GTECH, Scientific Games, Intralot S.A., operators of large bingo Web sites, and media companies with an interest in bingo's demographics.

- The Massachusetts Lottery should satisfy itself that sufficient demand for a joint Massachusetts Lottery/television or Internet bingo game is present in the Massachusetts market by conducting market research designed to assess the dimensions of demand for such a product. As noted, Internet bingo, either play-for-free or play-for-money, is available to any American who wants it today, and consequently a play-for-money bingo television game launched in 2005 would be entering a fully competed market.

- Market research would also be necessary to assess the potential cannibalization, if any, of traditional charitable bingo games offered by the Massachusetts Lottery. A televised bingo product may increase the exposure and popularity of bingo in the Commonwealth, much the way the World Poker Tour increased the popularity of poker. Or it may not, simply keeping existing bingo players at home thereby siphoning wagering away from the neighborhood bingo game. Either, both, or neither of these things may occur with the launch of televised bingo in Massachusetts. Without comparable experience or market research on potential customers to point to, this question can not be answered with any degree of certainty.

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- With respect to interstate telecasts of a Massachusetts Lottery bingo game, which the BIS LLC proposal seems to envision, four neighboring States, Connecticut, Maine, New Hampshire and New York, consider the Bingo TV television program carried by EchoStar DISH Network to be illegal. This aspect of the bingo game BIS LLC proposes may

therefore raise legal questions. Before proceeding with a televised bingo game, the Massachusetts Attorney General may wish to examine these potential legal questions.

Finally, we observe that play-along television games were a pre-Internet concept. In the past decade, the Internet has become the most commonly used interactive platform for Americans who wish to gamble at home. The most successful experience with a gambling game used for television programming is poker. The poker business model consists of independently owned domestic cable and broadcast television programs that are not interactive and do not enable viewers to play poker, either for free or for money; and independently owned Internet poker rooms licensed in jurisdictions outside the United States that do allow players to participate in poker (i.e., play for money). This business model has proven to be overwhelmingly successful[16]. In the few years since Travel Channel's initial World Poker Tour cable cast, poker has mushroomed into a gigantic global phenomenon. The synergistic combination of passive television poker tournaments and Internet poker rooms has made poker a pervasive presence in American life. The passive Television/interactive Internet model is also the one employed by Fun Technologies's Lingo, an interactive spelling game launched 18 months ago on Liberty Media's Game Show Network (GSN). As the GSN Lingo television show proceeds, viewers participate in real time over the Internet. The success of Lingo prompted Liberty Media to announce on November 22, 2005 that it would acquire a majority stake in Fun Technologies for $144 million and 32.4 million shares in a new Liberty Media subsidiary, suggesting that this large media company thinks the TV/Internet model used by poker and Lingo will be an important model for interactive games in the future.

The Massachusetts Lottery's games, including the charitable bingo games it oversees, could, conceptually, be developed in a similar manner, utilizing the television/Internet model that has been proven to be so successful with other games, with potentially significant benefits for the Lottery and the Commonwealth of Massachusetts. As discussed in the concluding section of our report, national lotteries outside the United States are placing their products on Internet, interactive television and mobile telephone platforms and are enjoying considerable success in these developments. While current Federal policies preclude similar initiatives by the Massachusetts Lottery, on a forward-looking basis interactive games are almost certainly an important part of the Lottery's future.

[16] As noted elsewhere in this report, the United States Department of Justice considers Internet gambling to be a violation of Federal law.

The Massachusetts Lottery asked CCA to evaluate a "daily race game" developed by TelCom Productions in conjunction with Scientific Games that is similar to a daily race monitor game produced by Tabcorp, a large, diversified Australian company with headquarters in Melbourne, Victoria. This daily race game was tested earlier this year by the Maryland Lottery. The daily race game is similar to keno and would be displayed either on installed keno monitors or on an adjacent monitor. Thematically, this daily race game is distinct from keno in that (in the version proposed) the monitor display features a simulated (animated) horse race. Unlike betting on a horse race at either fixed (bookmaking) or pari-mutuel odds, however, outcomes are determined by a random number generator; in other words, there is no element of skill involved in playing the daily race monitor game. Essentially, the daily race game replaces the numerical grid display on a keno monitor with color animated horse races. The intent of the proposed daily race game is to increase sales of the Massachusetts Lottery's monitor games and refresh this product category. The Massachusetts Lottery also asked us to evaluate the impact, whether positive or negative, a daily race monitor game would be likely to have on Massachusetts's racing industry.

Game Design

The materials relating to the daily race game we examined were obtained from Scientific Games. The proposed daily race game monitor would display an animated race a given number of times an hour, or a given number of times a day. For the purposes of evaluating this game we assumed the game frequency would be the same as Massachusetts's existing keno game. Each simulated race would have 12 horses. Players would select horse numbers; players would be able choose bets with names drawn from the vocabulary of pari-mutuel betting, e.g., a horse number to win, horse numbers to win and place, horse numbers to win, place and show, quinella, exacta and so forth. Exhibit 3.19 presents a schedule of proposed daily race game bets, prizes, and chances of winning.

Exhibit 3.19: Daily Race Game Proposed Bet Types, Prizes, and Chances of Winning

Bet Type	Prize	Chance of Winning
A. Pick 1 of 12 to **win**	$8	1:12
B. **Quinella**- Pick 2 of 12 numbers to come in **1st and 2nd and any order**	$45	0.0875
C. **Exacta**- pick 2 of 12 numbers to come in 1st and 2nd **exact order**.	$90	0.1333
D. **Trifecta** Pick 3 of 12 numbers to come in 1st, 2nd and 3rd **exact order**.	$900	0.9583
D. **Boxed Trifecta** Pick 3 of 12 numbers to come in 1st, 2nd and 3rd **any order.**	$150	0.1944
F. Pick 3 of 12 in exact order includes all of the following in one bet:		
Win (1st)	$2	1:12
Place (2nd)	Free Ticket	1:12
Show (3rd)	Free Ticket	1:12
Exacta (1st & 2nd exact order)	$20	0.1333
Trifecta (1st,2nd, & 3rd exact order)	$325	0.9583

Source: Scientific Games

As with keno, a daily race monitor game player would be able to bet $1 to $20 per play. Daily race game bets would be entered by the player on betting slips. The same bet slip would be used for any of these bet types, but only one bet type could be placed on an individual slip. Players could play their bets for up to 20 races on an individual bet slip. Quick Pics could be generated by computer for any bet type.

Market Research

Scientific Games says it has conducted "qualitative", "not statistically valid" research on the daily race game "in four separate focus groups studies and the results have been extremely positive." Scientific Games says, further, that "[a]lthough results have been excellent across the whole spectrum of our players, they have been best among younger more affluent adults than the market for our traditional games. This market [for a daily race game] will be very similar to that of keno, but will draw in those consumers looking for more excitement than the simple selection of numbered balls provides. Given that the bars and lounges are generally frequented by a younger, more affluent segment of the population, this product is aimed right where it will most likely be successful … Consumers involved in the research felt that this product would be much more entertaining than keno and felt that the game should be run 4 to 6 times per hour. In their opinion, they would spend more money on this game because of the excitement of the action and the variety of attractive bet types."

Scientific Games's "qualitative" research on the daily race game is supplemented by some focus group research on monitor games conducted by Schneiders Della Volpe Schulman for the Massachusetts Lottery in June 2005. Exhibit 3.20a presents some pertinent findings from the SDS focus group study. While the Tabcorp game monitor display can employ various animated themes, SDS found that few focus group participants were interested in (for example) a NASCAR or auto racing theme, while a horse racing game elicited favorable responses.

Exhibit 3.20a: SDS Market Research

- Keno players in all groups were generally intrigued by the concept of a Racing Channel – but only reacted favorably to one of the concepts tested.
- Very few focus group participants had interest in NASCAR or any other kind of auto racing ("I hate car racing. I would never play it!") – Therefore this game's overall rating was 4.0 on the 0-10 scale.
- The more detailed horse racing game previewed from Australia met with a more favorable response than the shorter horse racing game. Participants were attracted to its realistic presentation – including horse's names, as well as some past performance data. This game could further be improved by incorporating a more realistic trackside announcer.

Source: Schneiders, Della Volpe, Schulman

Exhibit 3.20b presents additional findings from the SDS focus group research on monitor games. Focus group participants were interested in the horse race monitor game, feeling that it was more exciting than keno's number grid display. One negative response concerned the horse racing game's betting slips: some participants found these confusing, an indication, perhaps, that they were not familiar with pari-mutuel betting on races.

Exhibit 3.20b: SDS Market Research

The Racing Channel – A Welcomed Addition for Most

Most believed that the Racing Channel would offer a welcomed addition to the mix. Both players and agents however, did voice concern over the "confusing" betting slips.

Comments in Favor

- *"I like the names. I like this better; it seems more like a regular race track." (Light/Moderate Female)*
- *"I like having all the numbers." (Heavy Male)*
- *"The graphics were great – more detail." (Light/Mod. Male)*
- *"When I get bored of losing at keno, I'll play this." (Heavy Female)*

Comments Against

- *"Its misleading that they are showing you all this meaningless information." (Lapsed Male)*
- *"I'd like more talking." (Light/Moderate Male)*
- *"The betting slips were confusing, but now I realize I can bet four times in the same race. I might gravitate toward this, but the cards should be made more clear." (Heavy Male)*

Source: Schneiders, Della Volpe, Schulman

CCA has not independently conducted market research into a daily race game, in Massachusetts or elsewhere, such task being beyond the scope of this project.

Comparable Experience

Although Tabcorp's horse race-themed monitor game is deployed in Australia and in some other countries, the only extensive experience with a daily race monitor game in a United States lottery appears to be in Maryland. CCA reviewed material describing the experience with this monitor animated race game, called "Racetrax", in Maryland that was provided by Scientific Games. Racetrax was offered in selected Maryland Lottery retail outlets that also offered keno for a 33-week period.

Exhibit 3.21: Scientific Games Racetrax Maryland Pilot Program Results

Racetrax Performance over the 33 Week Pilot:
Average Weekly Sales per Retailer of $3,010
Impact on keno over the 33 Week Pilot:
Average Weekly Sales Declines of 14%

Source: Massachusetts Lottery, Scientific Games, Christiansen Capital Advisors, LLC

Massachusetts Projections

On the basis of its market research, Scientific Games projects that conducting a daily race game in Massachusetts four (4) times an hour during game operating hours "should allow [the daily race game] to generate between $186,000,000 and $224,000,000 [in sales or gross wagers] annually." Under the assumption that the daily race game would cannibalize 20% of existing keno sales, Scientific Games projects that a daily race game "would result in net [incremental] sales of $148,800,000 to $179,200,000." Moreover, Scientific Games feels that "by adding more excitement into the monitor game mix, the long-term stability of this business will be enhanced."

Scientific Games evaluated two different options for implementing a daily race game, each option having somewhat different costs. Net of these differing costs, Scientific Games projects annual "incremental net revenue of $35,712,000-$43,008,000".

Exhibit 3.22 summarizes CCA's extrapolation of Scientific Games's Maryland Racetrax pilot results (applying the average weekly Racetrax sales per retailer of $3,010.00 to the 1,767 keno retailers in Massachusetts and cannibalization of keno of 14%) to formulate a potential scenario of net combined keno and daily race monitor game sales patterns in Massachusetts. We note in making these projections that the Maryland pilot program data, which represent 30 keno retailers out of over 2,000 in Maryland, probably does not provide a large enough sample for extrapolation of these results to Massachusetts with a high degree of confidence. We would prefer a more extensive data set. Moreover, while there are general similarities between Maryland and Massachusetts in a number of areas, including population (Massachusetts 6.4 million, Maryland 5.6 million), comparatively high *per capita* spending on keno (Massachusetts $120.9, overall rank 1, Maryland $70.1, overall rank 2), and proximity to both casino gaming (Atlantic City, Foxwoods/Mohegan Sun) and racino gaming (West Virginia/Delaware, Rhode Island), there are some notable differences between the two States: Massachusetts total lottery sales *per capita* ($680.8, overall rank 1) and instant ticket sales *per capita* ($464.0, overall rank 1) are much higher than Maryland total lottery sales per capita ($251.1, overall rank 7) and instant ticket sales *per capita* ($63.9, overall rank 21).

With these qualifications, Exhibit 3.22 presents projections of what Massachusetts monitor game sales would have looked like in FY 2004 had the daily race game tested in Maryland been operating for the entire year in all 1,767 keno outlets. Massachusetts fiscal 2004 keno sales were $775.5 million. A daily race monitor game operating in all 1,767 keno outlets would reduce keno sales by $108.6 million, or 14%. Daily race game sales would total $276.6 million. Combined monitor game sales would thus increase from $775.5 million to $943.5 million, a gain in monitor game sales of $168 million, or 21.7%.

Exhibit 3.22: CCA's Projections for FY 2004 Keno Sales Net of 18% Cannibalization and Daily Race Game Sales Projected by Scientific Games

	Actual FY 2004 Sales ($M)	Estimated Sales ($M)	Estimated Change ($M)	Estimated % Change
Keno	$775.5	$666.9	-$108.6	-14.0%
Daily Race Game	0.0	276.6	$276.6	0.0%
Total	$775.5	$943.5	$168.0	21.7%

Source: Massachusetts Lottery, Scientific Games, Christiansen Capital Advisors, LLC

We understand that the possibility that a daily race monitor game would cannibalize Massachusetts pari-mutuel betting on racing is an issue in Massachusetts.

Exhibit 3.23 presents Massachusetts pari-mutuel handle by sport in fiscal 2004.

Exhibit 3.23: FY 2004 Massachusetts Pari-Mutuel Handle by Sport

	Total Horse Handle	Total Greyhound Handle	Total Handle	Estimated Horse Revenue	Estimated Greyhound Revenue
2002	$277.2	$151.9	$429.0	$65.3	$32.1
2003	258.7	141.8	400.5	61.0	29.9
2004	242.8	133.0	375.8	57.2	28.1

Source: The Massachusetts Racing Commission, Christiansen Capital Advisors, LLC

Horse racing accounted for $242.8 million, or 64.6%, of FY 2004 Massachusetts pari-mutuel handle of $375.8 million (Exhibit 3.23). Consumer spending on Massachusetts horseracing in FY 2004 (i.e., the takeout, or handle less winnings returned to bettors) was approximately $57.2 million. In other words, the Massachusetts horseracing industry is comparatively small, and is, moreover, in decline.

In general, the outlook for small U.S. horse racing industries, particularly in markets that are supplied by casinos and racetrack gaming devices on their margins, is not good. The market economics for U.S. horseracing have been deteriorating for years. Among the causes of this deterioration are the enormous and still-continuing expansion of casinos and machine games and the proliferation of Internet and offshore betting exchanges and other betting services that offer lower-priced horse race betting and rebates on wagers for large bettors. The latter problem, finding ways to compete with lower-priced competitors, is proving difficult for all State-licensed pari-mutuel betting operations. Massachusetts racetracks are no exception. The former problem, the very adverse impacts of casino gaming on pari-mutuel racing industries, does have a proven solution, which is to allow racetracks to add gaming devices (slot machines or video lottery

terminals, or VLTs) to their facilities under terms that allocate sufficient shares of machine gross gaming revenue to racetracks and purses. Rhode Island, Delaware and West Virginia have authorized machines at their pari-mutuel facilities partly for this reason, utilizing their lotteries for this purpose. Machine gaming has stabilized racing in these States, particularly in Delaware and West Virginia. It is probable that without machines the racing industries in these states would not have survived. This experience, and trends in pari-mutuel racing elsewhere in the United States, supports the statement that unless Massachusetts racetracks are allowed to emulate pari-mutuel facilities in Delaware, West Virginia and Rhode Island and add gaming devices to their operations Massachusetts racing faces a future of diminishing prospects.

Likely Impact on Massachusetts Racing

Because the daily race game would use a random number generator it would be fundamentally different from handicapping horse races, and would not be a substitute for it. Handicappers are engaged in constructing subjective probabilities of the outcomes of horse races. The data used in the handicapping process and the skills needed to make effective use of them are voluminous and complicated: handicapping is a discipline that takes years to master. Placing bets on an animated simulation of a fictitious horse race the outcome of which is determined by a random number generator offers absolutely no scope for the exercise of the handicapper's skills. To the regular horse players who contribute the bulk of U.S. handle on horse races, a horse race themed keno game is in no sense a substitute for a real horse race. We would not, therefore, expect a random number generator daily race game to adversely impact the pari-mutuel betting of handicappers, in Massachusetts or anywhere else. Impacts, if any, would be confined to casual bettors, and in the contracting market for racing in Massachusetts casual bettors are unlikely to make significant contributions to Massachusetts pari-mutuel handle, the bulk of which, unless Massachusetts is atypical of U.S. horse racing in general, is currently contributed by regular horse players.

A daily race monitor game might benefit Massachusetts racetracks, by exposing horse racing to the segment of the Massachusetts population that plays the Lottery's daily race monitor game and, possibly, establishing a basis for cross-marketing initiatives between Massachusetts racetracks and the Massachusetts Lottery.

Recommendation

A daily race game would in the projections offered here increase Massachusetts Lottery monitor game sales by 21.7%, or $168 million, to $943.5 million. It would, further, refresh this product category.

Subject to further study of the issue, we do not think a daily race monitor game would seriously harm Massachusetts's racing industry, which, like other small racing industries, needs machine games of its own to enable it to compete in the 21st century marketplace, not less competition from random lottery games. If the Massachusetts Lottery or the Commonwealth of Massachusetts feels that more information concerning the possible impacts, whether positive or negative, a daily race monitor game might have on Massachusetts racing it could conduct market research designed to assess these impacts.

IV. Video Lottery Terminals (VLTs)

CCA was asked to provide an independent assessment of the revenue potential of video lottery terminals, or VLTs, in Massachusetts and the impacts VLTs would have on the Lottery's traditional products. The Massachusetts Lottery also asked us to review Senate Bill 2215, the "Live Racing Revitalization Act", to analyze and verify the financial projections that accompanied this bill, and to provide an opinion concerning the accuracy of these financial projections, and recommend a structure for VLTs, *viz*., whether the machines should come directly under the Lottery, under a separate entity under the Treasury, or under an independent regulatory agency.

We begin this section by discussing the CCA methodology for studies of this kind. Our baseline for evaluating the potential of new gambling markets is consumer spending on gambling in Massachusetts (see Section 2, in which we compare spending on gambling in a variety of comparable markets).

Methodology

CCA utilized proprietary models it has used in previous studies, [17] modified to take into account specific market conditions in Massachusetts and surrounding areas, to develop projections for the market potential of video lottery terminals in the Commonwealth.

The model chosen, which is used by most economists in location-based analyses of this type, is often referred to as a "gravity model," because it is similar to Newton's Law of Gravitation (for which the distance factor would be -2.0: if you double the distance, the attraction declines by a factor of four). This model has been refined by CCA over the past 20 years, as it relates to gaming facilities; the technique focuses on the demographics of areas surrounding each facility, in particular the number of adults residing at various distances, and the observed ratio of actual spending of other similar adult populations.

Our model assesses, and projects, gambling revenues based upon the distribution and characteristics of the adult population surrounding each facility. The model includes as factors or variables: distance, *per capita* income, urban/rural population components, the non-resident "visitor" population, and competition. These factors or variables are weighted and aggregated to generate projections. CCA models markets in the United States down to adult population by zip code, and in Canada by postal FSA. This provides a more accurate assessment of geographic distribution of

[17] CCA has conducted similar studies for the Federal National Gambling Impact Study Commission, in Kentucky, Pennsylvania, Kansas, Connecticut, Iowa, Massachusetts, Florida, New York, New Jersey, Rhode Island, California, Maryland, and a variety of other North American markets.

populations, particularly important in markets that have several competing gambling facilities.

As noted above, an important component of CCA's analysis is a verifiable adult spending base for video lottery terminals. We assessed the experience of existing pari-mutuel gaming device facilities ("racinos") in markets comparable to Massachusetts and used this experience as the basis for estimates of the consumer demand for the proposed machine gambling facilities and their potential impacts upon existing gambling facilities, including the Massachusetts Lottery. CCA's analysis is based upon observed, verifiable distance-adjusted spending per adult in comparable gambling markets, providing a factual basis for projections.

The models used for our projections in this report adjust the population surrounding each facility (or proposed facility) for distance, *per capita* income, and the proportion of urban to rural residents, the non-resident "visitor" population, and competition. From these data we calculate an *adjusted adult population* around each facility, or group of facilities. This measure weights the adults who live closest to a facility at higher values than those who live at greater distances. Total actual or estimated revenues (or consumer spending) in each market is divided by these adjusted population figures to arrive at revenue per "distance adjusted" adult. [18]

Our projections of demand and potential revenues are based on an important observation: other things being equal, gambling patrons overwhelmingly tend to gamble at the facility that is most conveniently located for them. "Convenience" is a quality with multiple parameters where video lottery facilities are concerned. For example, in markets served by pari-mutuel facility gaming machines and cruising riverboats, land based pari-mutuel machines, with continuous hours of operation, have proven (other things being equal) more convenient than identical riverboat machines with start-and-stop cruise schedules. Convenience of access is also another key consideration. Most regional gambling markets are served via automobile, and during peak times bottlenecks can, and often do, occur. The analysis presented in this report, therefore, does not draw sharp geographical distinctions between markets within Massachusetts. Casino patrons sometimes do visit more distant facilities, particularly if there is a critical mass of gambling options or amenities that they cannot find at the nearest facility. But other things being equal, VLTs, and non-casino machine games generally, are commodities: geographic proximity tends to outweigh other factors in consumer choice among

[18] As noted above, these populations are adjusted for several other factors as well; however, the most significant variable, in terms of casino spending, is distance. Hence we refer to these populations as "distance" adjusted.

competing suppliers. The gravity model appears to accurately reflect patterns of gambling consumption in Massachusetts.

Because the public tends to gamble at the facility that is most conveniently located, patronage (and associated spending) at pari-mutuel facilities with VLTs falls off with distance. For Massachusetts pari-mutuel facilities with VLTs, we assume (based upon previous research and CCA's experience) a "distance coefficient" [19] of -0.7, compared to values of around -0.6 for dockside (non-cruising) riverboats with table games, stand alone slot facilities and very large racinos, and about -0.5 for destination resorts (including regional destinations) with hotel, retail, and conference facilities.

These coefficients mean that casino patronage rises with increased proximity to a gaming facility in differing degrees. [20] Because video lottery terminals are commodities, distance is the predominant determinant of pari-mutuel facility VLT gaming operations, "racino" patronage (and, hence, we assume, of spending of other kinds at "racino" facilities). Distance not only determines the overall level of *per capita* expenditures in the marketplace; it weighs heavily in consumer choice among competing suppliers. With relatively few exceptions, the evidence from other markets overwhelmingly indicates that consumer expenditures on casino games will flow to the closest supplier to any given market. [21]

As previously noted, our models also incorporate the estimated effects of *per capita* income. We assume that for counties with *per capita* money incomes below regional averages, slot machine spending declines with income with an elasticity of 0.5. We do not assume any increase in urban/rural mix (urban residents typically spend more).

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[19] The "distance factors" estimated for these models are, technically, the "elasticities" of spending with respect to distance. Based upon survey data from several jurisdictions, rates of casino visitation appear to decline in proportion to about the 0.5 to 0.6 power of the distance to the casino, yielding distance factors of about 0.5 to 0.6. This is a relatively "long-distance" attraction; if distance is doubled, visitation (and hence, we assume, spending) declines by only about 30 percent.

[20] Some researchers refer to these phenomena as "Attraction" and "Friction". Attraction, as measured by CCA's distance coefficient, is the relative "draw" of the facility from regional markets. Friction, as measured by our models, is primarily distance, but includes other limiting factors as well such per capita income.

[21] The most well known exception would be Las Vegas. The Las Vegas market is unique both in terms of the scale of development and of the attractions it has evolved, which enable it to exploit a truly global market. Due to this infusion of personal income from other States and countries, and because, to some extent, Nevada residents are a "self-selected population" with a bias towards gambling, Nevada spending ratios are very high. We do not believe that they are representative of any other jurisdiction.

We examined two scenarios, one utilizing central system video lottery terminals or VLTs, and one utilizing central determination system video lottery terminals; that is, a machine gaming system that employs lottery decision logic to determine the outcome of trying its devices. As the following discussion demonstrates, there are significant performance differences between these two kinds of VLTs, with large implications for the revenues generated from VLT operations. Further, both kinds of VLTs are distinct, legally and in practical ways, from casino slot machines. It is important for the Commonwealth, its Attorney General, and the Massachusetts Lottery to understand the differences between central system video lottery terminals, central determination system video lottery terminals, and slot machines. Appendix E discusses central system devices in some detail. Appendix F provides a comparison of central system devices, central determination system devices, and the slot machines found in most casinos.

Comparable Markets: Scenario 1 Central System Video Lottery Terminals

West Virginia

The West Virginia market is served by four racinos and 7,388 distributed devices in restaurants and bars. In the aggregate, the four West Virginia facilities have 286,656 square feet of casino floor, 11,491 slot machines, 26 restaurants and 510 hotel rooms. The four facilities generated $894.5 million in slot machine revenue in the fiscal year ended June 30, 2005. Exhibit 4.1 presents relevant data for each facility. Note that since 1999 West Virginia pari-mutuel facilities have been able to deploy reel-spinning random devices that pay out in cash and coin which have proven superior to video facsimiles of spinning reels and voucher outputs.[22]

Exhibit 4.1: West Virginia Market: Revenue Amenities and Property Performance

FY 2005	Slot Revenue ($M)	Number of Slot Machines	Win Per Slot Per Day	Square Footage	Hotel Rooms	Restaurants
Charles Town	$384.5	4,370	$241.0	83,600	0	6
Mountaineer Racetrack	254.8	3,147	221.8	80,056	359	12
Wheeling Downs	189.9	2,244	231.8	90,000	151	6
Tri-State	65.4	1,730	103.6	33,000	0	2
	$894.5	**11,491**	**$213.3**	**286,656**	**510**	**26**

Source: The West Virginia Lottery, Christiansen Capital Advisors, LLC

Adjusting the surrounding populations for distance, income, and other factors (including the 34% of revenues that are spent on limited gaming at restaurants and bars) incorporated in the gravity model results in an average rate of spending per distance-adjusted adult of $408.40. (Exhibit 4.2) This figure can be interpreted as the average amount an adult within 10 miles of this market spends per year on slot machines in West Virginia. For the reasons discussed earlier, at greater distances this spending declines.

[22] This does not include TITO (or ticket in-ticket out). The old voucher systems that were in place in West Virginia were ticket out only. Any winning tickets had to be redeemed at the cage. New cashless systems, such as TITO, which allow to simply insert the ticket in the same, or a different machine, have proven very popular with gamblers.

Exhibit 4.2 presents the output of the gravity model analysis for the West Virginia facilities.

Exhibit 4.2: West Virginia Model Output

Charles Town Races and Slots

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	33,592	50.0%	$5.1	$152.9
10-25	302,193	37.6%	34.7	114.9
25-50	2,232,276	26.7%	181.9	81.5
50-75	3,369,495	12.9%	132.5	39.3
75-100	1,670,797	5.9%	30.2	18.1
Total	7,608,353		$384.5	

Spending Base: $305.50

Mountaineer Racetrack and Gaming Resort

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	46,687	53.9%	$7.8	$166.8
10-25	312,913	27.5%	26.6	85.0
25-50	2,104,143	16.0%	104.5	49.6
50-75	1,507,347	11.6%	54.0	35.8
75-100	2,197,722	9.1%	61.9	28.2
Total	6,168,812		$254.8	

Spending Base: $309.46

Wheeling Island Racetrack and Gaming Center

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	80,724	51.8%	$22.1	$274.3
10-25	127,141	19.4%	13.1	102.7
25-50	1,119,568	9.2%	54.3	48.5
50-75	1,875,397	5.3%	52.5	28.0
75-100	1,542,549	2.4%	19.6	12.7
100-125	2,982,246	1.8%	28.3	9.5
Total	7,727,625		$189.8	

Spending Base: $529.65

Tri-State Racetrack & Gaming Center

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	98,869	45.3%	$21.9	$221.7
10-25	118,933	27.0%	15.7	131.8
25-50	352,885	7.0%	12.2	34.5
50-75	518,671	3.6%	9.1	17.6
75-100	600,624	2.2%	6.5	10.9
Total	1,689,982		$65.4	

Spending Base: $489.00

Source: Christiansen Capital Advisors, LLC

Delaware

The Delaware market is served by three racinos. In the aggregate, the Delaware facilities have 214,520 square feet of "racino" floor, 6,581 video lottery terminals (which are often advertised as "slot machines"), 21 restaurants and 232 hotel rooms. These racinos, which have been adversely impacted by a smoking ban imposed by the State of Delaware in November 2002, generated $564.3 million in gross gaming revenue in the fiscal year ended June 30, 2005. Exhibit 4.3 presents relevant data for each facility. Note that the devices used in Delaware are central system VLTs, not slot machines *per se*; each Delaware VLT is an independent random device, making the player's experience so close to the experience of playing a casino slot machine (which is likewise an independent random device) that it is indistinguishable. The difference is that these machines are hooked to a costly statewide central monitoring system.

Exhibit 4.3: Delaware Market: Revenue Amenities and Property Performance

FY 2005	Slot Revenue ($M)	Number of Slot Machines	Win Per Slot Per Day	Square Footage	Hotel Rooms	Restaurants
Delaware Park	$272.2	2,500	$298.3	78,520	0	8
Dover Downs	193.0	2,500	211.5	91,000	232	9
Harrington Raceway	99.1	1,581	171.7	45,000	0	4
	$564.3	**6,581**	**$234.9**	**214,520**	**232**	**21**

Source: The Delaware Lottery, Christiansen Capital Advisors, LLC

Adjusting the surrounding populations for distance, income, and other factors incorporated in the gravity model results in an average rate of spending per distance-adjusted adult of $652.63. (Exhibit 4.4) This figure can be interpreted as the average amount an adult within 10 miles of this market spends per year on VLTs in Delaware. For the reasons discussed earlier, at greater distances this spending declines.

Exhibit 4.4 presents the output of the gravity model analysis for the Delaware facilities.

Exhibit 4.4: Delaware Model Output

Delaware Park

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	871,052	34.6%	$119.9	$137.6
25-50	3,883,451	5.0%	77.4	19.9
50-75	3,774,535	4.2%	63.0	16.7
75-100	5,473,761	0.6%	12.0	2.2
Total	**14,002,799**		**$272.2**	
		Spending Base:	$397.75	

Dover Downs/Harrington Raceway

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	143,852	53.8%	$70.2	$488.0
25-50	578,719	12.6%	66.1	114.3
50-75	1,059,062	4.0%	38.2	36.1
75-100	3,784,423	2.9%	100.1	26.5
100-125	1,210,978	1.5%	17.0	14.0
125-150	595,936	0.1%	0.4	0.7
Total	**7,372,970**		**$292.1**	
		Spending Base:	$907.50	

Source: Christiansen Capital Advisors, LLC

Rhode Island

The Rhode Island market is served by two racinos. In the aggregate, the Rhode Island facilities have 80,000 square feet of casino floor, 3,563 video lottery terminals, and 4 restaurants. These racinos generated $564.3 million in gross gaming revenue in calendar year 2004. Exhibit 4.5 presents relevant data for each facility. Like the VLTs used in Delaware, the VLTs used in Rhode Island are central system VLTs; like the Delaware VLTs, each Rhode Island VLT is an independent random device, making the player's experience very close to the experience of playing a casino slot machine (which is likewise an independent random device). Devices in Rhode Island, however, are limited to video only and do not pay out in cash. Although slot machines have gone through numerous innovations over the past 25 years, the most popular machine among slot players remains the traditional "three-reel stepper." Video facsimiles of spinning reels, however close, have been shown to lag in performance compared to the machines with actual physical spinning reels.

Exhibit 4.5 Rhode Island Market: Revenue Amenities and Property Performance

CY 2004	Slot Revenue ($M)	Number of Slot Machines	Win Per Slot Per Day	Square Footage	Restaurants
Lincoln Park	$304.7	2,543	$328.3	60,000	3
Newport Grand	71.6	1,020	192.3	20,000	1
Totals	**$376.3**	**3,563**	**$289.4**	**80,000**	**4**

Source: The Rhode Island Lottery, Christiansen Capital Advisors, LLC

Adjusting the surrounding populations for distance, income, and other factors incorporated in the gravity model results in an average rate of spending per distance-adjusted adult of $579.9. (Exhibit 4.6) This figure can be interpreted as the average amount an adult within 10 miles of this market spends per year on video gaming devices in Rhode Island. For the reasons discussed earlier, at greater distances this spending declines.

Exhibit 4.6 presents the output of the gravity model analysis for the Rhode Island facilities.

Exhibit 4.6: Rhode Island Racino Model Output

Newport Grand

Estimated Contributions	Adult Population	Competition, Distance, and Income Adjustments	Total Revenues ($M)	Actual Spending Per Adult
Local Area	39,523	66.8%	$14.5	$367.5
Rhode Island	770,371	6.2%	26.1	33.9
Connecticut	2,574,719	0.0%	0.4	0.1
Massachusetts	4,904,340	1.1%	30.6	6.2
More Distant (% of Total)			5.0	
Total	**8,288,953**		**$76.6**	
		Spending Base:	$550.00	

Lincoln Park

Estimated Contributions:	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
Local Area	477,911	60.3%	$175.7	$367.7
Rhode Island	331,983	10.6%	21.4	64.5
Connecticut	2,614,242	0.0%	0.6	0.2
Massachusetts	4,904,340	3.4%	101.3	20.6
More Distant (% of Total)			5.7	
Total	**8,328,476**		**$304.7**	
		Spending Base:	$609.80	

Source: Christiansen Capital Advisors, LLC

VLT Revenue Projections—Scenario 1 Central System Video Lottery Terminals

In the following section CCA evaluates the revenue potential of VLTs at four pari-mutuel facilities in the Commonwealth. We have performed a feasibility analysis for two distinct scenarios: in Scenario 1 we assume 2,000 central system or Delaware-style VLTs located at each of the four licensed pari-mutuel facilities in Massachusetts. We assume no Indian Gaming or stand-alone slot machine or other gaming device facilities elsewhere (on the mainland) in the Commonwealth. [23]

Exhibit 4.7 reviews a summary of the spending bases in comparable markets described in the preceding section. Scenario 1 utilizes facility spending bases from Delaware, Rhode Island, and West Virginia, to produce a likely average spending per distance adjusted adult in Massachusetts markets or $512.3 per distance adjusted adult.

Exhibit 4.7: Spending Bases in Comparable VLT markets

Scenario 1	Spending Base
Dover Downs/Harrington	$907.5
Wheeling	529.7
Lincoln Park	609.8
Newport Grand	550.0
Tri-State Racetrack	489.0
Delaware Park	397.8
Mountaineer	309.5
Charles Town	305.5
Average	$512.3

Source: Christiansen Capital Advisors, LLC

[23] We understand that Massachusetts has at least one recognized tribe, the Wampanoags. The Wampanoags currently do not have a reservation on mainland Massachusetts and maintain their ancestral lands on Martha's Vineyard. It is assumed by CCA for the purposes of this report that if the Massachusetts Lottery implements machine gaming, the Wampanoags will successfully negotiate a compact for gaming of their own, but limited to Martha's Vineyard. We believe that the tribe will either have to settle for gaming at this location or negotiate with the Commonwealth of Massachusetts for a site on the mainland. In this latter case the Commonwealth could negotiate a revenue share from the tribal facility. The reasoning behind this view is that in the Federal Indian Gaming Regulatory Act's (IGRA's) 17 year history only three landed tribes (tribes with reservations) have succeeded in taking land into trust from the Federal government (in other words without State approval) to build a casino off the reservation. Furthermore, the whole concept of "reservation shopping" is under Congressional review. CCA believes that all decisions of the National Indian Gaming Commission (the regulatory agency formed by IGRA) in regard to taking land into trust are likely to receive a great deal more scrutiny in the future. In short, without the support (and a revenue deal) with the Commonwealth the Wampanoags seem unlikely to be able to build a casino anywhere in Massachusetts other than on their reservation on Martha's Vineyard. The outcome of the current Congressional review of IGRA is incomplete and the results may be different than what we expect. However, "reservation shopping" was the catalyst for this review and appears to be the most likely area of IGRA that may be more narrowly tailored and hence, curtailed.

Exhibit 4.8 summarizes the results of a gravity model analysis under the assumptions we have used in Scenario 1. In total, our gravity model projects that the four pari-mutuel facilities in Massachusetts under this scenario could generate $1.2 billion in gross gambling (machine, or VLT) revenues if the number of machines at Massachusetts tracks were unlimited. However, according to comparable experience at other casinos and racinos across the North America, 2,000 machines would not be enough to supply the demand at the two Boston facilities, which would consequently be capacity-constrained. VLTs and other gaming devices produce over 50% of total gaming revenues on Friday and Saturday. In markets where supply is restricted or insufficient to meet the demand in the marketplace a free machine may be next to impossible to find during those peak times. In other words, there is only so much money that can be pumped through any VLT during a given period. For these reasons CCA has estimated that machine productivity (win per machine per day) would level off around $500.00 per unit per day. [24]

[24] There are examples of win per unit day figures that exceed the artificial cap we have established here; notably at Grand Victoria in Elgin, Illinois, two other Chicago area facilities, and devices in Ontario prior to the authorization of gaming in Detroit. These results appear to be the exception, rather than the rule, however, and in our experience win per unit per day normally seems to reach a great deal of resistance at the $400-$500 level.

Exhibit 4.8: Massachusetts Racino Model Output – Scenario 1

Suffolk/Wonderland

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	2,480,066	55.0%	698.4	$281.6
25-50	2,114,115	8.8%	95.2	45.0
50-75	1,207,939	4.4%	27.1	22.4
75-100	1,505,170	3.0%	23.1	15.3
More Distant (% of total)			42.2	
Total	**7,307,290**		**$886.0**	
		Spending Base:	$512.33	

Raynham/Taunton

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	1,944,951	14.3%	$143.0	$73.5
25-50	2,592,294	1.1%	14.7	5.7
50-75	1,288,383	0.6%	3.8	2.9
75-100	1,603,960	0.0%	0.0	0.0
More Distant (% of total)			8.1	
Total	**7,429,588**		**$169.5**	
		Spending Base:	$512.33	

Plainridge

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	2,267,199	11.8%	$137.2	$60.5
25-50	2,458,108	2.4%	30.7	12.5
50-75	1,866,617	0.9%	8.9	4.8
75-100	1,317,709	0.3%	1.8	1.4
More Distant (% of total)			8.9	
Total	**7,909,633**		**$187.6**	
		Spending Base:	$512.33	

Source: Christiansen Capital Advisors, LLC

Pro Forma Delaware-Style VLT Revenue Projections – Scenario 1

CCA developed projections for Delaware-style (i.e., central system) VLT win (consumer spending or gross gaming revenue) at these four facilities. The technique employed relies on ratios of consumer spending to adult population observed in comparable slot machine markets.

The estimates presented in Exhibit 4.8 are, as noted, demand estimates. They are not assessments of the operators' ability to absorb this demand. We have found in other markets that even well-managed gaming facilities take approximately three full years of operation to establish their businesses in the marketplace and capture the existing demand it contains.

In the following table, we present *pro forma* revenue projections derived from the demand models presented in the previous section. We assume that machine gaming facilities absorb 75% of the existing demand in the first full year of operation, and 90% in the second year. These assumptions are based upon the observed experience with the development of machine gaming in other markets. New gambling markets are typically characterized by two to three years of double-digit growth as gambling supply is absorbed and properties establish themselves in the market. Exceptionally effective marketing of a given property can accelerate this trend while less effective marketing can retard it, but in our experience in most markets average growth rates are consistent with the percentages we assume in this report. When markets mature, growth rates typically decline to levels that fluctuate within one or two points of growth in population and *per capita* income in the market. By the third year of operations, we expect that well-managed facilities will absorb most of the latent demand in the marketplace. In other words, we assume it will take three years for the market to mature. After that point, (i.e., Years Four and Five) we assume a 3% growth rate, which is consistent with growth rates in other mature gambling markets. The resulting projections for the Massachusetts VLTs are presented in Exhibit 4.9.

Exhibit 4.9 presents *pro forma* projections of the revenue that would be generated from the demand estimates presented in Exhibit 4.8 and adjusts these results to account for the capacity constraints at Suffolk and Wonderland by capping the potential revenue from these facilities at $500.00 per machine per day. Adjusted for this capacity constraint we estimate gross gaming revenue at these four pari-mutuel facilities with 2,000 Delaware-style VLTs over their first five years of operation. Gross gaming revenue is projected at $815.4 million in Year One, $978.5 million in Year Two, and $1.15 billion in Year Five. Under the assumption that 60% of gross gaming revenue from VLTs would go to the Commonwealth and 2% to local government, revenue to all levels of government in the Commonwealth is projected at $505.5 million in Year One, $606.6 million in Year Two, and $715.1 million in Year Five.

Exhibit 4.9: Pro Forma Massachusetts Racino Revenue Projections – Scenario 1 (Years One through Five)

Scenario 1 ($M)	Year One	Year Two	Year Three	Year Four	Year Five
Wonderland/Suffolk	$547.5	$657.0	$730.0	$751.9	$774.5
Raynham-Taunton	127.2	152.6	169.5	174.6	179.9
Plainridge	140.7	168.9	187.6	193.3	199.1
Total	**$815.4**	**$978.5**	**$1,087.2**	**$1,119.8**	**$1,153.4**
Revenue to Government	**$505.5**	**$606.6**	**$674.1**	**$694.3**	**$715.1**

Note: Revenue to government includes 60% to the Commonwealth and 2% to local government.

Source: Christiansen Capital Advisors, LLC

Comparable Markets: Scenario 2 Central Determination System or New York-Style Video Lottery Terminals

New York

The New York market is served by five racinos and five tribal casinos. In the aggregate, the New York racinos (not counting Batavia Downs, which opened in May 2005) have 155,267 square feet of casino floor, 5,042 slot machines and 14 restaurants. We estimate these racinos will generate $324.2 million in gross gaming revenue in the twelve months ended March 31, 2006. Exhibit 4.10 presents relevant data for each facility.

Exhibit 4.10: New York Racino Market: Revenue Amenities and Property Performance – Last Twelve Months Ended March 31, 2006

LTME 3/31/06	*Slot Revenue ($M)*	Number of Slot Machines	Win Per Slot Per Day	Square Footage	Restaurants
Saratoga	$122.6	1,324	$253.8	55,000	7
Finger Lakes	78.2	1,010	212.0	28,267	3
Buffalo	41.3	1,718	65.9	27,000	3
Monticello	82.1	990	227.1	45,000	1
Totals	**$324.2**	**5,042**	**$176.2**	**155,267**	**14**

Note: The revenue figures in this exhibit were generated using eight months of actual VLT results. The four months ended March 31, 2006 are CCA estimates. A fifth racino, Batavia Downs, began operations the week of May 21, 2005. Currently Batavia Downs has 586 machines.

Source: The New York Lottery, Christiansen Capital Advisors, LLC

Central System VLTs *vs*. Central Determination Systems

Unlike the VLTs in Rhode Island, West Virginia and Delaware, the VLTs used in New York are central *determination* system devices. Some explanation of these differing kinds of VLTs is necessary.

Lottery laws differ. Some are more restrictive than others in terms of what defines a lottery, and what the lottery can and cannot do. Delaware, which used its unusually liberal lottery law as the basis for a highly successful racino industry, defines "video lottery machine" as "any machine in which bills, coins or tokens are deposited in order to play in a game of chance in which the results, including options available to the player, are randomly and immediately determined by the machine. A machine may use spinning reels or video displays or both, and may or may not dispense coins or tokens directly to winning players. A machine shall be considered a video lottery machine notwithstanding the use of an electronic credit system making the deposit of bills, coins or tokens unnecessary." (29 Del. Laws § 4803 (g)) It's hard to think of a gaming device that wouldn't qualify as a video lottery machine under Delaware's definition. In other States lottery laws and/or constitutions are more restrictive and often limit the kinds of games that meet statutory definitions of "lottery".

The creation of gaming machine markets under existing lottery law is not a new phenomenon. "Video lottery terminal", or VLT, has been part of the gaming lexicon for quite some time. Video poker machines were added to a handful of State lotteries in the early 1990s. These VLTs were connected to central lottery computer systems and have subsequently evolved on this pattern: as player-operated terminals of central lottery systems.

So what are video lottery terminals? There is no hard and fast definition. In the beginning, "VLT" most often meant video poker administered by the lottery. It still does in jurisdictions that make clear distinctions between video poker and self-contained casino slot games; Louisiana (where video poker was authorized by statute and the lottery is not involved) and Ontario (which does not allow its lottery to deploy VLTs and all machine games are owned and operated by the Ontario Lottery and Gaming Corporation) are examples. But no two State gambling laws are exactly alike, and as VLTs have spread across North America the distinction between central system VLTs and casino slot machines has blurred to the point where the two legally distinct kinds of devices are practically indistinguishable in many markets. Market pressures have evolved central system VLTs that are close versions of casino slot machines, particularly in Delaware, West Virginia and Rhode Island. Someone playing a video lottery machine connected to central computer in these States enjoys an experience that is not fundamentally dissimilar to playing a slot machine that is not connected to central computer.

Lawmakers in New York were bound by the New York constitution, which has been construed by New York courts to require that gaming devices authorized under the State's lottery law be, in fact, lotteries, not independently random devices. Implementing the racetrack machine provision of New York's 2001 Omnibus Gambling Law was a troubled process. The trouble arose from the legislative strategy: bringing machines in under New York's constitutional provision authorizing a lottery for the purpose of providing aid to education. New York's constitution, like many State constitutions, prohibits gambling; there are exceptions for pari-mutuel betting, bingo,

charitable games and a State lottery. Amending the constitution is a cumbersome process. An identical bill must be passed by two successively elected legislatures and then approved by voters in a referendum. Other States with constitutional prohibitions got around the obstacle by defining gaming devices as "lotteries"; this is what New York decided to do.

Whereas Delaware's lottery law permits just about any type of machine, New York State lottery definitions aren't as elastic. New York's strict definition of "lottery" forced the State to implement its racetrack machine law using a central determination system.

Central determination systems are exactly what they sound like; the outcome of trying a central determination device is determined centrally at a host computer site, not at the individual device level. New York-style VLTs use *lottery decision logic* in which winners and losers are pre-determined: the equivalent, in this respect, of electronic scratch cards. The devices are dumb terminals. When the player tries a New York VLT he or she is drawing a lot or "ticket" from a finite stack maintained on the central system: this central system determines whether the lot or video ticket selected wins or loses. True slot machines, in contrast, are player-operated, self-contained random devices. Moreover, any game title within the New York central determination system, anywhere in New York State, is identical with all other games of that title; the racino floor manager has no control over consumer pricing, hit frequency or pay table, the basic tools casino slot managers use to optimize their casino floors. Although virtually all slot machines today are connected to computer monitoring systems these box games are "smart": the random number generator that determines what happens when a player tries the device resides inside the box, not on a computer in some remote location. Slot players play the machine, not a computer system behind the machine. Games based upon lottery logic differ in the way that they play compared to a traditional slot machine. With a locally determined slot machine, each trial of the randomizing device is independent from any other trial. This is not true with devices utilizing lottery decision logic. There are a fixed number of predetermined winning combinations in lottery decision logic devices; therefore if a lot of those combinations is hit early players can be looking at a "cold machine" for quite some time. For this reason devices utilizing lottery decision logic can exhibit erratic or (worse yet) low hit frequencies.

Furthermore these central determination systems are compatible with a restricted number of devices (titles) and consequently limit operator flexibility in configuring racino floors; this limitation puts New York racinos at a competitive disadvantage to New York Class III tribal casinos and venues in other States and Provinces. Currently the lottery employs a restricted menu of games from four designated vendors. In comparison, Class III tribal casinos have thousands of machines to choose from with more pouring forth from IGT and Bally and Aristocrat and other manufacturers every year. This limitation on the racino operator's ability to provide the machines players want is another penalty imposed by New York's decision to go the lottery law/central determination system route to machine gaming.

Central determination system VLTs in New York do not perform as well as the central system VLTs in use in Rhode Island and Delaware, and the difference in performance is significant. We analyzed the last twelve months ended March 31, 2006 in order to more accurately represent the performance of the VLTs currently in operation. At six-month intervals the New York Lottery performs a review of their VLT offerings and as a result of that review culls up to 20% of the

worst-performing games in order to refresh the VLT product portfolio. Between January 2005 and April 2005 the result of this procedure translated into an average gain of nearly 20% at racinos in New York.

But even adjusting for this recent improvement in performance the results presented in Exhibit 4.10 are inferior to other VLT States. These substandard returns are the result of a complicated myriad of factors, including the device type and system limitations already discussed and high rates of gaming privilege taxes that limit the ability of VLT operators to attract sufficient investment capital.

Adjusting the surrounding populations for distance, income, and other factors incorporated in the gravity model results in an average rate of spending per distance-adjusted adult of $177.7. (Exhibit 4.10) This figure can be interpreted as the average amount an adult within 10 miles of this market spends per year on video slot machines in New York. For the reasons discussed earlier, at greater distances this spending declines.

Exhibit 4.11 presents the output of our gravity model for the New York facilities.

Exhibit 4.11: New York Racino Model Output

Finger Lakes

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	45,555	75.4%	$8.3	$181.9
10-25	438,068	35.6%	37.6	85.8
25-50	466,077	18.1%	20.3	43.6
50-75	997,127	3.2%	7.6	7.6
75-100	1,002,997	0.3%	0.7	0.7
More Distant (% of Total)			3.7	
Total	**2,949,824**		**$78.2**	
		Spending Base:	$241.20	

Saratoga Raceway

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	71,168	76.1%	$16.9	$238.0
10-25	340,708	39.2%	41.7	122.4
25-50	449,384	25.4%	35.7	79.5
50-75	469,241	10.6%	15.6	33.2
75-100	1,345,576	2.4%	10.3	7.6
More Distant (% of Total)			2.4	
Total	**2,806,822**		**$122.6**	
		Spending Base:	$312.70	

Buffalo Raceway

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	456,211	70.4%	$28.1	$61.6
10-25	357,797	31.4%	9.8	27.5
25-50	254,057	7.6%	1.7	6.6
50-75	766,471	0.5%	0.3	0.4
75-100	431,584	1.3%	0.5	1.2
More Distant (% of Total)			0.8	
Total	**2,266,120**		**$41.3**	
		Spending Base:	$87.50	

Monticello

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-10	28,498	63.2%	$1.3	$43.9
10-25	120,662	32.1%	2.7	22.3
25-50	907,307	19.6%	12.4	13.6
50-75	6,927,304	8.4%	40.4	5.8
75-100	9,256,060	3.7%	23.8	2.6
More Distant (% of Total)			1.6	
Total	**17,239,831**		**$82.1**	
		Spending Base:	$69.45	

Source: Christiansen Capital Advisors, LLC

VLT Revenue Projections—Scenario 2 Central Determination System or New York-Style Video Lottery Terminals

In the following section CCA evaluates the revenue potential of central determination system or New York-style video lottery terminals in the Commonwealth.

Exhibit 4.12 reviews a summary of the spending bases in comparable markets Scenario 2 utilizes facility spending bases from New York racinos to produce a likely average spending per distance adjusted adult in Massachusetts markets or $177.7.

Exhibit 4.12: Comparable State Spending Base Summary

Scenario 2	Spending Base
Saratoga	$312.7
Finger Lakes	241.2
Buffalo	87.5
Monticello	69.5
Average	$177.7

Source: Christiansen Capital Advisors, LLC

Exhibits 4.13 and 4.14 summarize the results of a gravity model analysis under the assumptions described for Scenario 2. Utilizing the New York experience as a guide, we project that the revenue potential for centrally determined VLTs (which would compete with better devices in Connecticut, Rhode Island, and Maine) is about one-third of the revenue potential of slot-like Delaware-style VLTs. We estimate that the four pari-mutuel facilities in Massachusetts under Scenario 2 would generate $431.2 million in stabilized (i.e., mature) gross gaming revenue.

Exhibit 4.13: Massachusetts Racino Model Output - Scenario 2

Suffolk/Wonderland

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	2,480,066	55.0%	242.3	$97.7
25-50	2,114,115	8.8%	33.0	15.6
50-75	1,207,939	4.4%	9.4	7.8
75-100	1,505,170	3.0%	8.0	5.3
More Distant (% of total)			14.6	
Total	**7,307,290**		**$307.3**	
		Spending Base:	$177.71	

Raynham/Taunton

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	1,944,951	14.3%	$49.6	$25.5
25-50	2,592,294	1.1%	5.1	2.0
50-75	1,288,383	0.6%	1.3	1.0
75-100	1,603,960	0.0%	0.0	0.0
More Distant (% of total)			2.8	
Total	**7,429,588**		**$58.8**	
		Spending Base:	$177.71	

Plainridge

Distance Range	Adult Population	Competition, Distance, and Income Adjustments	Spending ($M)	Actual Spending Per Adult
0-25	2,267,199	11.8%	$47.6	$21.0
25-50	2,458,108	2.4%	10.7	4.3
50-75	1,866,617	0.9%	3.1	1.7
75-100	1,317,709	0.3%	0.6	0.5
More Distant (% of total)			3.1	
Total	**7,909,633**		**$65.1**	
		Spending Base:	$177.71	

Source: Christiansen Capital Advisors, LLC

Pro Forma VLT Revenue Projections – Scenario 2

CCA developed projections for central determination system or New York style VLT win (consumer spending or gross gaming revenue) at these four facilities. The methodology employed is similar to the methodology employed in the Scenario 1 projections.

Exhibit 4.14 presents *pro forma* projections of the revenue that would be generated from the demand estimates presented in Exhibit 8.12. We project gross gaming revenue at these four pari-mutuel facilities assuming 2,000 central determination system or New York-style VLTs at each facility over their first five years of operation as follows: $323.4 million Year One, $388.1 million in Year Two, and $457.5 million in Year Five. Under the assumption that 60% of gross gaming revenue from VLTs would go to the Commonwealth and 2% to local government, revenue to all levels of government in the Commonwealth is projected at $200.5 million in Year One, $240.6 million in Year Two, and $283.6 million in Year Five.

Exhibit 4.14: *Pro Forma* Massachusetts Racino Revenue Projections – Scenario 2 (Years One through Five)

Scenario 2 ($M)	Year One	Year Two	Year Three	Year Four	Year Five
Wonderland/Suffolk	$230.5	$276.6	$307.3	$316.5	$326.0
Raynham-Taunton	44.1	52.9	58.8	60.6	62.4
Plainridge	48.8	58.6	65.1	67.0	69.0
Totals/Averages	**$323.4**	**$388.1**	**$431.2**	**$444.2**	**$457.5**
Revenue to Government	**$200.5**	**$240.6**	**$267.4**	**$275.4**	**$283.6**

Note: Revenue to government includes 60% to the State and 2% to local government.

Source: Christiansen Capital Advisors, LLC

Senate Bill 2215

CCA reviewed Senate Bill 2215, the "Live Racing Revitalization Act" and an estimate of gross gaming revenue from the first year of machine operations reported by State House News Service, and compared the financial projections implied by this bill with CCA's financial projections for VLTs in Massachusetts.

In our understanding of Senate Bill 2215, this bill would authorize 8,000 machines of unspecified kind at the four pari-mutuel facilities in Massachusetts, with each facility allotted 2,000 machines. The machines would be required to return a minimum 85% of all sums wagered to the player in winnings or payouts. Gross gaming revenue from the machines would be distributed as follows:

- 60% to the Commonwealth
- 7% to purses
- 5% for the Massachusetts Live Racing Development Fund
- 2% for local government (community mitigation)
- 0.5% for problem gambling programs

Exhibit 4.15: Comparison of CCA VLT Gross Gaming Revenue and Revenue Distributions with Estimates Reported by State House News Service and Senate Bill 2215

	CCA Scenario 1 Year 1 ($M)	CCA Scenario 2 Year 1 ($M)	State House News Service Year 1 ($M)
Gross Gaming Revenue	$815.4	$323.4	$725.8
Commonwealth	489.2	194.0	435.5
Purses	57.1	22.6	50.8
Massachusetts Live Racing Development Fund	40.8	16.2	36.3
Local Government "Community Mitigation"	16.3	6.5	14.5
Problem Gambling Programs	4.1	1.6	3.6

Note:
State House News Service reported an estimate of $450 million to the Commonwealth and local governments in the first year of machine operations on October 6, 2005. Percentage distributions from Senate Bill 2215 §4(b) as follows: 60% to the Commonwealth, 7% to purses, 5% to the Massachusetts Live Racing Development Fund, 2% to local government ("community mitigation"), 0.5% to problem gambling programs.

Exhibit 4.15 compares estimates of machine gross gaming revenue and the revenues that would be generated for government, purses, the Massachusetts Live Racing Development Fund and problem gambling programs under the distribution formula in Senate Bill 2215 with the estimate of machine gross gaming revenue reported by State House News Service and the revenues that would be generated for government, purses, the Massachusetts Live Racing Development Fund and problem gambling programs under the same distribution formula.

The gross gaming revenue estimated by State House News Service in Year One of machine

operations, $725.8 million, is lower than CCA's estimate of $815.4 million in Year One of Delaware-style VLT operations but substantially higher than CCA's estimate of $323.4 million in Year One of New York-style VLT operations. There are corresponding differences between the estimated revenues that would be generated for government, purses, the Massachusetts Live Racing Development Fund and problem gambling programs under Senate Bill 2215's distribution formula. In CCA's estimates, in the first year of operations Delaware-style VLTs would generate $489.2 million for the Commonwealth, $57.1 million for purses, $40.8 million for the Massachusetts Live Racing Development Fund and $4.1 million for problem gambling programs. For comparison, under the same distribution formula the estimate of machine gross gaming revenue reported by State House News Service would generate $435.5 million for the Commonwealth, $50.8 million for purses, $36.3 million for the Massachusetts Live Racing Development Fund and $3.6 million for problem gambling programs. In the first year of operations CCA estimates that New York-style VLTs would generate $194 million for the Commonwealth, $22.6 million for purses, $16.2 million for the Massachusetts Live Racing Development Fund and $1.6 million for problem gambling programs.

A Structure for Massachusetts VLTs

The Massachusetts Lottery asked CCA to recommend a structure for VLTs, *viz*., whether the machines should come directly under the Lottery, under a separate entity under the Treasury, or under a separate regulatory agency.

States that have authorized gaming machines at racetracks under their lottery laws have generally followed one of two structural models.

The first, and more usual, structure tasks the lottery with procuring the central system for the machines and exercising administrative oversight over the VLT program. In this structural model the racetracks procure the machines, operate them, and are responsible for marketing.

In the second model, which has been adopted in New York, the lottery procures a central determination system, administers the operation of this central determination system by the vendor, procures the VLTs at State expense, and, while allowing racetracks to market their individual machine businesses, may assume responsibility for a State-wide video lottery marketing program.

In our view, the first model, in which racetracks procure VLTs, operate them, and market them, has proven more successful. We would recommend this structure for Massachusetts, as opposed to the structure for VLTs adopted in New York.

As to the question of whether VLTs should come directly under the Lottery, a separate entity under the Treasury, or as an independent unit, this appears to us to be a parochial decision of the government of the Commonwealth and, as such, an area outside our expertise. These decisions rely more on political and legal considerations, rather than economic ones. In other States VLTs often come under the auspices of the lottery due to constitutional language that defines many types of gambling games (including any slot-like product) as a "lottery." As we understand it, "lottery" is not defined under the constitution of the Commonwealth, but rather in Massachusetts

case law. CCA is not qualified to opine on the nuances of Massachusetts gambling law. In terms of defining the regulatory structure for VLTs in the Commonwealth the starting point of the exercise is a through review and understanding of how VLTs would fit in the existing body of law regarding these devices in the Commonwealth. We consequently can express no opinion concerning this question.

Impacts on the Traditional Lottery

CCA was asked to assess the potential impacts of expanded VLT-type gaming in the State of Massachusetts on the traditional offerings of the Massachusetts Lottery.

Many such studies have been conducted in Massachusetts and elsewhere, with somewhat differing results. Should the Commonwealth authorize VLT gaming, particularly if these games are not centrally determined devices, a new and very large industry will be created in a relatively short period of time; perhaps in as little as 18 months. Consumer expenditures of as much as a billion dollars on a newly authorized activity would necessarily shift demand curves for all sorts of goods. Since gaming is an activity primarily funded with discretionary income, these impacts are most pronounced in other forms of leisure spending; including traditional lottery sales.

What CCA, and others, have found in previous studies of these issues is that while the expansion of casino or device gaming most certainly does affect lottery sales (and other forms of leisure consumption), lottery products for the most part are a separate and distinct gambling market and are much closer substitutes for each other (different lottery products) than other forms of gambling. [25] Consequently, lotteries have continued to operate successfully in States that have casinos.

One of the fundamental issues arising from the introduction of VLTs is the potential effect of substitution and gambling saturation on the State's lottery. "Substitution" refers to the diversion of spending on one type of gambling activity (the lottery) to another form of gambling (VLTs). "Saturation" is a reference to the fact that many consumer products, including gaming products, have a product life cycle with four phases: introduction, growth, maturity, and decline. In the saturation phase of this cycle supply and demand are in balance and, unless the product is refreshed or renewed, sales curves peak and flatten.

In our experience there is not a great deal of substitution between spending on State lotteries and casinos or machines-only racinos. As shown in the following exhibits, the introduction of commercial casinos or machines-only racinos has not generally caused precipitous declines in lottery sales. However, our analysis does show some correlation between an increase in casino spending and a decline in lottery spending.

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[25] A common misconception among those unfamiliar with the many forms of gambling available to consumers is that these industries attract a variety of clientele with different gambling habits and preferences. In many cases the fact that they are gambling games are the strongest characteristic these industries have in common. There are thirteen structural characteristics of any commercial gambling activity. These thirteen structural characteristics are: (1) The frequency of opportunities to gamble; (2) Payout interval; (3) Range of odds; (4) Range of stakes; (5) Degree of player participation; (6) the exercise of player skill; (7) the probability of winning a particular bet; (8) payout rates; (9) association of gambling with other activities; (10) whether gambling is on a cash or credit basis; (11) the price of gambling is the percentage of the gross amount wagered retained by the operator of a gambling enterprise; (12) intrinsic play value, and (13) extent of knowledge required for a particular gambling activity are positively correlated with an increased level of involvement in gambling activity. Wide divergences in these characteristics, such as the frequency of a lotto draw versus the handle pull of slot machine, essentially create unique products that appeal to different consumers. Abt, Smith, and Christiansen, *The Business of Risk,* University of Kansas Press: 1985.

Evaluating the impact of casino and machine gaming on traditional lottery sales is a complex task because environments differ markedly from jurisdiction to jurisdiction when both forms of gambling operate. For example, casinos or machines may be widely dispersed throughout the State (as they are in Iowa or Louisiana), or they may be confined to a relatively isolated area (as they are in Connecticut). Alternatively, some casinos and racinos (like those in Connecticut and New Jersey) draw their clientele from a broader market area, while others (like those in Iowa and Missouri) appeal primarily to in-State residents. Supply/demand relationships materially affect the extent to which casino gaming impacts lottery sales. In Louisiana [26] and Iowa, for example, the gambling market is fully or very nearly saturated, placing lotteries in the States under greater pressure than lotteries in States where the demand for gambling is less fully supplied.

Massachusetts, Maine, Connecticut, and Rhode Island present a different competitive landscape. All four have State lotteries. Connecticut has two very large casino hotel resorts, Rhode Island has electronic gambling devices at two pari-mutuel facilities, and Maine recently opened a temporary slot machine parlor in Bangor. Massachusetts already contributes more than one-third of the patrons of the Connecticut casinos and about 40% of the gross gaming revenue of the Rhode Island racinos.

State lotteries differ significantly in terms of their maturity, product mix, advertising and marketing savvy. Some casinos (like those in Michigan) operate in States that have mature, successful lotteries. Other casinos (like those in Minnesota) opened simultaneously with lottery start-ups. Controlling for all these variables is impossible.

This section presents data and sales trends for lotteries in nine States where casinos are operating. These States provide excellent illustrative examples of the varying impacts of devices and casinos on lottery sales. Analysis of these trends is helpful in providing an understanding of the relationship between lottery revenues and casino revenues.

We examine casino and lottery sales and revenues for the United States as a whole annually in Gross Annual Wager of the United States report. From that database we culled nine relatively (some more than others) comparable States that exhibit the factors determining the impacts of casino or machine gambling in competition with lotteries. The following exhibits illustrate these impacts.

Significantly, in every State that has introduced commercial casinos or machine gaming, total gross gaming revenue or consumer spending on gambling (the sum of all forms of State-sanctioned commercial gambling—lottery, casino, pari-mutuels, and charitable gaming) has increased following the introduction of gaming. Exhibit 4.16 presents total gambling revenue from the nine States examined below after the first five years of operation of casino or racino gaming.

[26] And at bars and restaurants, OTB outlets, and truck stops. In other words the State of Louisiana is virtually blanketed with machines.

Exhibit 4.16: Percentage Change in Total Gross Gaming Revenue (Consumer Spending) in the First Five Years after the Introduction of Casino or Racino Gaming

	Percent Change
Louisiana	688%
Colorado	567%
Delaware	549%
Connecticut	321%
West Virginia	231%
Rhode Island	199%
Missouri	153%
Iowa	150%
Illinois	127%

Source: Christiansen Capital Advisors, LLC

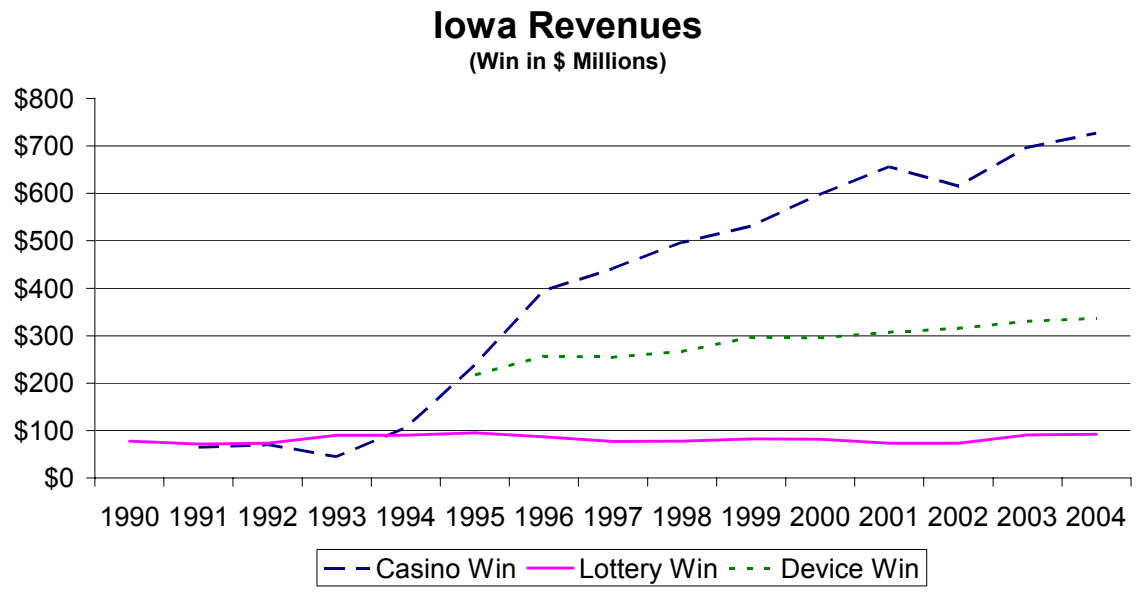
State by State Analysis

The following exhibits present historical consumer expenditure data for lottery games and casinos/gaming devices for the nine States we focused on. In order to compare apples to apples we did not evaluate lottery sales, but rather lottery revenues (sales after prizes), which is comparable to gross gaming revenue in casino revenue accounting. These nine States form the basis of CCA's analysis.

Iowa

Lottery sales in Iowa were flat to negative following the introduction of riverboat gaming in 1991 and the introduction of racinos in 1994. Today, Iowa is a saturated gaming market: *per capita* spending on all forms of gambling exceeds $701.1. In any market or economy there are only so many discretionary dollars to go around. The Iowa analysis supports the statement that the more widespread the competing form of gambling may be (in other words the geographic distribution) the greater the impact upon lottery sales will be.

Exhibit 4.17: Observed Ticket Lottery Impacts-Iowa

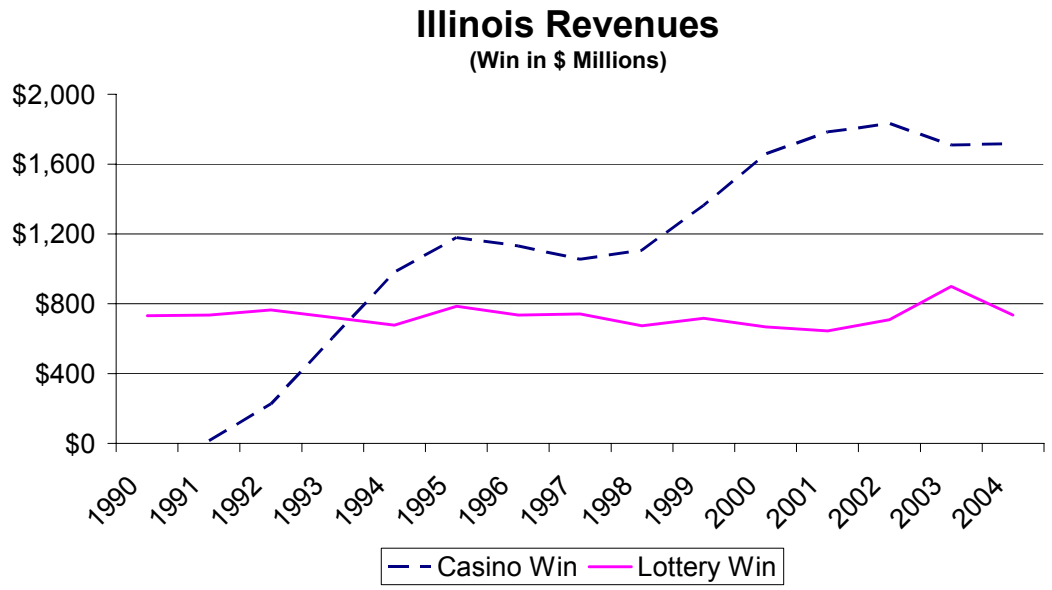


Source: Iowa Racing and Gaming Commission, Iowa Lottery

Illinois

Illinois is an example of a mature State lottery that competes with casino gaming (riverboats). Importantly, lottery revenues have continued to make a significant contribution to the State following legalization of riverboat gaming. Lottery revenues have clearly flattened since casino gaming was introduced, but the Illinois Lottery continues to generate over a half-billion dollars in revenue.

Exhibit 4.18: Observed Ticket Lottery Impacts – Illinois

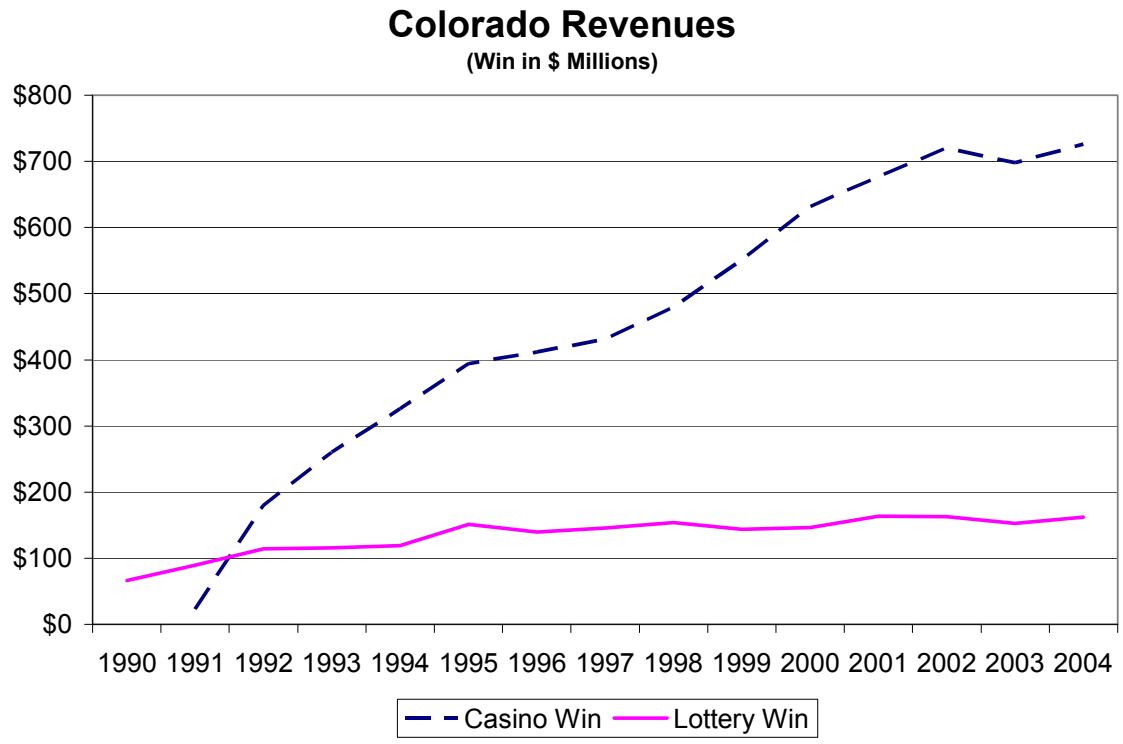


Source: Illinois Lottery, Illinois Gaming Board

Colorado

The introduction of small-stakes casino gaming in the historic mining towns of Black Hawk, Central City, and Cripple Creek resulted in a large increase in total gambling revenue in the State of Colorado. The historical analysis of these results suggests that limited locations and, therefore, restricted geographic distribution of gaming in that State mitigated the negative impacts of casino gaming on lottery spending. Lottery revenues have grown by over 81% since the introduction of gaming in 1991.

Exhibit 4.19: Observed Ticket Lottery Impacts – Colorado

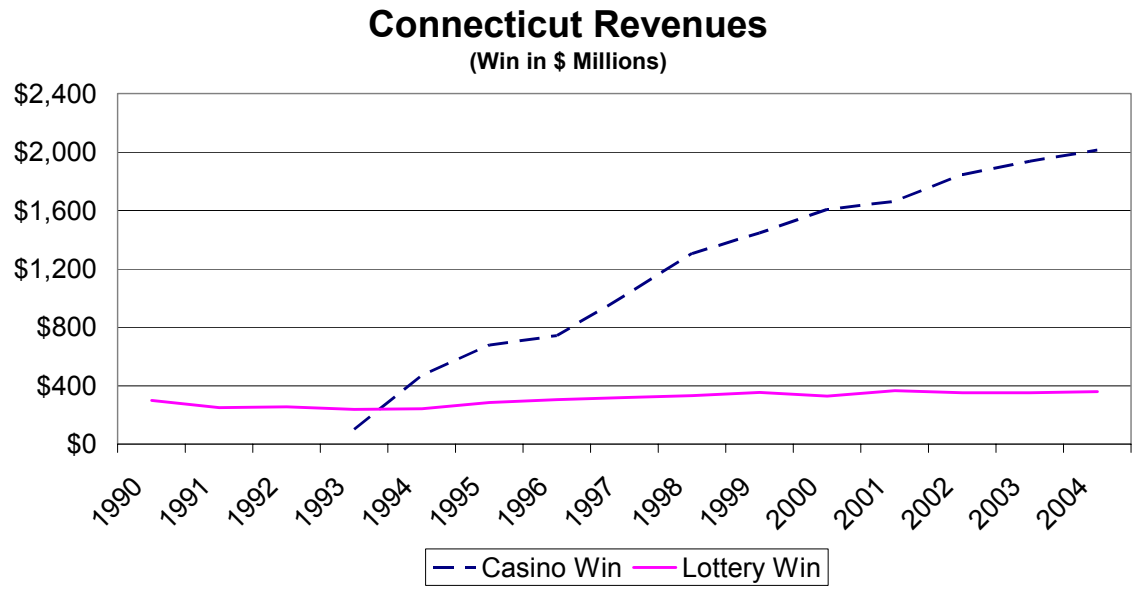


Source: Colorado Lottery, Colorado Division of Gaming

Connecticut

The impact of Connecticut's two casinos on that State's lottery may provide a good indicator of what could happen in Massachusetts. Lottery revenues have grown slightly but have been generally flat following these casinos' start-ups, in 1993 and 1996 respectively. Total gross gambling revenues have increased markedly over time and (due to a 25% revenue share with tribes from slot gaming) the State of Connecticut has benefited from that growth.

Exhibit 4.20: Observed Ticket Lottery Impacts – Connecticut

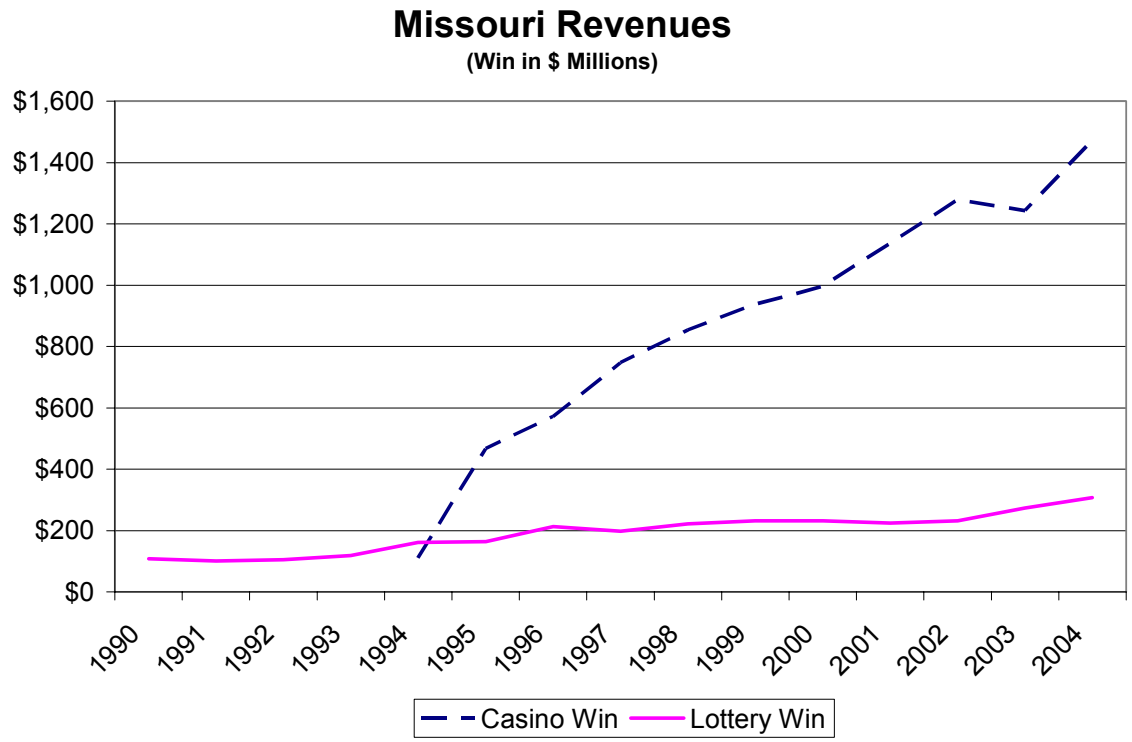


Source: Connecticut Division of Special Revenue, Connecticut Lottery Corporation

Missouri

Riverboat gaming in Missouri quickly became the primary source of commercial gambling revenue after its introduction in 1994. It is important to note that despite the huge increase in gaming revenue from riverboat casinos, both gaming and the State lottery continued to grow following the introduction casino riverboats. In fact, lottery and riverboat gross gambling revenue have both increased every year (with the exception of mid 1997) since the introduction of casino gaming in Missouri.

Exhibit 4.21: Observed Ticket Lottery Impacts – Missouri

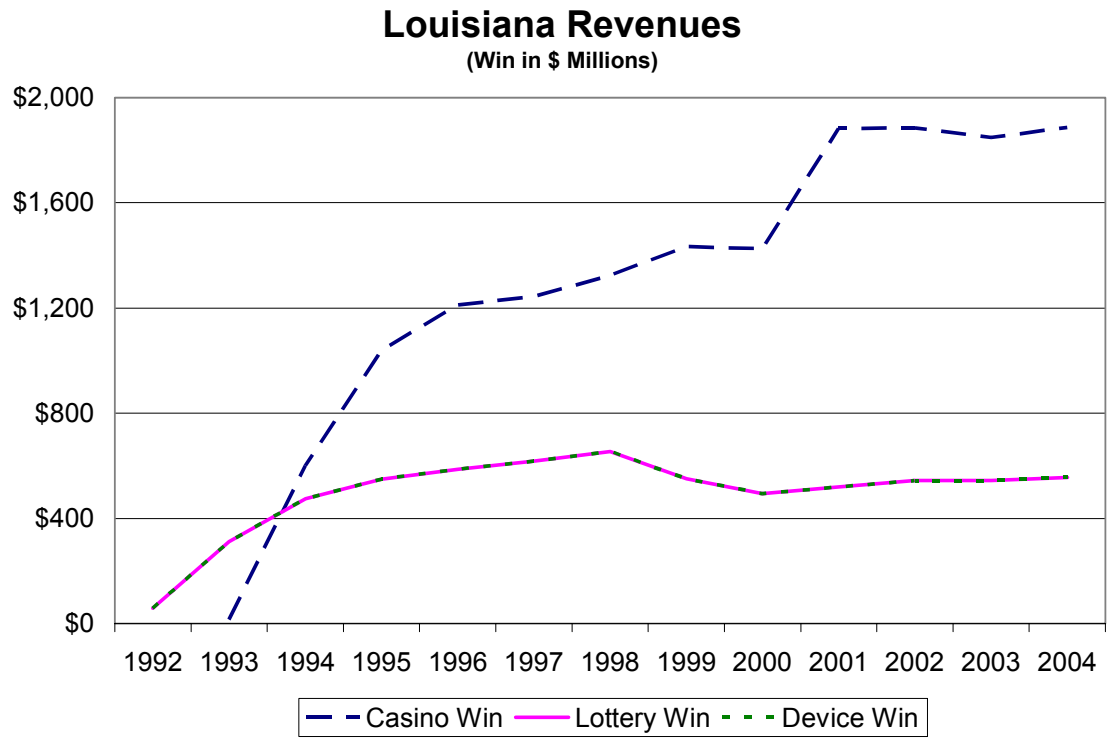


Source: Missouri Lottery, Missouri Gaming Commission

Louisiana

Somewhat like Iowa, Louisiana is a saturated gambling market. Louisiana has State lottery, slot machines at racetracks, video poker at bars and restaurants (the lottery is not involved in video poker), OTB outlets and truck stops, riverboat casinos, and a land-based casino in New Orleans. Given the pervasive presence of machine gaming in this State and its growth over the past 12 years it is no surprise that lottery revenues have steadily declined over the last decade.

Exhibit 4.22: Observed Ticket Lottery Impacts - Louisiana

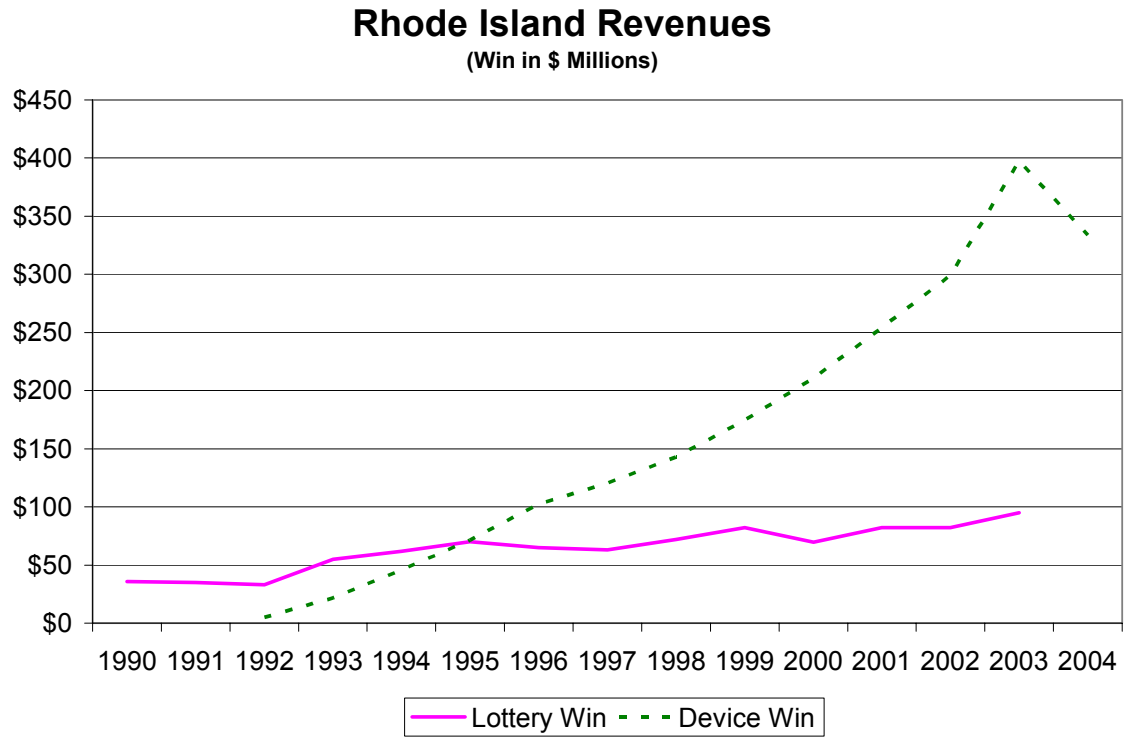


Source: Louisiana Lottery, Louisiana State Police, Louisiana

Rhode Island

Rhode Island may provide another good indicator for assessing the impacts of gaming on lottery sales and revenue in Massachusetts. The Rhode Island Lottery was, and is, quite successful in terms of *per capita* spending on lottery products and has a urban/rural mix similar to Massachusetts's. Furthermore, devices are restricted to pari-mutuel facilities, as in the scenario we examined for Massachusetts. Rhode Island Lottery revenues have grown 181% since the introduction of VLT gaming in late 1992. This growth has been inconsistent in some years, however, as restrictions on gaming have been eased in the State.

Exhibit 4.23: Observed Ticket Lottery Impacts - Rhode Island

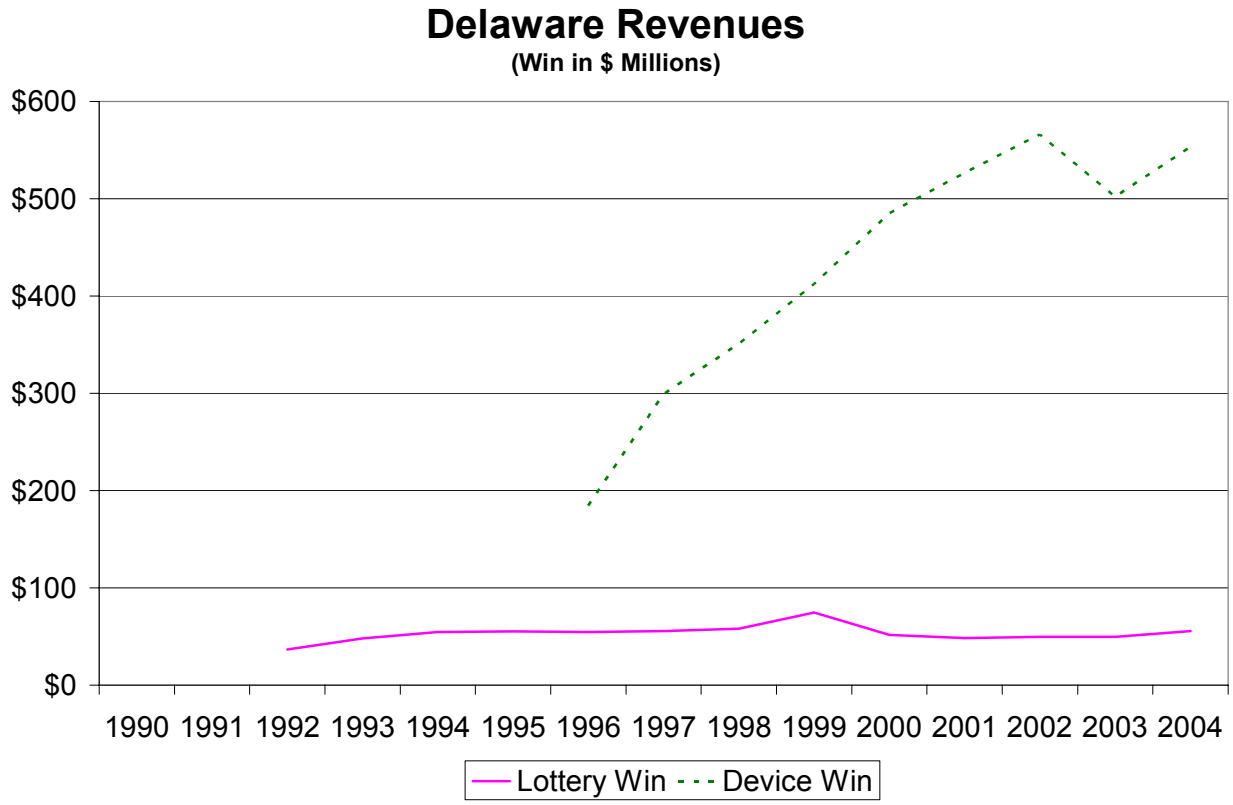


Source: Rhode Island Lottery, Lincoln Park, Newport Jai Alai

Delaware

Delaware was one of the first States to authorize racinos. In per capita terms Delaware was the leading State in terms of lottery revenue production in fiscal year 2003, raising nearly $260 for government on a *per capita* basis. Lottery revenue in Delaware is driven primarily by VLTs and regularly increased throughout the 1990s. However, fiscal year 2003 saw a decrease in lottery-generated revenue, from $230 million in 2002 to $213 million in 2003.

Exhibit 4.24: Observed Ticket Lottery Impacts - Delaware

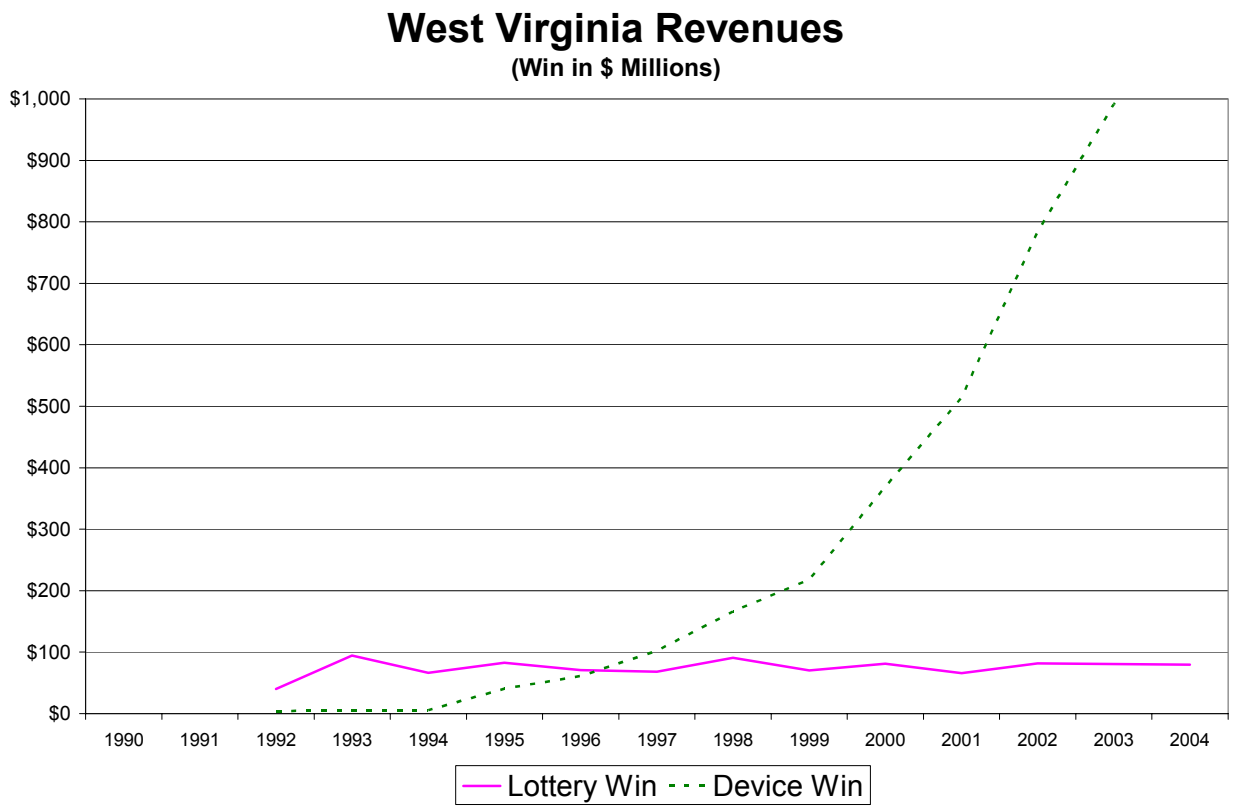


Source: The Delaware Lottery

West Virginia

The success of the West Virginia Lottery can be attributed primarily to the Racino/VLT model, which is similar to Delaware's. The West Virginia Lottery has seen exponential growth in lottery-generated revenue, which now amounts to more than $455 million (FY 2003). This revenue growth is directly attributable to the adoption of a hybrid VLT model incorporates elements drawn from both Delaware and Oregon. West Virginia has decided to not limit VLTs to pari-mutuel facilities, but has authorized VLTs at locations throughout the State. Given the relatively recent implementation of this strategy, the effect of neighborhood VLTs on the State's racinos is still unclear.

Exhibit 4.25: Observed Ticket Lottery Impacts – West Virginia



Source: The West Virginia Lottery

Summary of Results

Total Lottery Sales

None of the nine lotteries in States with casino gaming experienced consistent decreases in total lottery sales following the start of casino or racino operations.

Instant Ticket Sales

All nine State lotteries in this sample sell instant games. None of these nine States experienced consistent decreases in instant ticket sales following the start of casino gambling. Sales of instant games did, however, decrease in some States (four of nine) as casino or device operations begin (usually the first two or three years).

Numbers Games

Six of these nine lotteries sell numbers games. Casinos may have contributed to minor erosion of numbers games sales in Illinois and Connecticut.

Lotto

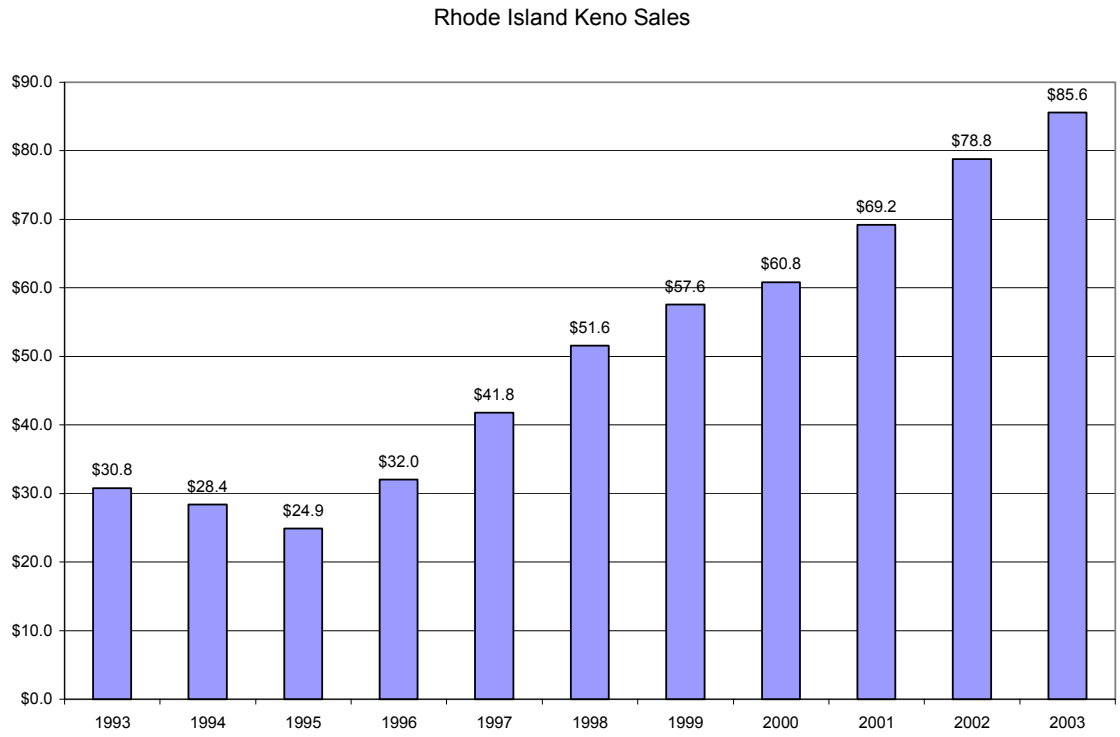
All nine State lotteries in the sample sell lotto games. Roughly half of the lotteries experienced lotto sales declines after casinos opened. Casinos may have contributed to these declines.

Keno

Only three of these nine States, Rhode Island, West Virginia and Missouri, have keno and only two, Rhode Island and West Virginia, had keno prior to the expansion of gaming. [27] Given the structural characteristics of keno it appears to be more affected by machine gaming than are lotto games.

Exhibit 4.26 presents historical keno sales in Rhode Island before and after the implementation of racetrack devices. As Exhibit 4.26 shows, keno sales declined by 19% in the first three years of device operations. Sales in later years rebounded and keno sales have grown 200% in Rhode Island over the last 10 years.

Exhibit 4.26: Historical Rhode Island Keno Sales

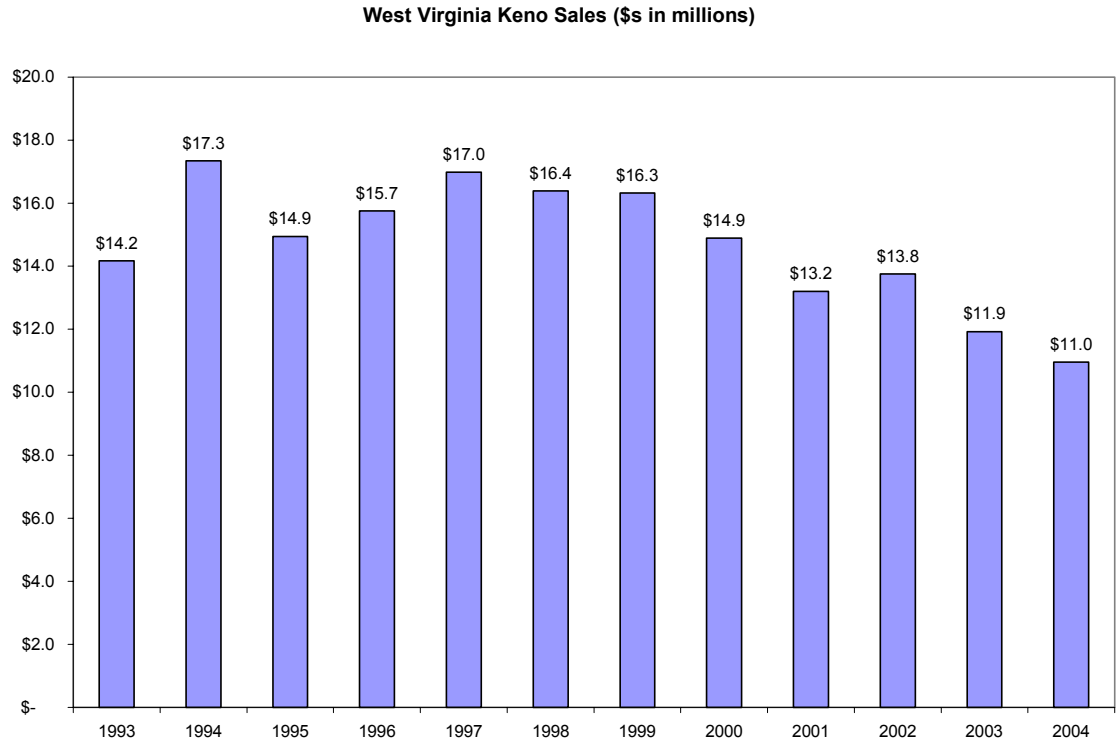


Source: Christiansen Capital Advisors, LLC

In West Virginia keno sales were flat to negative following the introduction of gaming devices. In the last five years keno has declined considerably with the easing of restrictions on machines: at the present time racetracks can theoretically (they simply need lottery approval) have as many unrestricted devices as they would like. Moreover, gaming devices are now located in liquor licensed establishments and fraternal organizations. (Exhibit 4.27)

[27] Technically West Virginia had machine gaming prior to the introduction of keno in 1993. At that time, however, the extent of machine gaming in West Virginia was 400 very restricted machines at Mountaineer Park. It was not until 1994 that this "experiment" with machine gaming was expanded to other tracks and many of the constraints on the number of devices and the types of devices allowed were eased. Therefore, CCA believes that the West Virginia experience is still relevant.

Exhibit 4.27: Historical West Virginia Sales



Source: Christiansen Capital Advisors, LLC

Likely Impacts on the Massachusetts Lottery

When we applied the foregoing analysis of variations in data set averages to lottery sales we obtained surprisingly consistent results. A strong correlation was observed between the presence of casinos and/or racinos and a reduction in the compound annual rate of growth of lottery sales. As described in the State by State analysis in the preceding section, the magnitude of these impacts is significantly affected by the size and scale of casino and/or VLT gaming. More limited expansions of gaming lead to more limited impacts upon traditional lottery sales. We found that the presence of casinos or VLTs in a state can depress the annual rate of growth of lottery sales by at least 2% per year and possibly as much as 9% per year.

We ran several iterations of the analysis, examining trends in sales growth under numerous scenarios. For example, we compared lottery sales trends in casino versus non-casino states as we varied the maturity of the lotteries. We also tested various levels of casino industry maturity. In this way we were able to construct a matrix analysis incorporating lottery/casino maturity levels. In other words, we ran analyses on *all* reasonable combinations of lottery/casino maturity. We found, however, that regardless of lottery or casino maturity, relatively consistent results are obtained.

Key Findings:

- Lottery impacts are somewhat mitigated if the geographic presence of casino games is restricted.

- The Massachusetts lottery market has already been somewhat restructured by the impacts of casino games at Foxwoods and Mohegan Sun and VLTs in Rhode Island. In other words, in many ways the Massachusetts lottery is already competing with nearby casinos and pari-mutuel devices for the gambling dollar.

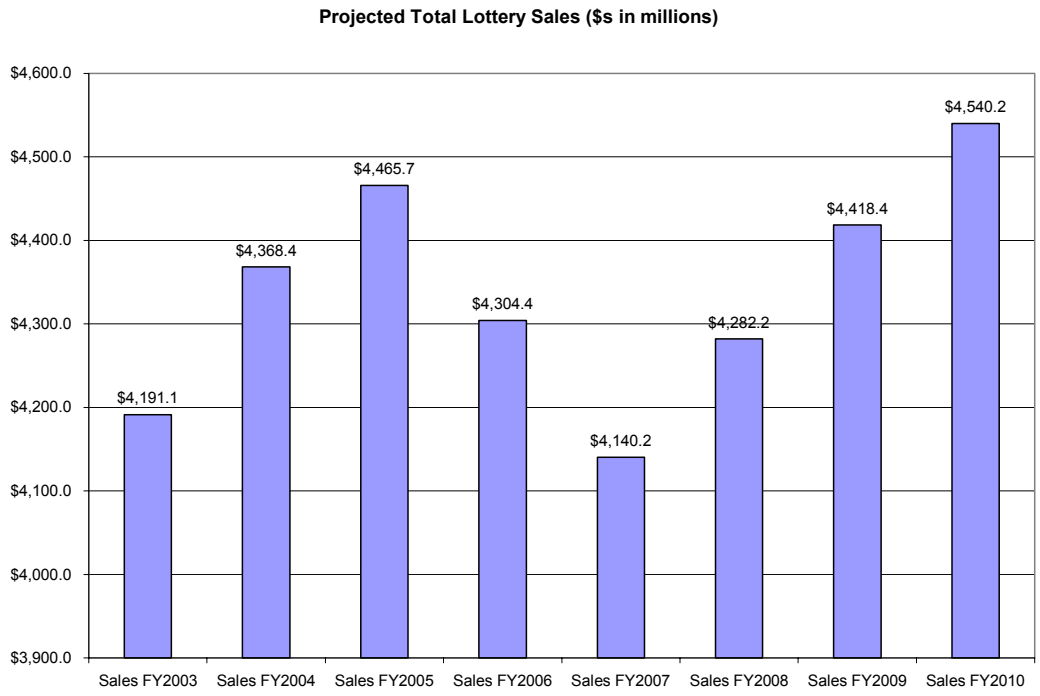
- In general, ticket lotteries and casinos serve different customer bases and satisfy different consumer needs and expectations.

In assessing the potential impacts of VLT gaming on the Massachusetts lottery we overlaid *per capita* lottery expenditures [28] on our projected spending on machine gaming by market to ascertain the level of saturation, as measured by discretionary income devoted to gambling (including lotteries and VLTs), in the proposed Massachusetts machine game markets. We then examined the projected lottery impacts on an individual lottery game basis, based upon the observed results from other jurisdictions where casinos or VLTs compete with lotteries. Based upon this observed experience we project that keno and instant ticket sales will be more impacted by VLTs than numbers or lotto games. We expect these impacts to be most severe in the early years of VLT operations, with lottery sales recovering somewhat as time goes on, although we do expect lottery sales growth rates to be somewhat curtailed going forward. Exhibit 4.28 presents the results of this analysis.

[28] Assuming these expenditures are relatively consistent across regions of the Commonwealth.

The projected impacts on the Massachusetts Lottery are somewhat more severe than in other States that have implemented some form of VLT or slot machine gaming. This is due to two factors: first, the large proportion of Massachusetts sales that are derived from keno and instant tickets (which are among the most affected by machine gaming); and, second, and the Massachusetts Lottery's present success. With the highest *per capita* sales in the nation (and probably the world) the Massachusetts Lottery has very effectively supplied the demand for gambling entertainment in the Commonwealth, meaning that as competing products enter the market there is less discretionary income available for more gambling. Nothing grows to the sky and the addition of $1.1 billion in consumer spending in Massachusetts on machine games will cause meaningful disruptions in existing patterns of consumer spending on gambling (and on other kinds of leisure). In our analysis presented in Exhibit 8.26 we create a hypothetical situation where machines begin operation in the Commonwealth at the beginning of FY2006 (along with the subsequent uptake time) so that we can assess these impacts in terms of the Massachusetts Lottery's FY05 sales. We project that lottery sales will decline by 3.6% in Year 1 of VLT operations and 3.8% in Year 2, at which point sales should slowly begin to recover. We project that by Year 5 sales will recover to previous levels.

Exhibit 4.28: Projected Lottery Sales Assuming VLTs



Source: Christiansen Capital Advisors, LLC

With central determination system devices of the kind now operating in New York, on the other hand, we would not expect observable negative impacts on Massachusetts Lottery sales. This is not that surprising given the limited attractiveness of central determination system devices when compared to a more slot-like VLT product.

V. Areas of Further Study

In addition to the specific tasks CCA was asked to perform (MSLC RFP LOT # 526),[29] CCA reviewed several areas of strategic importance for the Lottery's future. These areas are the retail network; lotto family games; interactive platforms, including the Internet, interactive television and mobile telephones; the Massachusetts Lottery's consumer base as an undeveloped asset; the possible extension of the Massachusetts Lottery brand; and the securitization of lottery revenues. The results of this review are presented in this section. Each of the subjects discussed in this section is deserving of further study.

1. The Retail Network

One of these areas for further study is the Lottery's retail network. CCA has observed in other jurisdictions that lottery retail networks, once established, tend to persist over long periods of time relatively unchanged. The composition of retail businesses, however, undergoes constant change. Old supermarkets close and are replaced by new supermarket chains and by new kinds of food stores like Whole Foods; new drug store chains, like CVS, appear; general retailers like Wal-Mart extend their product lines into new areas and become forces to reckon with in formerly specialty goods like books and movie DVDs. These changes in the retail economy alter consumer habits. Combined with the on-going restructuring of many kinds of retail, including relevantly the way people gets news, by the Internet, the continual changes in the composition of retail businesses can and does render older retail networks obsolete. How many consumer goods are sold today through retail networks that have remained essentially unchanged for 20 years?

It is important for Massachusetts Lottery products to be available where consumers spend most of their time in the course of pursuing their daily routines. A quarter of a century ago newsstands and convenience stores answered this description. For many consumers this is less true today. People leaving school and entering the workforce today may get their news from Google or Yahoo instead of newspapers, and may consequently not include newsstands in the stops they make on their daily rounds. Retail chains created or greatly expanded in the last two decades, including Wall-Mart, Costco, CVS, Whole Foods, Gap, Starbucks and so on through a long list are focal points of many contemporary consumer lives: these stores are where enormous numbers of consumers gather.

We reviewed SDS research that supports the statement that due to this on-going change in the makeup of the retail economy Massachusetts Lottery products are increasingly unavailable in establishments where many consumers spend most of their disposable time. In particular we were struck by the following responses to two questions asked in an SDS State-wide survey conducted on January 27-30, 2005 (Exhibits 5.1 and 5.2):

Exhibit 5.1: Places Where People Most Frequently Shop

[29] These tasks are to evaluate an electronic game card, a $20 instant ticket, a play-along bingo television show game, asses the revenue potential of video lottery terminals at pari-mutuel facilities in Massachusetts, and a daily race monitor game.

Question 29: Can you please tell me the names of the one or two places where you shop most frequently?

	Player (n=376)
Net: Supermarket	54%
Stop n Shop	19%
Shaw's	13%
Market Basket	8%
Price Chopper	3%
Roche Brothers	3%
Big Y	2%
Victory	2%
De Moula's	1%
Other Supermarket	3%
Net: Big Box	17%
WalMart	9%
Target	3%
Home Depot	3%
Kmart	1%
Kohl's	1%
Other Home Improvement Stores	*
Warehouse Clubs	*
Net: Department Store	9%
Filene's	4%
JC Penny's	1%
Macy's	1%
Marshall's	1%
Sears	1%
TJ Maxx	1%
The Mall (in general)	4%
Clothing Stores	3%
Convenience Stores	2%
Book Stores	1%
Electronics Stores	1%
Drug Stores	*
Other	6%
Don't know	3%

Source: Schneiders Della Volpe Schulman

Exhibit 5.2: Places Where People Most Frequently Buy Lottery Tickets

Question 30: Can you please tell me the names of the one or two places where you buy Lottery tickets most frequently?

	Player (n=376)
Convenience Store	46%
Supermarket	15%
Gas Station	11%
Liquor Store	6%
Other	7%
Don't know	15%

Source: Schneiders Della Volpe Schulman

Only 2% of the persons surveyed cited convenience stores as the place where they most frequently shopped. Forty-six percent, however, said the place where they most frequently purchased lottery tickets was a convenience store.

We think the Massachusetts Lottery should find this troubling. More research into this topic is clearly needed, but it appears that Massachusetts Lottery products are *not* available in many, if not most, of the places where Massachusetts residents shop most frequently. It also appears that the only reason many people visit convenience stores is to buy lottery tickets. If these conclusions are borne out by more detailed research, re-configuring the retail network through which Massachusetts Lottery products are sold should have equal priority with refreshing the Lottery's menu of product offerings.

Having games where people are is just as important as having good games. The Massachusetts Lottery will be a diminishing presence in people's lives if its products aren't available where people spend increasing amounts of their time. As a subsequent part of this section explains, this includes the enormous shopping mall that has formed on the Internet.

2. Lotto Family Games

Although certainly adequate, Massachusetts lotto family games do not perform as well as Massachusetts instant ticket games in relation to lotteries in comparable States. While we were not asked to perform a detailed analysis of the Massachusetts Lottery's lotto games, we are able to make one or two observations concerning this subset of the Lottery's product line.

First, the Massachusetts lotto family game market is relatively crowded. The Lottery currently offers four lotto family products: Megabucks, Mega Millions, CashWinFall, and Mass Cash. The multiplicity of broadly similar products may be confusing the marketplace: the Lottery's various lotto family games may in the consumer's mind have an identity problem. Moreover, Mega Millions, a multi-jurisdiction lotto game offered in other States with large populations, generates jackpots in the hundreds of millions of dollars. Such enormous jackpots tend to devalue jackpots generated in Massachusetts's in-State lotto games, which may be "only" in the tens of millions of dollars. The Massachusetts Lottery's overall lotto family game sales might benefit from a product line of fewer lotto family games with more clearly distinguishable identities. This is clearly a subject for further study, but, we think, the Lottery might fruitfully undertake.

Second, it appears to us that CashWinFall may be in the player's mind be neither fish nor fowl. CashWinFall is in the general class of low hit frequency games but only infrequently generates large jackpots, yet, from the data we reviewed, CashWinFall sales rise and decline with jackpot size in the manner typical of lotto family games. It might be best to retire this game and thus simplify the lotto family game offerings in the Massachusetts marketplace.

Third, the focus group and survey research data we reviewed show unambiguously that Massachusetts players like to win; that is, they like games with high hit frequencies. This Massachusetts consumer preference is too strong to ignore. It suggests that the Lottery's numbers games might benefit from an easy-to-hit large-but-not-lotto-sized jackpot game. Particularly in the event that the Commonwealth authorizes VLTs, which would negatively impact the Lottery's instant ticket games, an online numbers game of this description might prove to be of long term benefit to the Lottery.

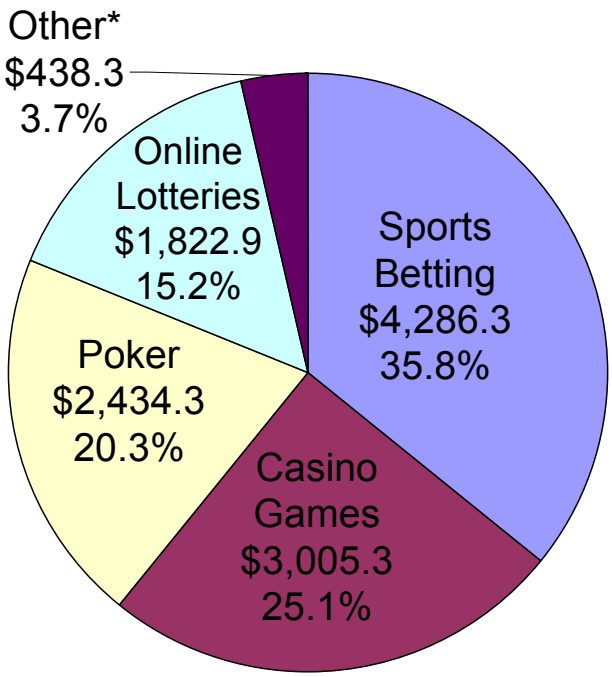
3. The Internet, Interactive Television and Mobile Telephones

U.S. sales of traditional (ticket) lottery games reached a plateau in 1996 and declined slightly in the closing years of the century. Growth in U.S. ticket game sales resumed in 2000, at least in part due to a continuing decline in the consumer price of U.S. ticket games. The recent renewed growth in ticket game sales notwithstanding, the market conditions domestic lotteries enjoyed prior to the mid 1990s, when substantial unsatisfied demand for ticket games regularly produced annual double-digit sales gains, are unlikely to return. The maturing of the U.S. market for traditional ticket games means that stimulating meaningful increases in sales of traditional ticket games on a sustained basis is likely to prove increasingly difficult for the domestic lottery industry as a whole.

A response to these maturing market conditions that lotteries outside the U.S. are adopting is to place their products on new interactive platforms: Web sites, interactive television services, and mobile phones. Consumers in the United Kingdom, Germany, Scandinavia, France and a lengthening list of other countries can purchase lottery products on these interactive platforms today. Ticket lottery games, which involve picking numbers, adapt particularly well to small screens, and 3G mobile phone service providers are eagerly entering into distribution agreements with national lotteries. Outside the U.S. interactive platforms are becoming accepted distribution channels for lottery games.

Online lottery sales are already substantial. Exhibit 5.3 presents CCA's estimates of global consumer spending (i.e., for lotteries, sales net of prizes) in 2005 on the major forms of Internet gambling in pie chart format, for all interactive platforms (personal computers connected to the Internet, interactive television, and mobile phone handsets). Consumers spent approximately $12 billion on gambling of various kinds on interactive platforms in 2005. Consumer spending on online lottery products was approximately $1.8 billion, or 15% of total consumer interactive gambling expenditures.

Exhibit 5.3: Global Consumer Spending on Major Forms of Internet Gambling in 2005



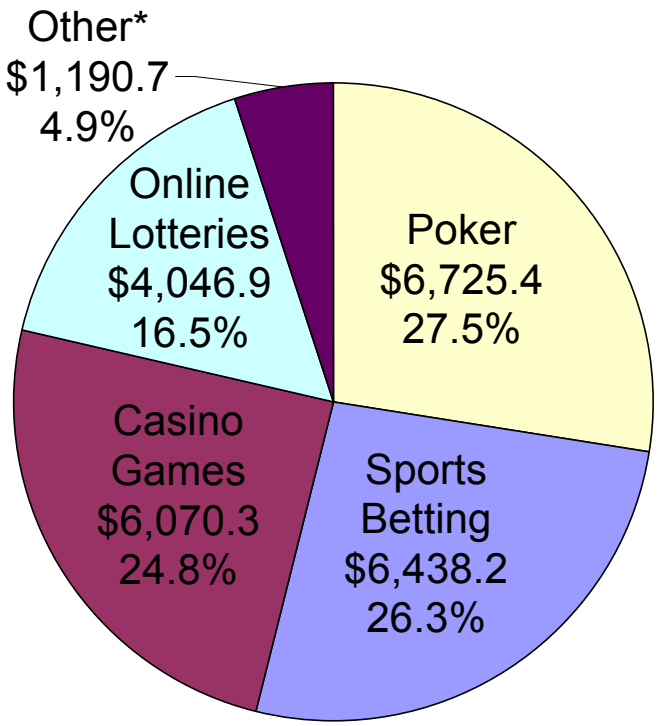
Source: Christiansen Capital Advisors, LLC

Because the Internet itself continues to grow, and because the supply of lottery products, betting services, poker rooms and casino games available on interactive platforms, including mobile phone handsets, likewise continues to grow, global consumer spending on interactive gambling will continue to increase at least for the rest of this decade. In other words, the market fundamentals for interactive gambling, including consumer demand and a diversifying supply of

gambling services that are continually being improved, are strong.

CCA prepares annual estimates of gambling on interactive platforms as part of the its annual updating of its widely used statistical database, which appears each summer if trade magazines as the Gross Annual Wager of the United States. Exhibit 5.4 presents CCA's projection of global consumer spending (i.e., for lotteries, sales net of prizes) in 2010 on the major forms of Internet gambling, again in pie chart format. In this projection consumers will spend approximately $24.5 billion on gambling of various kinds on interactive platforms in 2010. Consumer spending on online lottery products will rise to approximately $4 billion, or 16.3% of total projected 2010 consumer interactive gambling expenditures.

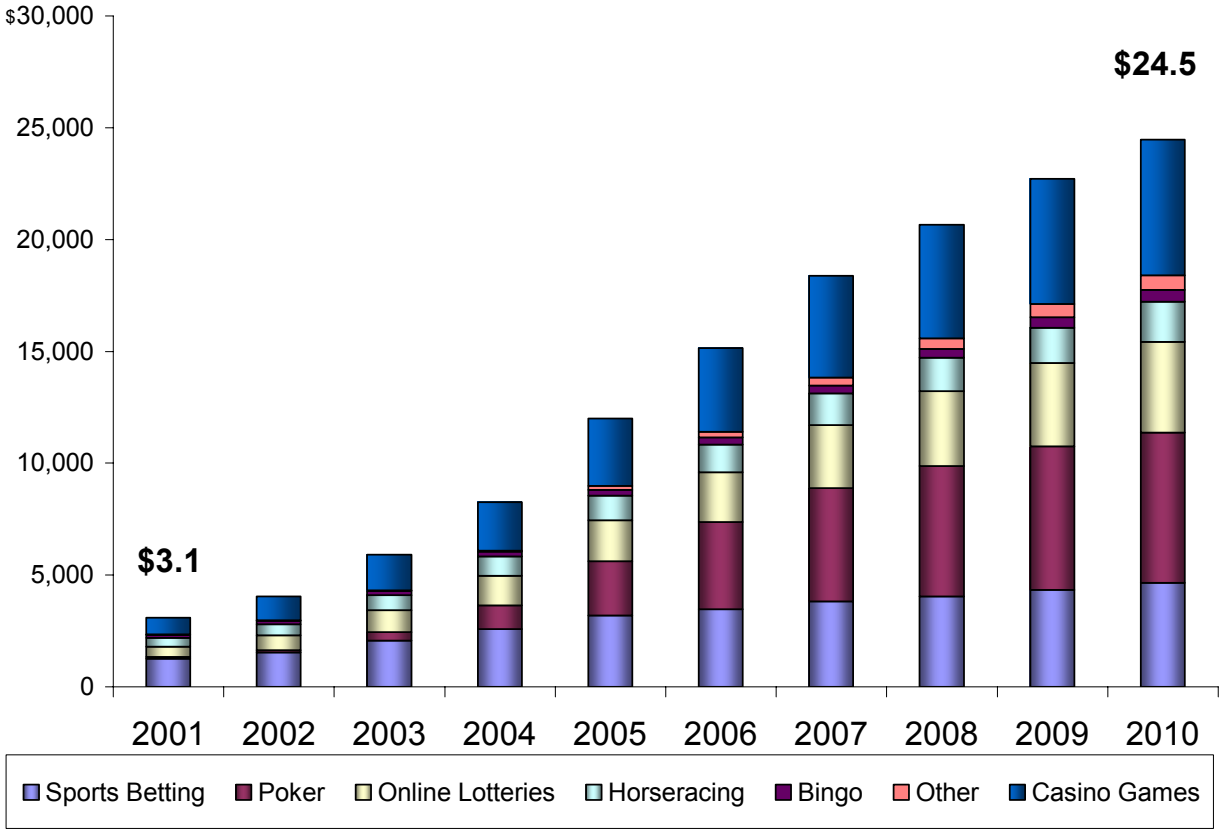
Exhibit 5.4: Global Consumer Spending on Major Forms of Internet Gambling in 2010



Source: Christiansen Capital Advisors, LLC

Exhibit 5.5 presents CCA's annual estimates and projections of global consumer spending on gambling offered on interactive platforms from 2001 through 2010 in bar chart format. Aggregate global consumer spending on major form of gambling on interactive platforms increased from an estimated $3.1 billion in 2001 to a projected $24.5 billion in 2010. Lottery products, relatively insignificant in relation to other forms of interactive gambling in 2001, will in CCA's projections comprise an increasingly percentage of all consumer spending on interactive gambling as the decade progresses. As noted, in 2010 lottery products will account for about 16% of global consumer spending on interactive gambling. The growing importance of lotteries in interactive gambling is partly due to the fact that each year more lotteries place their products on interactive platforms, and partly due to the fact that the number of interactive platforms on which lottery products can be placed continues to grow, particularly as respects mobile phone handsets and interactive television.

Exhibit 5.5: Global Consumer Spending on Major Forms of Internet Gambling 2001 - 2010



Source: Christiansen Capital Advisors, LLC

Lotteries that have placed their products on interactive platforms are learning that distributing lottery games through the Internet (or interactive television and mobile telephones) has several benefits.

- First and most obviously, it puts lottery games on the shelves of the global Internet shopping mall. Books, music, movie tickets and many other goods and services are purchased online today. The consumer generation now reaching adulthood has purchasing habits that are very different from the consumer habits that prevailed in the 1970s and 1980s, when the retail network of lottery sales agents was established. Consumers who keep abreast of events at Yahoo or MSN Network may never visit a newstand. Businesses of many kinds are finding that young adults who spend four or five hours of their leisure time online each day can only be reached through the Internet. Across the economy, suppliers of goods and services of all kinds are finding it necessary to make their products available online and to allocate increasing portions of their advertising budgets to Yahoo, Google and their Internet competitors. Lotteries are proving to be no exception. Online distribution should stimulate incremental lottery sales—just as it has for other goods and services.

● Second, the cost of lottery game sales through a Web site should be less than the cost of sales through a ticket issuing machine (TIM) maintained in a retail establishment. Lotteries that sell their products through Web sites effectively eliminate agent commissions, and a substantial portion of the money saved should flow directly to government in the form of increased revenue from its lottery.

● Third, to the extent that existing purchases of paper tickets and online games shift to Web sites operated by a lottery, vendor costs for these goods and services should be reduced. Web site sales platforms do of course cost money to build and maintain, and distribution agreements with interactive television companies and mobile phone carriers compensate these carriers for their services, but net of these expenses there should be improved operating margins for lottery product sales on interactive platforms. The established vendors of lottery tickets and systems developed have Internet lottery products, which they currently supply to lotteries outside the United States.

● Fourth, the Internet makes it feasible to develop a database of lottery players on a cost-effective basis. This technological capability and its potential benefits are discussed in greater detail below.

● Fifth, converting anonymous lottery purchases to activity in individual consumer accounts makes it possible for a lottery to identify individuals engaged in excessive and possibly compulsive gambling and intervene, or ask some qualified public agency to intervene, to reduce this social cost of lotteries.

In the United States, Internet lottery sales raises significant legal questions. Nevertheless, in the past year serious discussions and proposals to authorize Internet lottery sales have surfaced in a number of States, including North Dakota, Illinois, Georgia and, perhaps surprisingly, North Carolina, the newest U.S. lottery. Except in New Jersey, where a multi-media product named Slingo can be downloaded from the New Jersey Lottery's Web site, little has actually happened, however, due to Federal opposition. The United States Department of Justice maintains that Internet gambling, including the sale of State lottery products on interactive platforms, is illegal. Moreover, bills that would specifically prohibit Internet gambling have been introduced into Congress annually since 1997. To the extent that the Commonwealth of Massachusetts and the Massachusetts Lottery wish to preserve the option for the sale of Massachusetts Lottery products on interactive platforms at some future date they may wish to review this pending Federal legislation with its Congressional delegation. CCA does not practice law and cannot render legal advice to the Massachusetts Lottery or the Commonwealth of Massachusetts. For the Lottery's review, an analysis of the legal questions raised by Internet gambling co-authored by Anthony N. Cabot and Eugene M. Christiansen, CCA's chief executive officer, which appeared in the June 2005 issue of *Gaming Law Review*, is appended to this report (See Appendix B for full text of article). Mr. Cabot is an attorney in practice in Nevada and generally considered to be an authority concerning the legal issues Internet gambling has raised. Although this law review article focuses on Internet betting on pari-mutuel horseracing, which is conducted pursuant to State licenses and the Federal Interstate Horseracing Act of 1978 (codified at 15 U.S.C. §§ 3001-3007), as amended in 2000, it contains a detailed review of relevant Federal law, State law, case law, the World Trade Organization ruling in the case brought by Antigua against the United States, the reaction of the Office of the United States Trade Representative to this ruling, and the

current version of the Federal bill to specifically prohibit Internet gambling ("the Kyl bill"). In any case, before undertaking initiatives in this area (if any), the Lottery will no doubt consult with the Commonwealth's Attorney General and be guided by this official's advice.

4. The Lottery's Consumer Base: An Undeveloped Asset

Lotteries typically have very large consumer bases. More than half the resident adult population may buy a lottery ticket or play a lottery game at least occasionally, while a smaller but still significant percentage of the adult population are regular players.

Most lottery sales are anonymous cash transactions. Lotteries may know something, and perhaps a great deal, about their consumer base through market surveys and focus groups, but they typically do not know their players as individuals. In other words, lotteries do not have extensive player databases. Lotteries differ from casinos in this respect, which have converted formerly anonymous cash play to recorded activity through slot machine (and now table game) player tracking systems, using player club loyalty programs that were originally modeled on airline frequent flyer loyalty programs. Many other businesses that deal directly with consumers, including lodging, retail of various kinds and many eCommerce businesses relate to their customers through database management loyalty programs of this kind.

The Internet has made it possible for lotteries to emulate casinos and create their own player databases and use these databases for customer relationship management and player loyalty programs. Lotteries in other countries that sell their products on interactive platforms are exploring the use of these tools, as are some of the operators of the interactive platforms themselves, including especially mobile phone carriers.

The Massachusetts Lottery's large but largely anonymous consumer base is an undeveloped asset. As airlines, casinos, retailers and other businesses that deal directly with consumers know, a consumer database can be an immensely powerful tool. It is no exaggeration to say that the casino industry, a competitor for lotteries in many markets, runs on its extensive and detailed player database. The largest domestic casino company, Harrah's Entertainment, has made an integrated player database (that is, one that recognizes a player at any Harrah's property, and, inside the property, anywhere a point of contact with the customer occurs—in the casino, at the hotel desk, in a restaurant, at a retail location) its principle corporate strategy. Players enter the database through membership in Harrah's Total Rewards loyalty program; the player data collected in this way enables Harrah's to relate to its players as individuals through its customer relationship management (CRM) program. Casino industry experience has shown player databases to be extraordinarily effective business tools. No casino today would try to operate without a player database.

The Massachusetts Lottery might emulate lotteries in other countries and use Internet technology to start building a database of its players. No single step, with the possible exception of adding machine games to its product line, would yield larger long-term benefits to the Massachusetts Lottery and to its owner, the Commonwealth of Massachusetts. A detailed set of recommendations and business plan for converting the Lottery's present anonymous cash transactions to individual player account activity is beyond the scope of this report. The

Massachusetts Lottery might, however, take this matter up with its market research and advertising firms, who will doubtless be familiar with customer database programs and their operation from clients in other industries.

5. Develop the Massachusetts Lottery Brand

The Massachusetts Lottery is a widely recognized and trusted consumer brand. Like the Lottery's consumer base, the Lottery's brand is an asset that can be developed; it can also be extended to areas other than lottery products. Lotteries in other countries are developing their brands for use in non-gambling services, including bill-paying and branded debit (cash) cards for general retail use. In one or two cases (Italy, for example) the extension of the lottery into non-gambling areas has evolved into a substantial, and profitable, business. These extensions of a lottery brand into non-gambling transactions makes the lottery an even more pervasive presence to consumers, and by facilitating non-gambling transactions such as utility bill-paying allows the lottery to provide public services unrelated to compulsive gambling and other social costs of commercial gambling.

6. Securitization

A step short of transferring all or a portion of the equity in a government lottery to the investing public that can still give government greater financial flexibility is securitization of lottery revenues. Several States have borrowed against future lottery revenues by issuing bonds secured by lottery revenue streams. West Virginia has repeatedly accessed debt markets in this manner, issuing several series of bonds at multiple lien levels for its State Building, School Building and Economic Development Authorities. Other States have used proceeds from lottery bonds to fund capital expenditures for secondary and higher education, economic development, and public sector infrastructure, including government buildings. In a variation on this fiscal technique, last year California's Governor Arnold Schwarzenegger proposed raising as much as $2 billion from bonds (for State transportation expenditures) secured by tribal slot machine revenues anticipated from new compacts between the State of California and certain California tribes. Various other proposals for bonds secured by lottery or other gambling revenue have been discussed in various States within the past year.

The appetite of the financial markets for bonds secured by lottery revenues is robust: CCA has worked with Merrill Lynch on projects of this nature, and other Wall Street investment banks would doubtless be ready to assist the Commonwealth of Massachusetts in exploring this possibility if the Commonwealth wished to do so.

Appendix A: Massachusetts Lottery Instant Ticket Prize Structures and Hit Frequencies

Exhibit A.1 presents prize amounts and hit frequencies, expressed as percentages of tickets per roll of tickets that are winners, for Massachusetts Lottery instant ticket games. This exhibit shows that prize amount and hit frequency are inversely related; that is, as prize amounts increase hit frequency falls. Maximum prizes vary greatly with denomination: the maximum prize for a $1 instant ticket is $2,500, while the maximum prize for a $5 instant ticket is either $1 million or $100,000 per year for life.

Exhibit A.1: Prize Structure/Hit Frequency Summary of Instant Games in Massachusetts

Prize Amount	$1 Ticket	Prize Amount	$2 Ticket	Prize Amount	$5 Ticket	Prize Amount	$10 Ticket
$1	8.7%	$1		$5	9.3%	$5	
$2	7.3%	$2	9.0%	$10	8.0%	$10	10.0%
$4	2.3%	$4	7.3%	$20	2.3%	$15	6.0%
$5	0.7%	$5	1.3%	$40	0.3%	$20	8.0%
$10	1.0%	$10	2.0%	$50	0.3%	$40	1.00%
$20	0.3%	$20	1.0%	$100	0.3%	$50	1.00%
$40	0.13%	$50	0.36%	$200	0.13%	$100	1.23%
$50	0.04%	$100	0.14%	$500	0.09%	$500	0.16%
$100	0.083%	$400	0.03%	$1,000	0.03%	$1,000	0.043%
$2,500	0.0007%	$2,000	0.003%	$2,000	0.006%	$10,000	0.002%
		$5,000	0.0002%	$50,000	0.0002%	$20,000	0.0003%
		$25,000	0.00010%	$1,000,000	0.00003%	$1,000,000	0.00007%
						$100,000/YR/LIFE	0.00003%

Note: Hit frequencies (percentages of winning tickets per roll of tickets) may not correspond with the actual hit frequencies if some tickets per roll are unsold.

Source: The Massachusetts Lottery

Exhibits A.2, A.3, A.4 and A.5 present more detailed data for prize amounts and hit frequencies for Massachusetts Lottery $1, $2, $5 and $10 instant tickets. The exhibits include data for the cost of prizes as a percentage of sales and the percentage of the prize represented by the individual prize. The same inverse relationship between prize amount and hit frequency that characterizes $1 instant tickets generally holds for instant tickets in these larger denominations.

Exhibit A.2: Prize Structures of $1 Instant Games in Massachusetts

WIN ALL 5 PRIZES WITH PRIZE(S) OF:	WIN:	WINNERS IN 300** (PER BOOK)	WINNERS IN 144,000 (PER MINI-POOL)	WINNERS IN 1,008,000 (PER POOL)	WINNERS IN 25 POOLS	PRIZE COST	PERCENT OF PRIZE FUND*
$1	$1	26.00	12,480	87,360	2,184,000	2,184,000	12.39%
$1 + $1	$2	12.00	5,760	40,320	1,008,000	2,016,000	11.44%
$2	$2	10.00	4,800	33,600	840,000	1,680,000	9.53%
$1 x 4	$4	2.00	960	6,720	168,000	672,000	3.81%
$1 + $1 + $2	$4	1.00	480	3,360	84,000	336,000	1.91%
$2 + $2	$4	2.00	960	6,720	168,000	672,000	3.81%
$4	$4	2.00	960	6,720	168,000	672,000	3.81%
$1 x 5 (SNOWFLAKE)	$5	0.40	192	1,344	33,600	168,000	0.95%
$1 + $1 + $1 + $2	$5	0.40	192	1,344	33,600	168,000	0.95%
$1 + $2 + $2	$5	0.40	192	1,344	33,600	168,000	0.95%
$1 + $4	$5	0.40	192	1,344	33,600	168,000	0.95%
$5	$5	0.40	192	1,344	33,600	168,000	0.95%
$2 x 5 (SNOWFLAKE)	$10	0.60	288	2,016	50,400	504,000	2.86%
$2 + $2 + $2 + $4	$10	0.60	288	2,016	50,400	504,000	2.86%
$2 + $4 + $4	$10	0.60	288	2,016	50,400	504,000	2.86%
$5 x 2	$10	0.60	288	2,016	50,400	504,000	2.86%
$10	$10	0.60	288	2,016	50,400	504,000	2.86%
$4 x 5 (SNOWFLAKE)	$20	0.20	96	672	16,800	336,000	1.91%
$5 x 4	$20	0.20	96	672	16,800	336,000	1.91%
$5 + $5 + $10	$20	0.20	96	672	16,800	336,000	1.91%
$10 x 2	$20	0.20	96	672	16,800	336,000	1.91%
$20	$20	0.20	96	672	16,800	336,000	1.91%
$5 + $5 + $10 + $10 + $10	$40	-	50	350	8,750	350,000	1.99%
$10 x 4	$40	-	45	315	7,875	315,000	1.79%
$10 + $10 + $20	$40	-	30	210	5,250	210,000	1.19%
$20 + $20	$40	-	30	210	5,250	210,000	1.19%
$40	$40	-	30	210	5,250	210,000	1.19%
$10 x 5 (SNOWFLAKE)	$50	-	12	84	2,100	105,000	0.60%
$10 + $10 + $10 + $20	$50	-	12	84	2,100	105,000	0.60%
$10 + $20 + $20	$50	-	12	84	2,100	105,000	0.60%
$10 + $40	$50	-	12	84	2,100	105,000	0.60%
$50	$50	-	12	84	2,100	105,000	0.60%
$20 x 5 (SNOWFLAKE)	$100	-	24	168	4,200	420,000	2.38%
$20 + $20 + $20 + $40	$100	-	24	168	4,200	420,000	2.38%
$20 + $40 + $40	$100	-	24	168	4,200	420,000	2.38%
$50 x 2	$100	-	24	168	4,200	420,000	2.38%
$100	$100	-	24	168	4,200	420,000	2.38%
$2,500	$2,500	-	1	7	175	437,500	2.48%
		61.00	29,646	207,522	5,188,050	17,629,500	100.00%

Source: The Massachusetts Lottery

Exhibit A.3: Prize Structures of $2 Instant Games in Massachusetts

PRIZE(S) OF:	WIN:	WINNERS IN 300 (PER BOOK)**	WINNERS IN 144,000 (PER MINI-POOL)	WINNERS IN 1,008,000 (PER POOL)	WINNERS IN 20 POOLS	PRIZE COST	PERCENT OF PRIZE FUND*
$1 + $1	$2	15.00	7,200	50,400	1,008,000	2,016,000	6.86%
$2	$2	12.00	5,760	40,320	806,400	1,612,800	5.49%
$1 x 4	$4	5.00	2,400	16,800	336,000	1,344,000	4.57%
$1 + $1 + $2	$4	6.00	2,880	20,160	403,200	1,612,800	5.49%
$2 + $2	$4	6.00	2,880	20,160	403,200	1,612,800	5.49%
$4	$4	5.00	2,400	16,800	336,000	1,344,000	4.57%
$1 x 5	$5	0.80	384	2,688	53,760	268,800	0.91%
$1 + $1 + $1 + $2	$5	0.80	384	2,688	53,760	268,800	0.91%
$1 + $2 + $2	$5	0.80	384	2,688	53,760	268,800	0.91%
$1 + $4	$5	0.80	384	2,688	53,760	268,800	0.91%
$5	$5	0.80	384	2,688	53,760	268,800	0.91%
$1 x 10	$10	1.00	480	3,360	67,200	672,000	2.29%
$1 x 6 + $4	$10	1.00	480	3,360	67,200	672,000	2.29%
$2 x 3 + $4	$10	1.00	480	3,360	67,200	672,000	2.29%
$5 x 2	$10	2.00	960	6,720	134,400	1,344,000	4.57%
$10	$10	1.00	480	3,360	67,200	672,000	2.29%
$2 x 10	$20	0.60	288	2,016	40,320	806,400	2.74%
$4 x 5	$20	0.60	288	2,016	40,320	806,400	2.74%
$5 x 4	$20	0.60	288	2,016	40,320	806,400	2.74%
$10 x 2	$20	0.60	288	2,016	40,320	806,400	2.74%
$20	$20	0.60	288	2,016	40,320	806,400	2.74%
$5 x 10	$50	-	144	1,008	20,160	1,008,000	3.43%
$5 x 8 + $10	$50	-	144	1,008	20,160	1,008,000	3.43%
$10 x 5	$50	-	75	525	10,500	525,000	1.79%
$20 x 2 + $10	$50	-	75	525	10,500	525,000	1.79%
$50	$50	-	75	525	10,500	525,000	1.79%
$10 x 10	$100	-	40	280	5,600	560,000	1.90%
$10 x 4 + $20 x 3	$100	-	40	280	5,600	560,000	1.90%
$20 x 5	$100	-	40	280	5,600	560,000	1.90%
$50 x 2	$100	-	40	280	5,600	560,000	1.90%
$100	$100	-	36	252	5,040	504,000	1.71%
$20 x 5 + $50 x 4 + $100	$400	-	10	70	1,400	560,000	1.90%
$20 x 5 + $100 x 3	$400	-	8	56	1,120	448,000	1.52%
$100 x 3 + $50 x 2	$400	-	6	42	840	336,000	1.14%
$100 x 4	$400	-	6	42	840	336,000	1.14%
$400	$400	-	6	42	840	336,000	1.14%
$400 x 4 + $100 x 2 + $50 x 4	$2,000	-	2	14	280	560,000	1.90%
$400 x 5	$2,000	-	2	14	280	560,000	1.90%
$2,000	$2,000	-	1	7	140	280,000	0.95%
$100 x 2 + $400 x 7 + $2,000	$5,000	-	-	1	20	100,000	0.34%
$5,000	$5,000	-	-	1	20	100,000	0.34%
$25,000	$25,000	-	-	1	20	500,000	1.70%
	TOTAL	62.00	30,510	213,573	4,271,460	29,401,400	100.00%

Source: The Massachusetts Lottery

Exhibit A.4: Prize Structures of $5 Instant Games in Massachusetts

PRIZE(S) OF:	WIN:	WINNERS IN 300 (PER BOOK)**	WINNERS IN 144,000 (PER MINI-POOL)	WINNERS IN 1,008,000 (PER POOL)	WINNERS IN 30 POOLS	PRIZE COST	PERCENT OF PRIZE FUND*
$5	$5	28.00	13,440	94,080	2,822,400	$ 14,112,000	12.23%
$2x5	$10	6.00	2,880	20,160	604,800	$ 6,048,000	5.24%
$5x2	$10	8.00	3,840	26,880	806,400	$ 8,064,000	6.99%
$10	$10	10.00	4,800	33,600	1,008,000	$ 10,080,000	8.74%
$2x10 CHEST	$20	1.20	576	4,032	120,960	$ 2,419,200	2.10%
$2x5+$5x2	$20	1.20	576	4,032	120,960	$ 2,419,200	2.10%
$5x4	$20	1.20	576	4,032	120,960	$ 2,419,200	2.10%
$10x2	$20	1.40	672	4,704	141,120	$ 2,822,400	2.45%
$20	$20	2.00	960	6,720	201,600	$ 4,032,000	3.49%
$5x8	$40	0.40	192	1,344	40,320	$ 1,612,800	1.40%
$10x4	$40	0.20	96	672	20,160	$ 806,400	0.70%
$20x2	$40	0.20	96	672	20,160	$ 806,400	0.70%
$40	$40	0.20	96	672	20,160	$ 806,400	0.70%
$5x10 CHEST	$50	0.20	96	672	20,160	$ 1,008,000	0.87%
$5x10	$50	0.20	96	672	20,160	$ 1,008,000	0.87%
$5x8+$10	$50	0.20	96	672	20,160	$ 1,008,000	0.87%
$10x5	$50	0.20	96	672	20,160	$ 1,008,000	0.87%
$50	$50	0.20	96	672	20,160	$ 1,008,000	0.87%
$10x10CHEST	$100	0.20	96	672	20,160	$ 2,016,000	1.75%
$10x10	$100	0.20	96	672	20,160	$ 2,016,000	1.75%
$20x5	$100	0.20	96	672	20,160	$ 2,016,000	1.75%
$50x2	$100	0.20	96	672	20,160	$ 2,016,000	1.75%
$100	$100	0.20	96	672	20,160	$ 2,016,000	1.75%
$20x10 CHEST	$200	-	50	350	10,500	$ 2,100,000	1.82%
$20x10	$200	-	40	280	8,400	$ 1,680,000	1.46%
$20x5+$50x2	$200	-	30	210	6,300	$ 1,260,000	1.09%
$50x4	$200	-	30	210	6,300	$ 1,260,000	1.09%
$200	$200	-	30	210	6,300	$ 1,260,000	1.09%
$50x10 CHEST	$500	-	30	210	6,300	$ 3,150,000	2.73%
$50x10	$500	-	30	210	6,300	$ 3,150,000	2.73%
$50x6+$100x2	$500	-	25	175	5,250	$ 2,625,000	2.27%
$100x5	$500	-	25	175	5,250	$ 2,625,000	2.27%
$500	$500	-	25	175	5,250	$ 2,625,000	2.27%
$100x10 CHEST	$1,000	-	10	70	2,100	$ 2,100,000	1.82%
$100x10	$1,000	-	9	63	1,890	$ 1,890,000	1.64%
$200x5	$1,000	-	8	56	1,680	$ 1,680,000	1.46%
$500x2	$1,000	-	8	56	1,680	$ 1,680,000	1.46%
$1,000	$1,000	-	8	56	1,680	$ 1,680,000	1.46%
$200x10 CHEST	$2,000	-	2	14	420	$ 840,000	0.73%
$200x10	$2,000	-	2	14	420	$ 840,000	0.73%
$500x4	$2,000	-	2	14	420	$ 840,000	0.73%
$1000x2	$2,000	-	1	7	210	$ 420,000	0.36%
$2,000	$2,000	-	1	7	210	$ 420,000	0.36%
$50,000	$50,000	-	-	2	60	$ 3,000,000	2.60%
$1,000,000	$1,000,000	-	-	-	10	$ 6,700,000	5.81%
		62.00	30,126	210,884	6,326,530	$ 115,393,000	100.0%

Source: The Massachusetts Lottery

Exhibit A.5: Prize Structures of $10 Instant Games in Massachusetts

PRIZE(S) OF:	WIN:	WINNERS IN 100 (PER BOOK)***	WINNERS IN 144,000 (PER MINI-POOL)	WINNERS IN 1,008,000 (PER POOL)	WINNERS IN 99 POOLS	PRIZE COST	PERCENT OF PRIZE FUND*
$5 + $5	$10	5.0	7,200	50,400	4,989,600	49,896,000	6.24%
$10	$10	5.0	7,200	50,400	4,989,600	49,896,000	6.24%
$5 x 3	$15	2.0	2,880	20,160	1,995,840	29,937,600	3.74%
$5 + $10	$15	2.0	2,880	20,160	1,995,840	29,937,600	3.74%
$15	$15	2.0	2,880	20,160	1,995,840	29,937,600	3.74%
$5 x 2 + $10	$20	2.0	2,880	20,160	1,995,840	39,916,800	4.99%
$10 x 2	$20	4.0	5,760	40,320	3,991,680	79,833,600	9.98%
$20	$20	2.0	2,880	20,160	1,995,840	39,916,800	4.99%
$5 x 8	$40	0.2	288	2,016	199,584	7,983,360	1.00%
$5 x 4 + $10 x 2	$40	0.2	288	2,016	199,584	7,983,360	1.00%
$10 x 4	$40	0.2	288	2,016	199,584	7,983,360	1.00%
$20 x 2	$40	0.2	288	2,016	199,584	7,983,360	1.00%
$40	$40	0.2	288	2,016	199,584	7,983,360	1.00%
$5 x 10 **(STAR)**	$50	0.2	288	2,016	199,584	9,979,200	1.25%
$5 x 10	$50	0.2	288	2,016	199,584	9,979,200	1.25%
$10 x 5	$50	0.2	288	2,016	199,584	9,979,200	1.25%
$10 + $20 x 2	$50	0.2	288	2,016	199,584	9,979,200	1.25%
$50	$50	0.2	288	2,016	199,584	9,979,200	1.25%
$10 x 10 **(STAR)**	$100	-	300	2,100	207,900	20,790,000	2.60%
$10 x 10	$100	-	300	2,100	207,900	20,790,000	2.60%
$20 x 5	$100	-	300	2,100	207,900	20,790,000	2.60%
$20 + $40 x 2	$100	-	288	2,016	199,584	19,958,400	2.49%
$100	$100	-	225	1,575	155,925	15,592,500	1.95%
$100 (CASH BURST)	$100	-	360	2,520	249,480	24,948,000	3.12%
$50 x 10 **(STAR)**	$500	-	50	350	34,650	17,325,000	2.17%
$50 x 10	$500	-	50	350	34,650	17,325,000	2.17%
$50 x 6 + $100 x 2	$500	-	50	350	34,650	17,325,000	2.17%
$100 x 5	$500	-	45	315	31,185	15,592,500	1.95%
$500	$500	-	40	280	27,720	13,860,000	1.73%
$100 x 10 **(STAR)**	$1,000	-	16	112	11,088	11,088,000	1.39%
$100 x 10	$1,000	-	16	112	11,088	11,088,000	1.39%
$100 x 5 + $500	$1,000	-	10	70	6,930	6,930,000	0.87%
$500 x 2	$1,000	-	10	70	6,930	6,930,000	0.87%
$1,000	$1,000	-	10	70	6,930	6,930,000	0.87%
$1,000 x 10 **(STAR)**	$10,000	-	1	7	693	6,930,000	0.87%
$1,000 x 10	$10,000	-	1	7	693	6,930,000	0.87%
$10,000	$10,000	-	1	7	693	6,930,000	0.87%
$20,000	$20,000	-	-	3	297	5,940,000	0.74%
$1,000,000	$1,000,000	-	-	-	66	45,540,000	5.69%
$100,000/YR/LIFE*	$2,000,000	-	-	-	25	41,400,000	5.17%

Source: The Massachusetts Lottery

Appendix B: Why the Future of Horseracing Is At Risk: The WTO Decision and Senator Kyl

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Why the Future Of Horseracing Is At Risk: The WTO Decision and Senator Kyl

ANTHONY N. CABOT and EUGENE CHRISTIANSEN

AN OVERVIEW OF THE PROBLEM

For the past seven years, Senator Jon Kyl (R-AZ) and other conservative members of Congress have attempted to pass legislation that would prohibit all forms of Internet wagering. In early May, Senator Kyl began circulating proposed legislation that would again seek to prohibit interactive gaming.

Significant changes in the political landscape in Washington provide an unprecedented opportunity for Senator Kyl to obtain the necessary votes in both the House and Senate to pass his "Unlawful Internet Gambling Enforcement Act of 2005" (New Kyl Bill). Republicans control both houses of Congress; they control the White House; they control the Department of Justice; they are increasing their control of the federal bench; and they owe this control in significant part to the Christian Right, for whom Internet gambling is a moral issue, just as, to their forebears, Prohibition was a moral issue. If they want to pass Senator Kyl's bill, or any version of Senator Kyl's bill, they can.

What has this to do with horseracing? The New Kyl Bill in itself presents no more risk to the horse racing industry than prior failed attempts at prohibition. Now, however, new external factors provide a motivation, in fact a need to adopt legislation that specifically addresses horse racing in the proposed legislation. Strangely, the future of the horse race industry in America may be tied to a World Trade Organization (WTO) decision involving the small Caribbean island of Antigua's attempt to secure rights to host Internet casinos serving United States residents. The federal government has interpreted that decision to allow it to prohibit all forms of Internet gaming provided that it makes a "minor" change in federal law governing interstate account wagering on horses. More specifically, the United States trade representatives have indicated that the preferential method to comply with the WTO decision may be to "clarify" the "existing" prohibition against interstate account wagering.

THE FUTURE OF HORSERACING IS TIED TO ACCOUNT WAGERING

Without off-track betting and simulcasting, horse racing as we know it today would not exist. From the 1940s and through the early 1980s, horse racing was experiencing its golden era. On-track attendance in 1972 was 72 million persons, almost triple that of baseball. America's favorite pastime. But then, the walls began tumbling down. From a 28% share of the American gambling market in 1982, racing's influence dwindled to a mere 5.2% in 2000.[1] It was the victim of shifts in consumer preference as the American gambling dollar flowed from the track windows to the slot machine.

In total dollars, however, horse race wagering actually increased. In 1982, Americans legally wagered about $11.7 billion on horse races. In the ensuing 20 years, this total in-

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[1] *See* Eugene Christiansen and Sebastian Sinclair, 2000 Gross Annual Wager of the United States.

creased by a modest 35.5 percent to about $15.993 billion.[2] But these figures tell only half the story. In the 1990s racing's markets were restructured by simulcasting. On-track wagering decreased by about 72 percent during this period from about $9.9 billion to $2.87 billion.[3] The equalizing force was the growth of off-track betting (OTB) and inter-track simulcasting or ITW, a form of off-track betting where bets are accepted by a track on races being run at other tracks. A variety of licensed premises—OTB facilities including Nevada racebooks, racetracks and in California and other Western States racing fairs—became places where a person could place wagers on the outcome of races being held at racetracks throughout the country and watch the races live through closed circuit telecasts. The handle (total amount of all wagers) on ITW was about $5.9 billion in 2001, while the remaining OTB handle was about $7.2 billion.[4] Added together, these simulcast sources generated $13.1 billion in horse race wagers—82% of the industry total.

That wasn't all. Horse race wagering was spreading to the home. In the 1970s the New York City Off-Track Betting Corporation pioneered telephone deposit account wagering.[5] The concept spread: by the 1990s telephone betting was a major source of horserace handle in states that allowed, Pennsylvania being a case in point. In 2002, Bear Stearns observed that while account wagers then only accounted for 4–6% of all US horserace handle, it noted that "account wagering will be one of the key growth drivers of the horseracing industry . . . " This prediction has proven prophetical as account wagering jurisdictions continue to report double digit growth over prior years.

Meanwhile Congress had been busy with other concerns, concerns with illegal gambling that in 1961 resulted in the Federal Wire Act, codified at 18 U.S.C. § 1084.

POOR DRAFTING OF EXISTING FEDERAL LAWS CREATED ISSUES OF LEGALITY OF FOREIGN-BASED PROVIDERS OF ACCOUNT WAGERING

The Wire Act generally prohibits the use of interstate telephone lines to conduct a betting or wagering business.

Section 1084 provides in relevant part:

> Whoever being engaged in the business of betting or wagering knowingly uses a wire communication facility for the transmission in interstate or foreign commerce of bets or wagers or information assisting in the placing of bets or wagers on any sporting event or contest, or for the transmission of a wire communication which entitles the recipient to receive money or credit as a result of bets or wagers, or for information assisting in the placing of bets or wagers, shall be fined under this title or imprisoned not more than two years, or both.

The penalties for violating section 1084 were amended in 1993 to account for new federal sentencing guidelines. A violation subjects the offender to a maximum prison term of two years with the fines ranging from a minimum of $3,000 to a maximum of $30,000 for a violation of the statute.

Before the passage of the 2000 legislation, several racetrack and OTB facilities were conducting account wagering, including the New York Racing Association (NYRA) and the six New York OTB corporations, which are quasi-government agencies. The horse racing industry vehemently defended the rights of these licensed operators to accept account wagers, relying in part on the Interstate Horseracing Act of 1978, codified at 15 U.S.C. §§ 3001-3007.[6] In passing this legislation, Congress wanted to promote the stability of horse racing and off-track betting (OTB) in the United States.[7] Congress envisioned an interstate pari-mutuel scheme to ensure that states, like Nevada, which legalize pari-mutuel wagering, "coop-

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[2] *See Total Thoroughbred Handle Up Slightly in 2003*, BLOOD-HORSE, January 5, 2004.
[3] *See id*.
[4] *See id*.
[5] New York's off-track betting law is reviewed by Eugene Christiansen and Michael D. Shagan in *The New York Off-Track Betting Law: An Exercise in Selective Decriminalization*, 12 CONN. L. REV. 854 (Summer 1980).
[6] The Interstate Horseracing Act is evaluated by Heidi J. Seebauer, *The Interstate Horseracing Act of 1978: An Evaluation*, CONN. L. REV. 883 (Summer, 1980).
[7] 15 U.S.C. § 3001(3)(b) (2001).

erate[d] with one another in the acceptance of legal interstate wagering."[8] The Interstate Horseracing Act (IHRA) now governs the relationship between the OTB operators, licensed Internet and interactive television horserace betting services, the tracks, the horse owners and trainers, and the state racing commissions concerning wagers placed in one state on the outcome of races being held in another state.[9] All other aspects of horse racing, such as licensing and policing, are left to the discretion of the various state racing or gaming commissions.[10]

The IHRA has two major provisions. The first requires the OTB operator to effectively negotiate a fee for conducting interstate wagering with each track on which it accepts wagers. The second allows racetracks to protect their "national market area" by giving them the right to refuse to give consent to the OTB (within a specified distance from their track) to conduct interstate wagering. These provisions are discussed below.

Before an OTB operator can accept an interstate off-track wager, i.e., a wager with respect to the outcome of a horse race taking place in another state, consent must be obtained from:

The host racing association;
The host racing commission; and
The off-track racing commission.

The use of the word "consent" should not mask the true intent of the Act. Consent comes with a price either in the form of an agreement to provide wire information, a simulcast, or to conduct pari-mutuel wagering.[11] As a practical matter, the OTB operator will negotiate a contract with the track to conduct wagering on the track's races. This usually involves provisions for the merging of pari-mutuel pools and the receipt by the OTB operator of the race simulcast and instantaneous transmission of all tote (i.e., wagering) and other track information. Under these contracts, the OTB operator generally has the responsibility to obtain consent from its racing commission and the track has the responsibility to obtain the consent of its racing commission.

The IHRA has met its original intent of assuring that the tracks receive a fair share of interstate wagers on races conducted at its track. The respective rights of the OTB operator and the track are well defined under the IHRA. Once forced to the bargaining table, both parties have relatively equal bargaining power because both need the other to maximize profits. The Act also seeks to assure that horsemen receive fair shares of interstate wagers by including their consent as a "condition precedent" to the agreements. The second major provision of the IHRA is the requirement that OTB operators obtain the approval of all operating tracks within 60 miles of the OTB facility.[12]

To this end, the un-amended version of the IHRA prescribed rules for "interstate off-track wagering," which Congress defined as a "legal wager placed or accepted in one State with respect to the outcome of a horserace taking place in another state."[13] The Horseracing interest argued that this provision along with section 1084(b) of the Wire Act (discussed below), implies that interstate off-track wagering is legal under federal law. This would include interstate pari-mutuel poolings and account wagering by telephone or other means. As will be discussed below, the recent amendment to the IHRA was specifically intended to remove any ambiguity contrary to this implication.

Notwithstanding the foregoing, the United States Department of Justice took the position that interstate pari-mutuel off-track wagering

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[8] 15 U.S.C. § 3001(2) (2001).
[9] *See* 15 U.S.C. §§ 3001–7 (2000).
[10] *See, e.g.*, Atlantic City Racing Ass'n v. Attorney General, 189 N.J. Super. 549, 461 A.2d 178 (1983) (holding that the IHRA did not preempt state law that prohibited interstate pari-mutuel wagering).
[11] The IHRA does not, however, regulate wire information, disseminators or simulcasts. As the federal appellate court noted in *Turfway*: "We reject the appellee's claim that Congress was implicitly regulating the simulcasting of horse races by regulating interstate off-track wagering because interstate off-track wagering may occur without simulcasting, and simulcasting may occur without interstate off-track wagering." 20 F.3d 1406, 1412 n.10 (6th Cir. 1994).
[12] As part of the compromise process that led to the IHRA, a major exception to the "natural market" protection was included. It provides that OTB facilities in states that have over 250 racing dates do not have to obtain approvals of the "within 60-mile track" to conduct interstate wagering for up to 85 days (60 regular and 25 special events). 15 U.S.C. § 3004(b)(2).
[13] Pub. L. No. 95-515 (1978).

violates the Wire Act, 18 U.S.C. § 1084 (1961).[14] Understandably, this position generated various concerned responses from horsemen's groups, especially since the Department of Justice had never previously "used the Wire Act to prosecute any state licensed and regulated entities for conducting interstate simulcasting, commingling of pools or account wagering."[15] Accordingly, Stephen Walters, Chairman of the Oregon State Racing Commission, believed that the Department of Justice's position was an "extreme and incorrect interpretation of the Wire Act."[16]

Based on the law as it existed at that time, the Department of Justice's conclusion does indeed appear to be mistaken. The Wire Act specifically provides for an exception to interstate off-track pari-mutuel wagering. Although 18 U.S.C. § 1084(a) criminalizes persons "who use a wire communication facility for the transmission in interstate or foreign commerce of bets or wagers or information assisting in the placing of bets or wagers on any sporting event."[17] Subsection (b) provides an exception to interstate off-track pari-mutuel wagering allowing for "the transmission in interstate or foreign commerce . . . of information assisting in the placing of bets or wagers on a sporting event or contest from a State or foreign country where betting on that sporting event or contest is legal into a State or foreign country in which betting is legal."[18]

Moreover, the Ninth Circuit has held that the criminal provisions of section 1084 are not applicable to the activity of licensed pari-mutuel wagering where it is lawful under state law.[19] This decision is binding in Nevada, which is within the circuit. In accord, other federal courts have recognized that the "legislature drafted the exception in § 1084(b) specifically to accommodate the desire of some states to legalize off-track betting."[20]

The IHRA was amended in 2000 to clarify that pari-mutuel wagering may be placed, via telephone or other electronic media (including the Internet), and accepted by an off-track betting system where such wagers are lawful in each state involved.[21] The new definition of "inter-state off-track wager" is as follows:

> "[I]nterstate off-track wager" means a legal wager placed or accepted in one State with respect to the outcome of a horserace taking place in another State and includes pari-mutuel wagers, where lawful in each State involved, placed or transmitted by an individual in one State via telephone or other electronic media and accepted by an off-track betting system in the same or another State, as well as the combination of any pari-mutuel wagering pools.[22]

During Congressional debate, Representative Harold Rogers (R-KY), then Chairman of the Appropriation Subcommittee on Commerce, Justice, and State, stated the IHRA amendment was specifically intended to "clarif[y] that the Interstate Horseracing Act permits the continued merging of any wagering pools and wagering activities conducted between individuals and state-licensed and regulated off-track betting systems, whether such wagers are conducted

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[14] *See* Acting Assistant Attorney General Jon P. Jennings, Letter to from the Department of Justice to Senator Patrick Leahy regarding S. 692, The Internet Gambling Prohibition Act of 1999 (visited June 13, 2001) ⟨http://www.usdoj.gov/criminal/cybercrime/s692ltr.htm⟩; *see also Internet Prohibition Act of 1999: Hearings on H.R. 3125 Before the Subcomm. on Telecomm., Trade and Consumer Protection of the House Commerce Comm.*, 106th Cong. 34 (2000) (testimony of Kevin V. DiGregory, Deputy Assistant Attorney General, Criminal Division, Department of Justice).

[15] *Internet Gambling Prohibition Act of 1999: Hearing on H.R. 3125 Before the Subcomm. on Crime of the House Comm. on the Judiciary*, 106th Cong. 59 (2000)(statement by Stephen Walters, Chairman, Oregon Racing Commission); *see also Internet Prohibition Act of 1999: Hearings on H.R. 3125 Before the Subcomm. on Telecomm., Trade and Consumer Protection of the House Commerce Comm.*, 106th Cong. 43 (2000) (testimony of Anne Poulson, President of the Virginia Thoroughbred Association).

[16] *Id.*

[17] 18 U.S.C. § 1084(a) (1961).

[18] 18 U.S.C. § 1084(b) (1961).

[19] U.S. v. Donaway, 447 F.2d 940, 944 (9th Cir. 1971) (court reversed defendant's conviction under the Wire Act, holding that the Act was not applicable to defendant whose betting at licensed pari-mutuel betting enterprises was legal under state law).

[20] Sterling Suffolk Racecourse Ltd. Partnership v. Burrillville Racing Ass'n., Inc., 802 F. Supp 662, 670 (R.I.D. 1992) (holding that the Interstate Horseracing Act was intended to have purely civil consequences and race track operator could not use law designed to deter organized crime to attack activity subject to only civil repercussions); *aff'd*, 989 F.2d 1266 (1st Cir. R.I. 1993); *cert. denied*, 510 U.S. 1024, 114 S. Ct. 634 (1993).

[21] *See* 15 U.S.C. §§ 3001–3007 (2000).

[22] 15 U.S.C. § 3002 (2000).

in person, via telephone, or other electronic media."[23] An electronic media communication would undoubtedly include the Internet.

Yet in spite of the 2000 amendment, the United States Department of Justice continued to take the position that the existing prohibitions under the federal Wire Wager Act were not affected.[24] This position, however, is clearly unsupportable.

Considering recognized rules of statutory construction, the Department of Justice's continued position on account wagering does not make sense. There is a presumption that Congress is aware of existing law when it passes legislation,[25] and when it amends an existing statute.[26] When two statutes conflict, the statute that was most recently enacted controls.[27] In this case, the IHRA amendment was enacted after the Wire Act and therefore controls. Representative Rogers's comments evince that the very purpose of amending the IHRA was to clarify that account wagering is legal and not within the purview of the Wire Act. Therefore, a fair reading of existing federal statutes is that the IHRA specifically permits pari-mutuel wagering on horse races in those instances outlined above, and the Wire Act would not indirectly prohibit the same activities.

An unfortunate aspect of the 2000 amendment is that it is somewhat inconsistent with the Federal Wire Act. First, the Wire Act exemption applies to any type of bet, not simply pari-mutuel bets. Second, the Wire Act exemption extended to information assisting in the placing of a bet "from a State or foreign country where betting on that sporting event or contest is legal into a State or foreign country in which betting is legal," while the 2000 amendment only referred to wagers "transmitted by an individual in one State via telephone or other electronic media and accepted by an off-track betting system in the same or another State."

All interactive horse race wagering activity, whether pari-mutuel or not, or whether it is interstate or foreign, must fit under the exemption under the Federal Wire Act. The Wire Act makes no distinction between pari-mutuel and non-pari-mutuel wagers and specifically covers both interstate and foreign wagering activities. Therefore, the legal analysis of foreign wagers and non-pari-mutuel wagers should be no different than interstate pari-mutuel wagers.

The 2000 amendment was an attempt to add weight to the interpretation that the Wire Act exemption applied to licensed account wagering activity. That the language used in the 2000 amendment was narrower than the Wire Act exemption should not, but may be, interpreted as legislative intent that foreign and non-pari-mutuel wagers were not intended to be covered by the Wire Act exemption. The better and more likely interpretation is that Congress was concerned that the Justice Department's interpretation was infringing upon a longtime accepted and economically important activity and the Congress wanted to stress that the Wire Act exemption applied to this specific set of circumstances. It was not intended to limit the breadth of either the Wire Act exemption or the IHRA. Moreover, as the IHRA does not apply to foreign wagers, reference to foreign wagering in the definition section of the IHRA would not have made any sense.

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[23] Considering recognized rules of statutory construction, the Department of Justice continued position on account wagering does not make sense. There is a presumption that Congress is aware of existing law when it passes legislation, South Dakota v. Yankton, 522 U.S. 329, 351, 118 S. Ct. 789, 802 (1998), and when it amends an existing statute. In re Dobbins, 258 Cal. App. 2d 262, 270, 65 Cal. Rptr. 704, 709 (Cal. 1968). When two statutes conflict, the statute that was most recently enacted controls. Marschall v. City of Carson, 86 Nev. 107, 115, 464 P.2d 494, 500 (1970). In this case, the IHRA amendment was enacted after the Wire Act and therefore controls. To be sure Representative Rogers's comments evince that the very purpose of amending the IHRA was to clarify that account wagering is legal and not within the purview of the Wire Act.

[24] Conference Report on H.R. 4942, District of Columbia Appropriations Act, 2001, 146 Cong. Rec. H11265-02, at H11271 (2000). Despite what was an unequivocal pronouncement that account wagering was legal pursuant to this amendment, the Department of Justice still would not concede the legality of account wagering. In a press statement signing the IHRA amendment into law, President Clinton commented that the Department of Justice continued its position on account wagering. *See* Press Statement by President William J. Clinton, Signing H.R. 4942 into law (Dec. 27, 2000) 2000 WL 31157618.

[25] *See* South Dakota v. Yankton, 522 U.S. 329, 351, 118 S. Ct. 789, 802 (1998).

[26] *See* In re Dobbins, 258 Cal. App. 2d 262, 270, 65 Cal. Rptr. 704, 709 (Cal. 1968).

[27] *See* Marschall v. City of Carson, 86 Nev. 107, 115, 464 P.2d 494, 500 (1970).

WTO DECISION SEIZED UPON THIS POOR DRAFTING

The recent World Trade Organization decision involving the United States and Antigua has generated significant publicity. What is particularly odd about the decision is that both sides, the United States and Antigua, have declared almost unconditional victory. Regardless of the ultimate victor, the industry most in harm's way is the horse racing industry. In short, the WTO case was brought by Antigua based on commitments made by the United States under the General Agreement on Trade in Services (GATS). This agreement sets out multilateral rules governing international trade in services. The scope of what constitutes a service was intended to be very broad. As part of GATS, the WTO members made certain commitments reading the cross-border supply of services. In particular, the United States agreed that with regard to "recreational services," it would follow two principles: market access and national treatment. Market access means that it will open its markets to recreational services offered from another member country and will not impose trade restraints such as numerical limits. National treatment means that the United States agreed that it would not treat another member country less favorably than it treats its own suppliers of a like service.

An exception to market access and national treatment is measures that are adopted to protect the "public morals." According to the WTO Secretariat, "Measures to curb obscenity or to prohibit Internet gambling might well be justified on these grounds."[28] But, what justifies the exception is pretty much uncharted territory in trade law.[29]

Against this backdrop, the WTO Appellate Body issued a final ruling on April 9, 2005. Some findings are not debated. First, the United States' commitment regarding recreational services included gambling services. Second, certain U.S. laws including the Wire Act, the Travel Act, and the Illegal Gambling Business Act violate GATS because they have the effect of placing numerical limits on number of services suppliers, operators, and quantity of services output.

What the parties disagree on is the very convoluted discussion of the Public Morals exception. Here the United States must show that the prohibitions are necessary to protect the public morals and that any reasonable regulatory alternative to prohibition put forth by Antigua would not work. This was not fully played out in this case because the Appellate Body found that Antigua failed to put forth any regulatory alternatives.

The Appellate Body did, however, find that the United States failed to disprove Antigua's claim that the Interstate Horse Racing Act discriminated between foreign and domestic suppliers.[30] The decision stated:

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[28] WTO SECRETARIAT, THE WORK PROGRAMME ON ELECTRONIC COMMERCE (Nov. 16, 1998).

[29] *See* Steve Charnovitz, *The Moral Exception in Trade Policy*, 38 VA. J. INT'L L. 689, 694 (Spring, 1998).

[30] A portion of the text of that decision includes:

> We now turn to the United States' Article 11 claim relating to the chapeau. The Panel examined the scope of application of the Interstate Horseracing Act (IHA). Before the Panel, Antigua relied on the text of the IHA, which provides that "[a]n interstate off-track wager may be accepted by an off-track betting system" where consent is obtained from certain organizations. Antigua referred the Panel in particular to the definition given in the statute of "interstate off-track wager":
>
> > [T]he term . . . 'interstate off-track wager' means a legal wager placed or accepted in one State with respect to the outcome of a horserace taking place in another State and includes pari-mutuel wagers, where lawful in each State involved, placed or transmitted by an individual in one State via telephone or other electronic media and accepted by an off-track betting system in the same or another State, as well as the combination of any pari-mutuel wagering pools.
>
> Thus, according to Antigua, the IHA, on its face, authorizes domestic service suppliers, but not foreign service suppliers, to offer remote betting services in relation to certain horse races. To this extent, in Antigua's view, the IHA "exempts" domestic service suppliers from the prohibitions of the Wire Act, the Travel Act, and the IGBA.
>
> The United States disagreed, claiming that the IHA—a civil statute—cannot "repeal" the Wire Act, the Travel Act, or the IGBA—which are criminal statutes—by implication, that is, merely by virtue of the IHA's adoption subsequent to that of the Wire Act, the Travel Act, and the IGBA. Rather, un-

> (O)ur conclusion . . . relates solely to the possibility that the IHA exempts only domestic suppliers of remote betting services for horse racing from the prohibitions of the Wire Act, the Travel Act, and the IGBA.

So, while others argue the implications of the WTO ruling on Internet casinos and poker, no one disagrees that a problem exists with regard to horse racing.

Here is what Acting USTR Peter Allgeier from the Office of the United States Trade Representative said in its press release shortly after the ruling:

> By reversing key aspects of a deeply flawed panel report, the Appellate Body has affirmed that WTO Members can protect the public from organized crime and other dangers associated with Internet gambling.
>
> This is also a victory for the federal and state law enforcement officers and regulators who protect the public from illegal gambling and its associated risks of money laundering and organized crime."
>
> U.S. restrictions on Internet gambling can be maintained. . . . This report essentially

---

der principles of statutory interpretation in the United States, such a repeal could be effective only if done explicitly, which was not the case with the IHA.

Thus, the Panel had before it conflicting evidence as to the relationship between the IHA, on the one hand, and the measures at issue, on the other. We have already referred to the discretion accorded to panels, as fact-finders, in the assessment of the evidence. As the Appellate Body has observed on previous occasions, "not every error in the appreciation of the evidence (although it may give rise to a question of law) may be characterized as a failure to make an objective assessment of the facts."

In our view, this aspect of the United States' appeal essentially challenges the Panel's failure to accord sufficient weight to the evidence submitted by the United States with respect to the relationship under United States law between the IHA and the measures at issue. The Panel had limited evidence before it, as submitted by the parties, on which to base its conclusion. This limitation, however, could not absolve the Panel of its responsibility to arrive at a conclusion as to the relationship between the IHA and the prohibitions in the Wire Act, the Travel Act, and the IGBA. The Panel found that the evidence provided by the United States was not sufficiently persuasive to conclude that, as regards wagering on horseracing, the remote supply of such services by domestic firms continues to be prohibited notwithstanding the plain language of the IHA. In this light, we are not persuaded that the Panel failed to make an objective assessment of the facts.

With respect to the Panel's analysis under the chapeau of Article XIV, the United States also contends that the Panel failed to satisfy its obligations under Article 11 of the DSU in finding that "the United States has failed to demonstrate that the manner in which it enforced its prohibition on the remote supply of gambling and betting services against TVG, Capital OTB and Xpressbet.com is consistent with the requirements of the chapeau." Having reversed this finding under the chapeau of Article XIV, we need not rule on the United States' additional ground of appeal, namely that, in arriving at this finding, the Panel acted inconsistently with its duty under Article 11 of the DSU.

In sum, we find that none of the challenges under Article 11 of the DSU relating to the chapeau of Article XIV of the GATS has succeeded.

. . .

We explained that the only inconsistency that the Panel could have found with the requirements of the chapeau stems from the fact that the United States did not demonstrate that the prohibition embodied in the measures at issue applies to both foreign and domestic suppliers of remote gambling services, notwithstanding the IHA—which, according to the Panel, "does appear, on its face, to permit" domestic service suppliers to supply remote betting services for horse racing. In other words, the United States did not establish that the IHA does not alter the scope of application of the challenged measures, particularly vis-à-vis domestic suppliers of a specific type of remote gambling services. In this respect, we wish to clarify that the Panel did not, and we do not, make a finding as to whether the IHA does, in fact, permit domestic suppliers to provide certain remote betting services that would otherwise be prohibited by the Wire Act, the Travel Act, and/or the IGBA.

Therefore, we modify the Panel's conclusion in paragraph 7.2(d) of the Panel Report. We find, instead, that the United States has demonstrated that the Wire Act, the Travel Act, and the IGBA fall within the scope of paragraph (a) of Article XIV, but that it has not shown, in the light of the IHA, that the prohibitions embodied in these measures are applied to both foreign and domestic service suppliers of remote betting services for horse racing. For this reason alone, we find that the United States has not established that these measures satisfy the requirements of the chapeau. Here, too, we uphold the Panel, but only in part.

> says that if we clarify U.S. internet gambling restrictions in certain ways, we'll be fine.
>
> [The United States] "needs to clarify one narrow issue concerning internet gambling on horse racing [and that it will be] exploring possible avenues for addressing this finding. USTR will not ask Congress to weaken U.S. restrictions on internet gambling.[31]

A US Trade Spokesman, Rich Mills, put it another way: "We need to clarify one narrow issue, which is Internet gambling and horseracing." . . . It doesn't necessarily mean loosening restrictions. It could also mean tightening them."[32]

AN OVERVIEW OF THE NEW KYL BILL

The New Kyl Bill has three important sections: the first is a criminal prohibitory section, the second is an administrative regulatory section, and the third is a broad civil enforcement vehicle.

Criminal prohibitory section

The criminal prohibitory section is directed at persons engaged in the business of betting or wagering and provides prison terms of up to five years for its violation. The second section requires the Secretary of the Treasury to adopt regulations requiring that financial transaction providers code all transactions and block or prevent the acceptance of financial transactions related to Internet gambling. The third section grants authority to both the United States Attorney General, various federal agencies and the state attorneys general to bring actions against financial institutions, interactive computer services, and others to restrain "a violation or threatened violation of the" criminal prohibition or the civil regulations.

The prohibitory language of the New Kyl Bill is found in § 5362, which provides that:

1. A person engaged in the business of betting or wagering;
2. May not knowingly accept
3. In connection with the participation of another person,
4. In unlawful Internet gambling,
5. Any one of the following financial transfer:
   a. Credit/credit card;
   b. Electronic funds transfer ("EFT")
   c. Check, draft or similar instrument or
   d. Any other funds transfer involving a financial institution or intermediary as prescribed by the Secretary of the Treasury.

Two elements of this new prohibition are worthy of discussion. First, the New Kyl Bill only applies to persons engaged in the business of betting or wagering. This language comes from the existing Federal Wire Act. Under that Act, courts have required that a party be engaged in the "sale of a product or service for fee."[33] The courts also require that the party be engaged in a "continuing course of conduct."[34] Consequently, where a gambling operator charges the customers for its service either through accepting or brokering wagers, the continuing activities of the operators will likely constitute being "engaged in business of betting or wagering," thus leaving them open to liability under the statute.

The casual gambler does not face criminal liability.[35] The Wire Act and the Kyl Bill, as currently written, could not be used as a tool to prosecute "casual" gamblers who participate in games by telephone or over the Internet. The legislative history of the language used in the Wire Act indicates that it was not meant for mere social bettors, but aimed at "persons engaged in the business of betting or wagering."[36]

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[31] Press Release, Office of the United States Trade Representative, U.S. Internet Gambling Restrictions Can Stand as U.S. Wins Key Issues in WTO Dispute (April 7, 2005).
[32] Declan McCullagh, *WTO slams U.S. Net-gambling ban*, CNET NEWS.COM, April 7, 2005.
[33] United States v. Barborian, 522 F. Supp. 324, 329 (D.R.I. 1981).
[34] United States v. Scavo, 593 F.2d 837, 842 (8th Cir. 1979).
[35] This assertion should be tagged with the following caveat: the recreational user will likely have to face state regulations prohibiting gambling in private residences.
[36] United States v. Tomeo, 459 F.2d 445, 447 (10th Cir. 1972); *see also* United States v. Barborian, 522 F. Supp. 324, 328 (D.R.I. 1981) (concluding that Section 1084's legislative intent was directed at "business of gambling" and not "mere betting"). A review of the House and Senate Reports and the floor debates, Section 1084 was intended to target professional gamblers and bookmakers, not the "casual" gambler.

Second, the New Kyl Bill only applies to unlawful Internet gambling. Section 5361 subsection 3(9) defines "unlawful Internet gambling" as "to place, receive, or otherwise knowingly transmit a bet or wager by any means which involves the use, at least in part, of the Internet where such bet or wager is unlawful under any applicable Federal or State law in the State in which the bet or wager is initiated, received, or otherwise made."

As the Department of Justice takes the position that account wagering currently violates the Federal Wire Act, it follows that financial transactions in support of account wagering would run afoul of the New Kyl Bill regardless of their legality under the laws of the state in which the bet or wager is initiated, received, or otherwise.

Administrative regulatory section

The regulatory language of the Kyl Bill is found in § 5363, which requires the Secretary of the Treasury, in consultation with the Board of Governors of the Federal Reserve and the Attorney General to prescribe regulations "requiring each designated payment system, and all participants therein, to identify and prevent restricted transactions. . . . " In essence, the purpose of this section is to require the coding of all transactions including ACH transactions, the blocking of such transactions from going through the banking and other financial services channels, and the adoption of procedures to prevent the "acceptance of the products or services of the payment system in connection with" Internet gambling.

Civil enforcement provisions: the true value of the new kyl bill as a tool for law enforcement

Beginning in the fall of 2003, the Assistant U.S. Attorney General for the Eastern District of Missouri launched an investigation into advertising for offshore online gaming sites. The office issued numerous subpoenas to media outlets as follow-up to an earlier letter to the National Association of Broadcasters, warning that the practice of accepting gambling advertising may constitute aiding and abetting illegal conduct under federal law.[37] As one commentator from the University of Richmond Law School noted, the U.S. Department of Justice is showing a "crusader's zeal" against anyone who is in or associated with the chain of commerce of offshore gaming sites. It was the apparent position of the U.S. Department of Justice that anyone who is in or associated with the chain of commerce of offshore gaming sites is aiding and abetting the illegal activity.

These subpoenas had a profound effect on the online industry because the companies receiving the subpoenas, almost without exception ceased carrying the advertisements. Thus, by mere use of intimidation, the Department of Justice effectuated administration policy.

The New Kyl Bill is set up to institutionalize this process of extrajudicial intimidation. The bill allows the U.S. Attorney General, various federal administrative agencies, and state attorneys general to send out "notices" of "potential" violations to any financial transaction provider. Nothing requires these prosecutors and agencies to actually follow up on these notices. Therefore, if the Department of Justice or a rogue state attorney general decides to stop account wagering, they could send out literally hundreds of violation notices to banks, credit card companies, eCash providers and others. The natural response by most, if not all, recipients of the notices would be to terminate services to the account wagering companies. Moreover, the New Kyl Bill would protect the financial institutions from suits for termination of services by the account wagering operators. The bill provides that a person who blocks a transaction or refuses services for a "restricted transaction" shall not be liable to any party for such action. While the Department of Justice has never prosecuted a single provider of account wagering services, it could effectively shut down the industry in the United States with 37 cent stamps.

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[37] *See* US Court Subpoenas Gaming Portals, September 30, 2003, available online from Igamingnews.com ⟨http://www.igamingnews.com/index.cfm?page=artlisting&tid=4553⟩ (last visited February 19, 2004).

THE UNITED STATES NEEDS TO AMEND EXISTING LAWS GOVERNING ACCOUNT WAGERING TO COMPLY WITH THE WTO: THE NEW KYL BILL IS THE MOST LIKELY VEHICLE

The New Kyl Bill will not make it through the Senate without at least an attempt by the Bush Administration to solve the WTO issue. As written, the Kyl Bill gives the Department of Justice the tools it needs to effectuate its stated policy that all forms of gambling are illegal under federal law. The bill, however, is wholly insufficient for the Administration's needs to respond with a notice of compliance to the World Trade Organization. In that notice, the United States needs to affirmatively state that the inequities perceived by the WTO Appellate Body, which were created by the 2000 amendments to the Interstate Horseracing Act, have been rectified.

The continuing ambiguity of whether account wagering constitutes a violation of the Wire Act needs rectification. The Administration can seek an amendment of the Interstate Horseracing Act to remove the offending language or simply remove the "unlawful" language from this bill and effectively prohibit all wagering on the Internet. The latter was the progression of the Kyl Bill in the last session from introduction until passage by the Senate Banking Committee. History could repeat itself. In other words, the situation for the horse race industry could potentially go from bad to worse.

Appendix C: Lotteries and the Fiscal Crisis (*Insight* Volume 3, Issue 1)

Volume 3, Issue 1

Monday, January 31, 2005

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- 2 tribes pursue Cleveland casino
- Ready for some football? You bet
- MGM Mirage beats predictions

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Inside this issue:

Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky

By Jason Pawlina and Eugene Martin Christiansen

One way to deal with budget gaps is to tax people in neighboring States. It's politically painless: non-resident taxpayers can't vote against you. And it has tradition going for it: States have been poaching their neighbors through differential income, real estate and sales taxes since these tools were added to government revenue arsenals. Not for nothing does Nevada have no income tax: the Silver State is one vast tax haven for Californians tired of Sacramento's claims on their paychecks. Duty-free shopping in sales tax-less jurisdictions up and down the Eastern Seaboard attracts millions of cost-conscious consumers from places like New York (where the sales tax is 8%). The casino expansion of the past fifteen years has created a new variation on this theme. It works this way: legalize gaming; line borders with neighboring States that don't allow gaming with casinos or racinos; and watch the money roll in, as non-resident players fund your budget through gaming privilege tax payments. It's painless taxation in a very real sense for lawmakers who play this game well.

Indiana's Positive Trade Balance

Indiana provides an object lesson in this poach-your-

(continued on page 8)

Lotteries and the Fiscal Crisis

By Eugene Martin Christiansen

Just after the New Year Maine's Democratic governor, John Baldacci, said he was considering borrowing against future lottery revenue by selling ten years' of the lottery's proceeds to the Maine State Retirement System or to another investor in exchange for $250 million to plug a gap in Maine's upcoming budget. Maine's Republican Assistant Senate Leader, Carol Weston, quickly criticized the proposal as a one-shot stopgap that didn't address Maine's long-term fiscal troubles; the chairman of Maine's Republican Party called the idea irresponsible. But as Baldacci's chief financial officer, Rebecca Wyke, pointed out, the idea isn't new. West Virginia, Oregon, and Florida have all issued bonds backed by lottery revenues. West Virginia has extended the technique to racino lottery machine reve-

(continued on page 2)

"I looked at this and what's not to like about it?

If there's another way of doing this, I want to know about it."

- Maine Governor John Baldacci

Lotteries and the Fiscal Crisis (continued)

(continued from page 1)

nues, issuing several series of bonds at multiple lien levels for its State Building, School Building and Economic Development Authorities. And Baldacci was quick to add that the lottery bond would give the Maine State Retirement System a guaranteed rate of return higher than that of its corporate portfolio.

Securitizing Gambling Revenue: The Debt Option

In borrowing against their lottery revenue streams these States are participating in a broader process: securitizing gambling revenues for the purpose of raising cash to meet immediate fiscal needs. This effectively builds on the strong borrowing track record of commercial casino companies—supercharged by a State's access to the tax-exempt market. State governments may be broke, but their lotteries are profitable. Highly profitable: gambling monopolies with statutory "bottom lines", or distributions to their government owners, averaging about 31% of sales. As Jeff Carey, managing director at Merrill Lynch & Company, points out, this makes lottery revenue streams a strong source of debt service repayments. Hence the markets' appetite for lottery bonds.

Securities backed by gambling revenues haven't received much media attention but there's a lot going on. California's Governor Arnold Schwarzenegger wants to raise as much as $2 billion from bonds for State transportation expenditures secured by tribal slot machine revenues anticipated from new compacts between the State of California and certain California tribes. Debt issues secured by gaming machine revenues are being discussed in other States with general fund budget deficits. Since this category includes many State governments, and many of these same States have licensed or tribal gaming within their borders, lottery bonds appear to be an idea whose time has come.

States have used the proceeds of lottery bonds to fund capital expenditures for secondary and higher education, economic development, and public sector infrastructure, including government buildings. True, using the proceeds of lottery bonds to replace general fund revenues and close budget gaps differs from borrowing money to buy a house: when that debt is retired the borrower is left with an asset (his or her house); there may not be a residual asset once lottery bonds are retired. But States that securitize lottery revenues still own their lotteries after lottery bonds are retired, and in Maine's case, Governor Baldacci expects the $250 million his lottery bonds would raise to lower property taxes and thereby translate into 1,300 new jobs in 2006 and an additional 2,300 jobs the following year—meaningful numbers in terms of Maine's economy. Criticisms of government borrowing against future revenues, from lotteries or toll roads or

(continued on page 3)

"Strong growth in lottery sales, as well as non-lottery gaming industries, nationwide, coupled with proven popularity and performance under a range of economic condition, make these revenue streams a strong source of debt service payments."

Managing Director Jeff Carey, Merrill Lynch & Co.

Lotteries and the Fiscal Crisis (continued)

(continued from page 2)

anything else, are somewhat beside the point; the point being that public sector needs and public sector resources are wildly out of balance in the United States today. As a character in *The Godfather* observes, the fish stinks from the head, the head here being Washington. The Federal surpluses of the Clinton years are gone, replaced by the biggest deficits in U.S. history. The Bush Administration's massive reallocation of fiscal and economic resources to economically sterile military spending has left the Federal Government powerless to help the States, and State governments, assuming perforce the primary responsibility for protecting and preserving America's human capital—its people—must find help wherever they can.

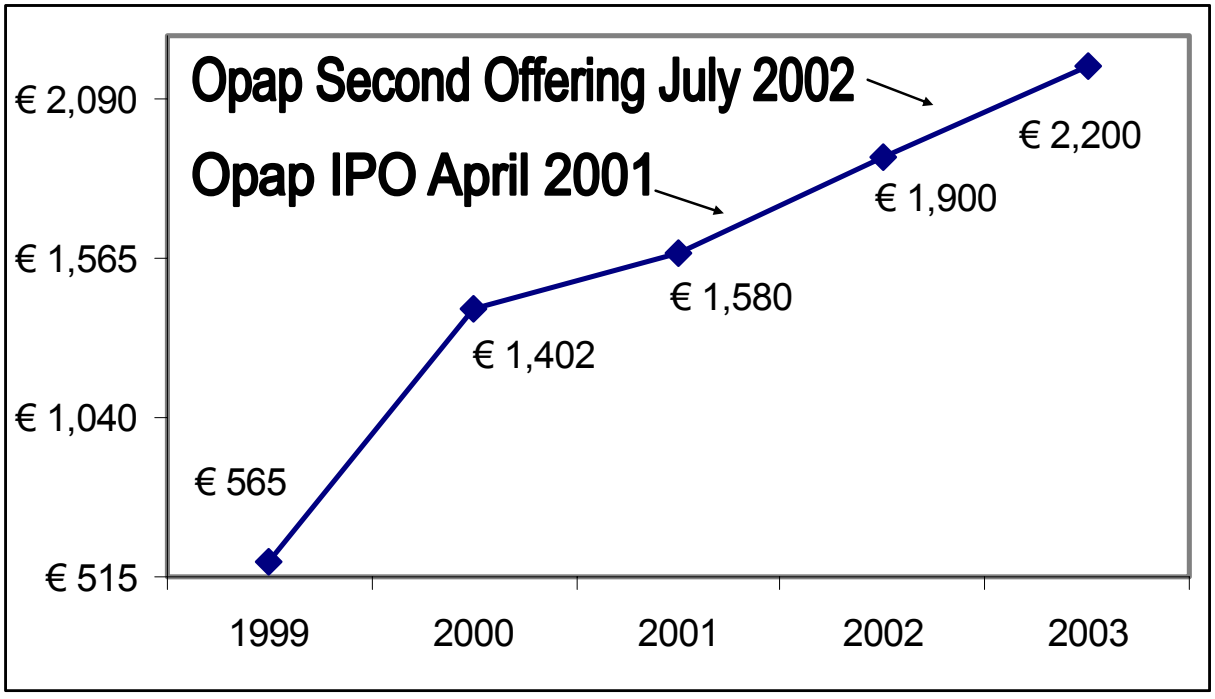
The Equity Card

In this bleak context, the lotteries owned by 39 States look very much like under-utilized assets. State governments received $11.74 billion in badly needed revenue from their lotteries in 2004, more than three times the amount of gaming privilege taxes they collected from casinos. Many States are looking at a budget gap and trying to find untapped revenue sources to close it. Expanded gambling is back on legislative calendars. States with revenue-producing toll bridges and roads are asking investment banks what these assets would bring if they were sold or privatized in some other way. As no end to the current fiscal crisis is in sight and many other 'one-shots' have already been utilized, privatization is likely to receive a thorough hearing. And so the question naturally arises: if State-owned toll roads are on the table (as is seemingly the case in New Jersey), what about State lotteries?

CCA raised this question four years ago in a research report, *Global Lottery Privatization: The Equity Potential of Government Lotteries* (posted to CCA-i.com in December 2001). In that report we pointed out that the direct revenue generated by lotteries understates their true value. Only a handful of the world's approximately 209 State, provincial or national lotteries (in 89 countries) are private-sector businesses; Australia's Tattersalls Holdings Pty, Ltd. and Italy's Lottomatica SpA are among the examples.

(continued on page 4)

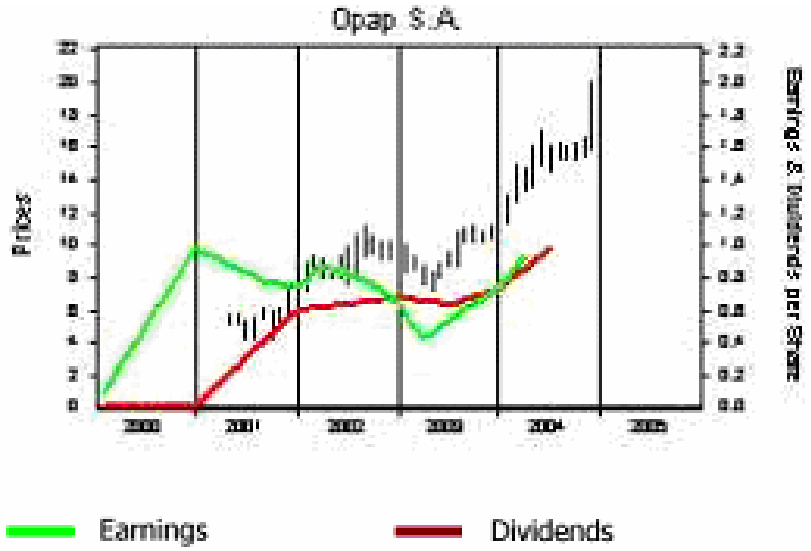
Exhibit 1: Opap Sales 1999-2003



Source: *IGWB Worldwide Lottery Sales Report*, June 1999-2003

Lotteries and the Fiscal Crisis (continued)

Exhibit 2: Opap S.A. Earnings, Dividends and Share Price 2000-2004



Stock Price (1/21/05): 20.50

Recent stock performance

1 Week 2.4%
4 Weeks 2.6%
13 Weeks 27.3%
52 Weeks 59.4%

Source: Wright Investors' Service

(continued from page 3)

The fact that lotteries are typically monopoly franchises with very high profit margins implies substantial but latent and un-monetized equity value. In other words, more than 200 governments around the world, including 39 State governments in the United States, are sitting on lottery assets worth many billions of dollars in equity markets if these assets were to be privatized.

National governments are waking up to this fact. Russia, the Ukraine, Turkey and perhaps a dozen other countries are looking at ways of unlocking the latent equity value in their lotteries by privatizing them. And one member of the European Community, Greece, has taken this step and transferred its national lottery to the private sector. How has privatization worked in Greece?

The Greek Experience

The privatization approach adopted by the Greek government was simple: convert its government lottery, Opap ("Greek Soccer Pools and Lotteries"), into a private company, Opap S.A., and sell a small percentage of its equity in the form of common shares to the public in an initial public offering (IPO). On April 3, 2001, the Greek government offered a 10% stake in Opap S.A. to the public through the Athens Stock Exchange. (The government had intended to offer 15% of Opap but reduced the offering due to soft market conditions.) The purpose of the offering was to help finance the 2004 Olympics; Greece expected to spend as much as $5.2 billion on stadiums, roads, and other infrastructure in preparation for the games. The Greek government hoped to sell 31.9 million shares. The issue was undersubscribed, however, and only about 5% of Opap, or 16,038,310 shares, were sold, at €5.5 a share. This initial offering yielded proceeds of about €88 million, or $83 million in US dollars at then-prevailing exchange rates. Opap S.A. shares rose in the immediate after-market, trading as high as €6.32 on April 25, 2001 before closing at €5.64. Five months later, on September 17, 2001, Opap S.A. shares were being quoted at €5.14.

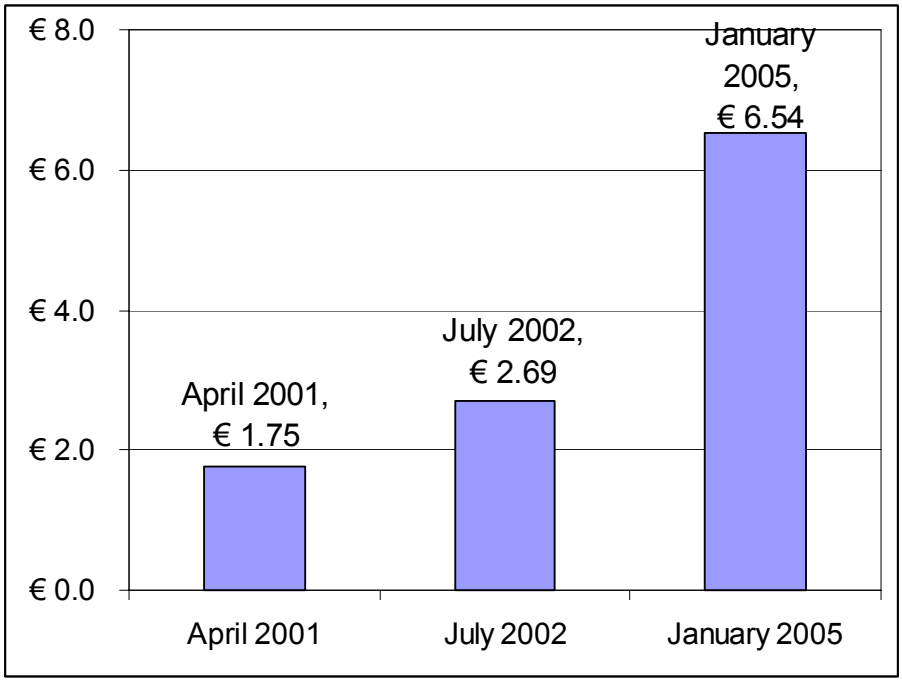
Opap S.A. Valuation Following the IPO

How did the stock market value Greece's lottery following its privatization? One way to answer that question is to look at the initial price of Opap S.A. shares in relation to Opap S.A.'s sales. Opap's total sales (handle or gross wagering) for the year 2000 were between €1.3 billion and €1.4 billion. The post-IPO market valued a 5% stake in Opap S.A. at €$88 million, giving Opap S.A. an implied value of €1.9 billion (US $1.76 billion). Using this valuation Opap S.A. was trading at a 1.27 multiple of 2000 sales (or gross wagering) in the IPO after-market.

(continued on page 5)

Lotteries and the Fiscal Crisis (continued)

Exhibit 3: Opap S.A. Market Capitalization April 2001, July 2002, January 2005 (€ B)



Source: CCA estimates, OPAP S.A. public offering documents

(continued from page 4)

Opap S.A. Performance

That was how things stood in 2001. Since then Opap S.A. has gone back to the stock market with a secondary offering (July 2002) and is preparing a third offering for 2005. How has Greece's lottery performed as a private-sector for-profit business?

Exhibit 1 presents Opap sales for the years 1999 through 2003. In 1999 sales were €564.8 million, rising to €1.4 billion in 2000, Opap's last year as a government operation. Following privatization sales continued to increase steadily, reaching €2.2 billion in 2003, a 57% increase over 2000.

That kind of top line performance would be impressive in any industry—and the stock market was duly impressed. Opap S.A.'s share price has risen almost steadily since trading began, closing on January 21, 2005 at €20.50—a 272% increase from the initial offering price despite a secondary offering of 60.3 million more shares in July 2002. The reasons for the increase in the value of Opap S.A. shares aren't far to seek. Earnings are up sharply since the lottery went private in 2001. Dividends are likewise up, with both earnings and dividends trending upward in 2004 (Exhibit 2). And, as Exhibit 1 shows, sales have likewise increased

Exhibit 3 shows the payoff. Opap S.A.'s market capitalization has exploded, increasing from €1.75 billion in April 2001 to €6.54 billion in January 2005. And as Exhibit 4 demonstrates, Opap S.A.'s share price and market value have appreciated in spite of a massive increase in the public float (the number of shares trading): from 16 million following the initial offering to 76.4 million following the secondary offering in July 2002.

A Win/Win Outcome

By all these measures Greece's lottery has performed better as a private-sector for-profit company than it did as a government operation. That performance was rewarded by the stock market with a 272% increase in the price of Opap S.A. shares even though the company increased the public float (number of shares in the public's hands) by offering an additional 60.3 million shares (or about 19% of the company) to the public (in July 2002), which, added to the 16.1 million shares initially sold, increased the number of shares trading nearly five-fold to 76.3 million (Exhibit 4).

The implications of the rising price of Opap S.A. shares (Exhibit 2) for the Greek government are overwhelmingly positive. The initial offering of 16.1 million shares sold at €5.5 and yielded €88.2 million euros, valuing Opap S.A. at €1.75 billion. The secondary offering, in July 2002, of a much larger number of shares (60.3 million) was priced at €8.4 and yielded €508.7 million—valuing Opap S.A. at €2.69 billion. A third offering of shares is planned for early 2005. If another 60 million shares were to be sold at Opap S.A.'s January 21, 2005 share price of €20.50 the yield would be €1.23 billion, valuing Opap S.A. at €6.54 billion euros—with 57.2% of the company's

(continued on page 6)

Lotteries and the Fiscal Crisis (continued)

Exhibit 3: Opap S.A. Market Capitalization, Share Price, Sales, and Public Offering Data

	1st Offering	2nd Offering	Hypothetical 3rd Offering
	April 2001	July 2002	January 2005
Total Shares	319,000,000	319,000,000	319,000,000
Shares	16,038,310	60,291,000	60,291,000
Share Price	€ 5.5	€ 8.4	€ 20.5
Float Cap	€ 88,210,705	€ 508,700,000	€ 1,251,641,160
% of Whole	5.0%	18.9%	18.9%
Total Capitalization (Cap / %)	€ 1,754,500,000	€ 2,692,360,000	€ 6,539,500,000
2003 Sales		€ 2,200,000,000	
2002 Sales		€ 1,900,000,000	
2001 Sales		€ 1,579,900,000	
2000 Sales		€ 1,402,380,000	
1999 Sales		€ 564,817,500	
Cap / Sales % (2001)		111%	
Cap / Sales % (2003)		122%	

Source: CCA estimates, OPAP S.A. public offering documents

(continued from page 5)

shares still unsold. One and quarter billion euros would plug a lot of budget gaps.

Let's recapitulate Greece's experience with privatizing its national lottery. Sales have risen steadily, by double digits. Profits have increased: Opap S.A. earned €235.1 million in 2003, up by 14% from €206.1 million in 2002. Opap S.A.'s 2003 EBITDA reached €472.8 million, a 16.5% increase over 2002. This business performance enabled Greece's lottery to harness public equity market power and make this powerful force work to its advantage. While the initial public offering was undersubscribed, the much larger July 2002 secondary offering was 3.8 times oversubscribed and, importantly, was largely taken up by investors outside Greece: international investors bought 71% of the secondary offering, leaving 29% for Greek investors. (Not surprisingly, Opap S.A. employees bought up their entire allotment of 300,000 shares.) Tapping international equity markets is exactly what Greece, a small country in an EC dominated by Germany, needs to do.

Today the Greek government is sitting pretty. It is looking forward to a third offering of Opap S.A. shares into a market that values these shares at €20.50. From its first two offerings it has realized €597 million (before underwriters' fees) and still retains 75.6% of an increasingly profitable company now valued at €6.54 billion. It can expect to raise another €1.23 billion from a third offering this year while still retaining a 57.2% ownership stake in Opap S.A. Investors who bought Opap S.A. shares in the IPO and held onto them have profited handsomely. Opap S.A. has enabled Greece to attracted equity investors outside Greece—no mean accomplishment. And, because the Greek government allotted a small but significant number of shares to Opap S.A.'s 264 employees these former civil servants have gotten moderately rich.

As Maine Governor Baldacci said about his plan to securitize Maine Lottery revenues, what's not to like about this?

Christiansen Capital Advisors's Insight

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Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky (continued)

Exhibit 1: Southeastern Indiana Riverboat Casino Data (Fiscal Year Ended June 30, 2004)

	Argosy	Caesars	Grand Victoria	Belterra	Total
# of Machines	2,353	2,300	1,509	1,531	**7,693**
Win per Unit per Day	$414.9	$271.7	$233.7	$217.1	**$297.2**
# of Tables	86	142	37	39	**304**
Table Win ($M)	$73.7	$62.1	$15.2	$19.3	**$170.3**
Slot Win ($M)	$356.3	$228.1	$128.7	$121.3	**$834.4**
Total Win ($M)	**$430.0**	**$290.1**	**$143.9**	**$140.6**	**$1,004.6**
% of Total	42.8%	28.9%	14.3%	14.0%	**100.0%**
Tax ($M)	**$135.5**	**$86.6**	**$35.6**	**$34.7**	**$292.4**
% of Total	46.3%	29.6%	12.2%	11.9%	**100.0%**

Source: Indiana Gaming Commission

(continued from page 1)

neighbor revenue-raising technique. Indiana allows gaming (on casino riverboats, which it authorized in 1993). Two of its neighbors, Ohio and Kentucky, do not. Conveniently, Indiana's border with Ohio and Kentucky is a river (the Ohio). On the Indiana side of that river opposite Cincinnati are three big riverboats: Argosy, Grand Victoria and Belterra (Map 2). Seventy miles downstream there's a fourth, Caesars, across from Louisville and about 70 miles from Lexington on I-64. (Map 3). All told, the four boats won a billion dollars in the fiscal year ended June 30, 2004 (Exhibit 1). By our estimate, $891 million of that was contributed by residents of Ohio and Kentucky, $664.4 million in the Cincinnati market alone (Exhibits 4 and 5).

Exhibit 1 presents summary statistics for these four Indiana riverboats. One or two comments are in order. Machine productivity at the Argosy casino is relatively high ($414.9) which suggests that demand for machine gaming in Argosy's market exceeds existing supply; in other words, the Argosy location would support more machines. Conversely, machine productivity at Grand Victoria, Belterra and Caesars is significantly lower, because these boats are further away (to the south-

(continued on page 9)

Exhibit 2: Argosy Casino (Lawrenceburg, Indiana)

Distance Range	Adult Population	Competition and Distance Adjustments	Adjusted Adult Population	Spending ($M) (Ohio)	Spending ($M) (Kentucky)	Spending ($M) (Indiana)	Total Spending ($M)
0-10	54,984	96%	52,785	$3.9	$4.9	$8.3	$17.2
10-25	759,032	47%	354,828	78.4	32.4	4.7	115.5
25-50	798,162	27%	214,007	57.4	9.7	2.5	69.6
50-75	1,481,440	19%	274,325	57.6	25.2	6.4	89.3
75-100	2,395,544	5%	112,790	9.0	24.4	3.3	36.7
100-125	1,761,825	16%	286,650	10.1	82.2	1.1	93.3
2% from outside of the market			25,908	4.3	3.6	0.5	8.4
				$220.8	**$182.4**	**$26.9**	**$430.0**

Source: Christiansen Capital Advisors, LLC

Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky (continued)

Exhibit 3: Grand Victoria Casino (Rising Sun, Indiana) and Belterra Casino (Markland, Indiana)

Distance Range	Adult Population	Competition and Distance Adjustments	Adjusted Adult Population	Spending ($M) (Ohio)	Spending ($M) (Kentucky)	Spending ($M) (Indiana)	Total Spending ($M)
0-10	33,559	96%	32,217	$0.0	$5.6	$11.5	$17.0
10-25	544,557	20%	111,046	39.9	16.5	2.4	58.7
25-50	983,543	12%	120,621	52.6	8.9	2.3	63.8
50-75	1,815,461	6%	106,636	36.4	15.9	4.1	56.4
75-100	2,052,730	2%	39,408	5.1	13.9	1.9	20.8
100-125	1,520,887	8%	117,399	6.7	54.7	0.7	62.1
2% from outside of the market			10,547	2.8	2.3	0.5	5.6
				$143.5	**$117.7**	**$23.3**	**$284.5**

Source: Christiansen Capital Advisors, LLC

(continued from page 8)

west) from the bulk of the area population—with no highway access. The implication is that if a casino similar to Argosy were to open on the Ohio side of the border its machines would be more productive than the Belterra and Grand Victoria machines due to closer proximity to the "spenders". (The Caesars facility is far enough away that it is virtually independent of the Cincinnati market.).

Map 1 depicts the Argosy market. The Argosy casino (located in the town of Lawrenceburg, Indiana) is just over a mile from the Ohio border, less than 10 miles from the Cincinnati city limits, and only about a mile from the highway ramp to route 275 which heads right into downtown Cincinnati.

Exhibit 2 presents a summary description of the Argosy casino's market, together with CCA's estimates of the geographic source of Argosy's gross gaming revenue. Only about 55,000 adults live within 10 miles of the facility and these truly "local" residents contribute by our estimate only about $17 million of Argosy's win. The next three distance ranges (10-25 miles, 25-50 miles, 50-75 miles) have substantial populations and contribute substantial amounts of Argosy's GGR: just under $275 million. Beyond 75 miles distance begins to tell and estimated contribution to Argosy GGR falls off: it's still meaningful, though, totaling $138.4 million.

Indiana's Free Lunch

The second column of Exhibit 2 shows how effectively Indiana lawmakers have been able to tap Ohio personal

(continued on page 10)

Exhibit 4: Caesars Casino (Elizabeth, Indiana)

Distance Range	Adult Population	Competition and Distance Adjustments	Adjusted Adult Population	Spending ($M) (Kentucky)	Spending ($M) (Indiana)	Total Spending ($M)
0-10	161,803	96%	155,331	$61.1	$3.0	$64.1
10-25	554,456	51%	284,514	88.7	28.7	117.4
25-50	305,748	33%	99,492	27.5	13.5	41.1
50-75	542,125	10%	54,645	14.2	8.4	22.6
75-100	1,499,815	4%	63,738	18.9	7.4	26.3
100-125	2,384,174	1%	31,606	11.7	1.3	13.0
2% from outside of the market			13,787	4.4	1.2	5.7
				$226.5	**$63.6**	**$290.2**

Source: Christiansen Capital Advisors, LLC

Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky (continued)

Exhibit 5: Estimated Spending from Kentucky

	Argosy	Caesars	Grand Victoria	Belterra	Total
Table Win ($M)	$31.3	$48.5	$6.3	$8.0	**$94.0**
Slot Win ($M)	$151.1	$178.1	$53.3	$50.2	**$432.7**
Tax ($M)	$57.5	$67.6	$14.7	$14.4	**$154.1**
% of Total	37.3%	43.8%	9.6%	9.3%	**100.0%**
Total Win ($M)	**$182.4**	**$226.5**	**$59.6**	**$58.2**	**$526.7**
% of Total	34.6%	43.0%	11.3%	11.0%	100.0%

Source: Christiansen Capital Advisors, LLC

(continued from page 9)

income. By our estimate, $220.8 million of Argosy's $430 million GGR was contributed by Ohio residents. Under Indiana's 29% (sliding scale average) gaming privilege tax rate this $220.8 million expenditure by Ohio residents on Argosy tables and machines generated $69.6 million in tax revenue (Exhibit 6) for the State of Indiana—all from people who can't vote in Indiana or burden Indiana's public sector tax-supported services. From this one riverboat, Indiana's treasury is getting a $70 million free lunch on Ohio's tab.

Exhibit 3 extends this analysis to the Grand Victoria and Belterra riverboats. Ohio residents contributed an estimated $143.5 million of the $284.5 million total gross gaming revenue generated by these two facilities—more than half. From Exhibit 6, Indiana gaming privilege taxes collected from this $143.5 million expenditure by Ohio residents in these two Indiana casinos totaled $35.5 million—for Indiana, more free lunch. Map 1 shows the locations of Indiana's three Cincinnati-area riverboats.

Kentucky's Contribution

That's not all. Kentucky residents also make substantial contributions to Indiana riverboat gross gaming revenue and hence to Indiana gaming privilege taxes. As Exhibit 4 shows, by our estimates $226.5 million of the gross gaming revenue generated by the Caesars boat docked near Louisville was contributed by Kentuckians. Applying Indiana's 29% (sliding scale average) gaming privilege tax rate to this $226.5 million expenditure, Indiana's treasury collected roughly $67.6 million in tax reve-

(continued on page 11)

Exhibit 6: Estimated Spending from Ohio

	Argosy	Grand Victoria	Belterra	Total
Table Win ($M)	$37.8	$7.7	$9.7	**$55.2**
Slot Win ($M)	$182.9	$64.9	$61.2	**$309.1**
Tax ($M)	$69.6	$18.0	$17.5	**$105.0**
% of Total	66.2%	17.1%	16.7%	**100.0%**
Total Win ($M)	**$220.8**	**$72.6**	**$70.9**	**$364.3**
% of Total	60.6%	19.9%	19.5%	100.0%

Source: Christiansen Capital Advisors, LLC

Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky (continued)

(continued from page 10)

nue (Exhibit 5) from Kentuckians who can't vote in Indiana or burden Indiana's public sector tax-supported services. From this one riverboat, Indiana's treasury is getting a $68 million free lunch at Kentucky's expense.

Exhibit 6 summarizes our estimate of spending by Ohio residents in the three Indiana casinos that draw from the Cincinnati metropolitan area. Ohioans spent (or lost) $364.3 million in these three Indiana casinos. That contribution from Ohio amounted to 51% of the three Cincinnati market casinos' total gross gaming revenue. Indiana gaming privilege tax collections from the GGR contributed by Ohioans in this market totaled $105 million.

But that's not all. Indiana residents contributed only $50.2 million, or 7%, of the three Cincinnati-area casinos' gross gaming revenue (Exhibits 2 and 3). Indiana residents contributed only $63.6 million, or 22%, of the gross gaming revenue generated by the Caesars boat across from Louisville (Exhibit 4). The capital investment in these four Indiana boats and the jobs that capital investment provides would not be feasible without the financial contribution of Ohio and Kentucky. In every sense, Ohio and Kentucky pay for Indiana's casino industry.

The Cincinnati Market

Maps 1 and 2 show southern Ohio , southeastern Indiana , and northern Kentucky. About 68%, or $232.2 million of the total $341.8 million spent by persons living within 50 miles of the three Indiana facilities serving the Cincinnati area comes from the population on the Ohio side of the border.

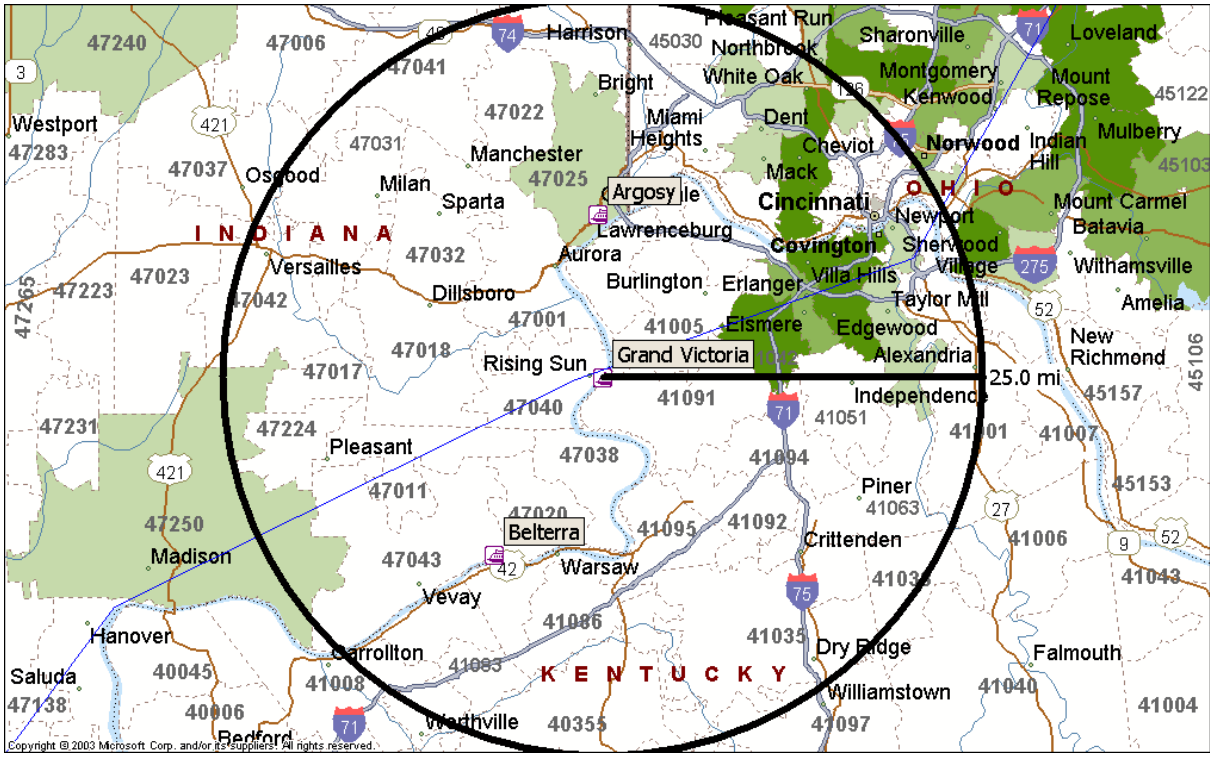
What Would a Cincinnati Riverboat Win?

The maps raise an interesting question: what would a riverboat located in Cincinnati win?

Exhibit 7 provides an answer to this

(continued on page 12)

Map 1: A 25 Mile Radius of the Southern Indiana Riverboat Casinos

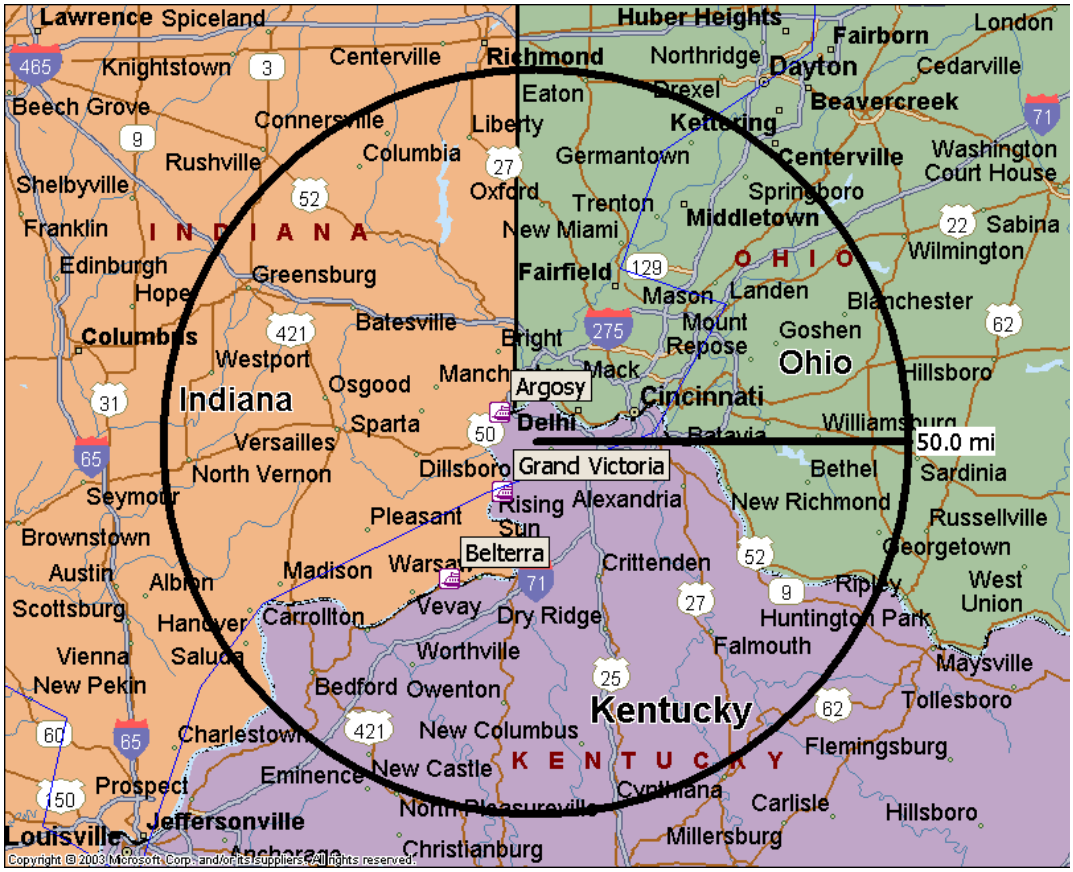


NOTE: Lighter shading indicates less population and darker shading indicates a more dense population.

Source: Christiansen Capital Advisors, LLC

Balance of Trade: Indiana Funds Its Budget in Ohio and Kentucky (continued)

Map 2: A 50 Mile Radius of the Southern Indiana Riverboat Casinos



Source: Christiansen Capital Advisors, LLC

(continued from page 11)

question. Assuming no other change in regional supply, a riverboat in Cincinnati would win $492.3 million. Almost 39% of that amount, or $190.6 million, would be contributed by persons living within a ten mile radius. More than half (57%, or $282 million) would come from persons living within 25 miles. In other words, Cincinnati would be a terrific casino market. One casino located within the city limits would generate nearly 70% of the total gross gaming revenue generated by all three of the existing riverboats on Indiana's side of the river.

Assuming the same 29% (sliding scale) tax rate that Indiana has, a Cincinnati riverboat casino would produce about $142 million in annual gaming privilege tax receipts for the State of Ohio. In the current fiscal climate that $142 million would undoubtedly come in handy. And from Ohio's point of view, a Cincinnati riverboat would accomplish something else. It would recover nearly all of the money Ohioans now spend in Indiana riverboats. A Cincinnati riverboat would go a long way to reduce Ohio's contribution to Indiana's free casino lunch.

Exhibit 7: Estimated Cincinnati Riverboat Casino Revenue

	Cincinnati
Table Win ($M)	$74.7
Slot Win ($M)	$417.7
Total Win ($M)	$492.3
Tax ($M)	$142.0

Source: Christiansen Capital Advisors, LLC

About Christiansen Capital Advisors, LLC

The principals and staff of Christiansen Capital Advisors, LLC (CCA) have performed studies of the economics, management, operations, taxation, and regulation of leisure and entertainment businesses in more than fifty states, provinces, and foreign countries, with particular focus on gaming and wagering.

The subjects of these studies have included sports, entertainment, communications, casinos, sports wagering, lotteries, and all segments of the racing and pari-mutuel wagering industries.

Christiansen Capital Advisors, LLC has provided consulting services to State and local governments, gambling operators, telecommunications companies, and major investment banks regarding many facets of the gambling industry.

CCA has testified concerning gambling legislation before the U.S. Congress, state legislatures, local government bodies, and regulatory agencies.

The results of CCA's studies have been presented in a number of venues including the 2003 Global Gaming Expo, the National Conference of State Legislators, the International Conference on Gambling and Risk-Taking sponsored biannually by the University of Nevada/Reno, the World Gaming Congress, the University of Arizona's Race Track Industry Program's annual Symposium on Racing, and the annual conferences of the American Horse Council, American Greyhound Track Operators Association, World Greyhound Federation, Harness Horsemen International, Harness Tracks of America, Thoroughbred Racing Associations, and Racetracks of Canada.

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- The overall economic contribution of commercial gambling industries to countries, states, and individual localities;
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- The values of existing gambling facilities;
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Appendix D: Central Systems for Machine Gaming: A Good Policy?

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Central Systems for Machine Gaming: A Good Policy?

By **Eugene Martin Christiansen**
CEO, Christiansen Capital Advisors, LLC
Monday, December 22, 2003

Central Systems for Machine Gaming: A Good Policy?

Fiscal crisis or no, machines are going to be an issue for a long time. Unsatisfied demand for machines and Class III tribal casinos that are beyond State control ensure that pressure for State-licensed and State-taxed machines will remain, this Fall, next Spring, and so on into the foreseeable future.

Not all gaming expansion proposals are created equal. The ones that surfaced in 2003 differ in just about every relevant respect: whether machines should be lotteries or legalized by new gaming law, the kind of device (video poker or reel-spinning machines), their number, where they are located, how heavily they are taxed, and who regulates them. One aspect of the policy debate that so far has been below the radar screen is a systems issue: should slot machines be connected to a single State-wide computer system? Or should these machines be controlled by computer systems already in use in casino and racino environments and regulated by methods proven in Nevada, New Jersey, Mississippi and other gaming States?

Exhibit 1: States with Video Lottery Terminals

State	Machines	Date	Centralized Monitoring System	Who Administers It?
Rhode Island	VLTs(VP) at tracks	1992	Yes	Lottery-Gtech contract
Delaware	VLTs(VP/VS) at tracks	1995	Yes	Lottery-IGT contract
*West Virginia	VLTs(VP/ VS/TS)at tracks, bars & fraternal org.	1994	Yes	Lottery operated [IGT System]
Oregon	VLT(VP) at bars, etc.+ one track	1992	Yes	Lottery operated [Gtech System]
South Dakota	VLTs(VP) at bars, ect.	1989	Yes	Lottery-IGT contract
**Louisiana	VP at tracks and bars, etc.	1992	Yes	State Police operated
**New Mexico	VGM and TS at tracks and fraternal org.	1997	Yes	Gaming Control Board operated-[IGT(Sci Games)]

VP: Video Poker
VS: Mechanical Reel
TS: Traditional Slot
*West Virginia: In 1999 the legislation was extended to include mechanical reels (video slots). In 2002 VLTs were expanded to include bars and restaurants with AB licenses.
**Louisiana and New Mexico are not lottery machine States.

Source: Christiansen Capital Advisors, LLC, Casino Association of Louisiana

At first sight central systems sound like a good idea. Video lottery terminals (VLTs) have been connected to central systems in half a dozen States for more than a decade (Exhibit 1), and, as legislators must be asking themselves, how can you have too much security?

On closer examination, however, video lotteries and casino slot operations are different businesses with different systems requirements. Video lottery terminals are exactly what they sound like: player-operated terminals of computer networks. Slot machines are self-contained random devices. Although virtually all slot machines in North America today are connected to computer monitoring systems these box games are "smart": the random number generator (typically a chip) that determines what happens when a player tries the device resides inside the box, not on a computer in some remote location or on a server in cyberspace.

There are hundreds of different slot machine box games from a long list of suppliers—and new ones come to market every month. Getting a central system to communicate with this endlessly proliferating device population is endlessly complicated. Given the extensive controls provided by computer monitoring systems designed for casino slot applications it is also probably unnecessary. It's reasonable to ask whether the taxpayers who pay, one way or another, for central systems receive benefits commensurate with their substantial cost where slot gaming is concerned. The difficulty Louisiana has experienced in implementing its slot machine central systems law suggests that the answer to this question may be No, and that for slot machines central systems are a solution in search of a problem

Let's take a look at the pros and cons of central monitoring systems:

PRO	**CON**
Provided they work, central monitoring systems can: ➢ Report machine activity. ➢ Help ensure machine security and integrity. ➢ Help ensure that licensees meet financial obligations to government.	➢ Existing casino monitoring systems provide adequate control. ➢ Overlaying existing monitoring systems adds costs: in Louisiana these added costs will total $1 million annually. ➢ Louisiana has experienced difficulty in implementing a central monitoring system. ➢ Lottery/totalizator TIM systems and casino slot machine monitoring systems serve fundamentally different purposes. ➢ TIM systems and monitoring systems aren't interchangeable. ➢ Adapting TIM systems to slot machines deprives casino operators of needed flexibility in maintaining a competitive mix of machine game offerings.

History

Slot gaming and video lotteries offer many of the same games and may be difficult for the consumer to distinguish, but the two forms of gambling are legally distinct and are the products of different histories.

Slot Machines

Slot machines originated as self-contained electro-mechanical random devices. Computer systems were added later. When computer technology became affordable casinos connected their slots to mainframe monitoring systems for accounting and control purposes: today few if any casino or racino slots aren't online. In the 1990s several factors converged to produce an explosion in the number of casino machine games: video slot technology, computers able to link progressive jackpot machines in widely separated locations, cashless systems, ever-stronger consumer preferences for games branded with intellectual property from television, movies, comic strips and video games. Casinos today have a bewildering variety of machine games to choose from, including video poker that to players is indistinguishable from video poker on lottery terminals.

Slot machines are made by a multiplicity of vendors. Unlike lottery central systems, which typically communicate with a limited number of devices, slot monitoring systems have open architectures and are designed to communicate with machines from many manufacturers. From the casino's point of view this open systems architecture is an essential business requirement, for the casino must constantly adjust the mix of machine games it offers to keep abreast of shifting consumer preferences. Unlike storefront video lottery agencies, casinos need monitoring systems that allow them to easily swap devices in and out of casino floors.

Video Lotteries

Video poker machines were added to a handful of State lotteries in the early 1990s (the genesis and evolution of lottery machine gaming is presented in Appendix A). Video lottery terminals, or VLTs, were connected to central lottery computer systems when they were first deployed and have subsequently evolved on this pattern: as player-operated terminals of central lottery systems. VLTs and central systems evolved together. Although several manufacturers make video lottery terminals and/or central computer lottery systems the number of VLT machines lotteries have to choose from is nowhere near as wide as the number of box games available to casinos and their slot gaming clientele.

What, exactly, are video lottery terminals? Early on, VLTs meant video poker. They still do in jurisdictions that make clear distinctions between video poker and self-contained casino slot box games; Louisiana and Ontario are examples. But no two State gambling laws are exactly alike, and as machine gaming has spread across North America distinctions between video lottery games and casino slot machines have blurred.

This is particularly true when machines are brought in under lottery laws. Delaware, which used its unusually liberal lottery law as the basis for a highly successful racino industry, defines "video lottery machine" as "any machine in which bills, coins or tokens are deposited in order to play in a game of chance in which the results, including options available to the player, are randomly and immediately determined by the machine. A machine may use spinning reels or video displays or both, and may or may not dispense coins or tokens directly to winning players. A machine shall be considered a video lottery machine notwithstanding the use of an electronic credit system making the deposit of bills, coins or tokens unnecessary." (29 Del. Laws § 4803 (g)) It's hard to think of a gaming device that wouldn't qualify as a video lottery machine under Delaware's definition.

The Louisiana Experience

Louisiana's central systems law provides a case study of the pros and cons of machine monitoring systems. The Louisiana experience is especially informative because Louisiana allows the full spectrum of machine gaming: video poker at truck stops and pari-mutuel racetracks and off-track betting facilities, and slot machines at riverboats, a land-based casino, and racetracks ("racinos"). Louisiana law also makes a clear distinction between video poker and slot machines.

The legislature set out the arguments for implementing a central monitoring system for slot machines in a 1999 amendment to Louisiana's riverboat gaming law (La.R.S. 27:114).

Louisiana's legislature found "a compelling state interest in ensuring the most efficient, honest, and accurate regulation of the gaming industry". No one disagrees with that.

Video Poker

The legislature first addressed video poker machines, which it had authorized in 1992: "[i]n order to maintain the security and integrity of electronic gaming devices and for ensuring accurate and thorough accounting procedures … all licensed video draw poker devices, video pull-tabs, and slot machines at live racing facilities [will] be connected to a central computer." This language covers video poker machines at truck stops, liquored-licensed premises, racetracks and off-track betting (OTB) facilities. Video poker machines were duly connected to a central computer system with both monitoring and control features extending to individual video poker machines.

Slot Machines

The legislature then turned to slot machines, finding "that it is in the best interest of the state and the general public that all electronic gaming devices [not just video poker] licensed in this state should be subject to this type of monitoring and accordingly that all electronic gaming devices on licensed riverboats should be linked by telecommunication to a central computer system." In other words, the legislature wanted the central

monitoring and control capability the State of Louisiana exercises over video poker machines extended to slot machine box games installed at its widely scattered riverboats, single land-based casino, and racinos. All machines, no exceptions.

Feasibility

The threshold question is, of course, whether a State-wide monitoring and control system for casino slot machines, as distinct from video poker machines, is technologically feasible.

Louisiana's legislature assumed that it was: "[t]he present level of technology in electronic gaming devices makes it both feasible and efficacious to require all electronic gaming devices on licensed riverboats in this state to be linked by telecommunication to a central computer system." In the event this turned out to an overly optimistic assumption.

The second question is why. What benefits would connecting machines to a central monitoring system produce that Louisiana does not already derive from slot monitoring systems installed at individual riverboats and racinos?

The legislature expected that a central system "will facilitate the monitoring and reading of the devices for the purposes of maintaining the security and integrity of the devices and the integrity of the information reported to the system, in order to ensure that licensees meet their financial obligations to the state."

In other words, machine integrity and accurate financial reporting are the benefits Louisiana expected a central system to provide. To make this perfectly clear, the legislature added that "[t]he most efficient, accurate, and honest regulation of the gaming industry in this state can best be facilitated by establishing a central computer system under which all electronic gaming devices on licensed riverboats will be linked to that system by telecommunication to provide superior capability of auditing, reporting, and regulation of that industry."

This is a fairly tall order. As envisioned by the legislature the central system's capabilities are formidable. The system "shall be capable of monitoring and reading financial aspects of each electronic gaming device such as cash in, cash out, amount played, amount won, games played, and games won", and "provide for the monitoring and reading of exception code reporting such as an on-line computer alert, alarm monitoring capability to insure direct scrutiny of conditions detected and reported by the electronic gaming device, including any device malfunction, any type of tampering, and any open door to the drop area."

The central monitoring system would be "located within and administered by the Department of Public Safety and Corrections, office of state police, riverboat gaming division."

Audit and control, efficiency and honesty, accurate financial reporting: the purposes Louisiana seeks to accomplish with its central systems law are desirable by any standard.

But will it work?

Louisiana's video poker central system performs the tasks the legislature prescribes. Video poker machines were connected to a central monitoring and control system when they were installed in 1992. The State pays for the system: no per-machine fees are assessed to cover its cost. The system is operated by the State Police. Using it, the State Police can monitor activity on individual machines and, if necessary, shut either individual machines or the entire system down if communications protocols are broken, indicating unauthorized access to the system. Machines report device win automatically each 72 hours, generating a report of video poker revenues: if a machine doesn't report it automatically shuts down. Operators (truck stops, liquor-licensed premises, pari-mutuel racetracks and OTB offices) aren't restricted to a single video poker device, though they have limited flexibility in their choice of video poker machines: with regulatory approval they can disconnect their facility from the system and change video poker machines from a list of licensed, approved devices.

Trying to replicate these systems capabilities for Louisiana's widely scattered slot machines proved, in practice, to be an extremely difficult task. Instead of an established network of nearly identical video poker devices system developers were confronted with thousands of dissimilar box games installed in 14 riverboats, one land-based casino (in New Orleans), and (by 2004) four slot racinos. Moreover, not all the slot machines were stationary. The riverboats cruised. The system's developers explored the idea of using secure satellite communications to stay connected to moving riverboat machines but rejected the idea as being too expensive. The legislature solved the problem of how to maintain communications with moving slot machines by ending the riverboat cruising requirement as of April 1, 2001—an unintended consequence of its 1999 central slot system law. Cruising wasn't the only casualty of the central system. The development process suffered another setback when developers discovered that Louisiana's thousands of dissimilar box games were *already* connected by riverboat and racino operators to no fewer than *five* computer monitoring systems, meaning that the central system overlaying the operators' systems has to interface with five different operating systems. More development time, more development costs.

Four and a half years after Louisiana's legislature passed a central slot systems law the system is, nearly, ready. What the legislature wanted was a State-operated central *monitoring and control* system providing regulators with control over individual slot machines, including the ability to shut malfunctioning machines down, in addition to audit and financial monitoring for individual machines and for slot gaming as a whole in real time. What Louisiana is getting is a weak *monitoring* system that is shorn of the intended individual machine control features and essentially duplicates the financial audit controls provided to licensed operators by casino computer monitoring systems designed for this purpose.

Costs

The legislature decided machine operators would pay for its slot monitoring system: "The Department of Public Safety and Corrections, office of state police, shall impose and collect an annual fee not in excess of fifty dollars on each electronic gaming device linked by telecommunication to the central computer system as provided by this Section. The purpose of the fee shall be to defray the costs to the state of acquiring, implementing, and maintaining the central computer system".

Exhibit 2: Video Gaming Devices (VGDs) in Louisiana 2003

Type	Video Gaming Device	Locations	Net Device Revenue
Bars	4,576	1,555	$33,811,997
Restaurants	3,276	1,123	25,030,728
Hotels	147	28	1,077,604
Racetracks/OTBs	844	10	4,132,347
Truck stops	5,398	138	71,262,799
Total	**14,241**	**2,854**	**$135,315,475**

Source: Louisiana State Police Video Gaming Division

There are approximately 33,500 gaming machines in Louisiana. About 14,240 of these are video poker machines, the lottery-like video poker terminals that were installed in 1992 or their lineal descendants. (Exhibit 2)

The remaining 19,200 devices installed in Louisiana are slot box games—random devices at the State's 14 riverboats, single land-based casino (Harrah's Jazz in New Orleans), and two (soon to be four, with the additions of Fair Grounds and the under-construction Evangeline Downs in St. Landry Parish) slot racinos. (Exhibit 3).

Exhibit 3: Slot Machines in Louisiana and Estimated Central System Fees

Machine Operators	2002	$50 License Fee	$5 Maintenance Fee	Total Central Systems Fee
Riverboats	14,870	$743,500	$74,350	$888,500
Delta Downs	1,462	73,100	7,310	73,100
Total	**16,332**	**$816,600**	**$81,660**	**$961,600**

Machine Operators	2,004	$50 License Fee	$5 Maintenance Fee	Total Central Systems Fee
*Riverboats	14,870	$743,500	$74,350	$8,885,000
*Louisiana Downs	906	45,300	4,530	45,300
*Delta Downs	1,462	73,100	7,310	73,100
**Fair Grounds	300	15,000	1,500	15,000
Evangeline Downs	1,627	81,350	8,135	81,350
Total	**19,165**	**$958,250**	**$95,825**	**$9,099,750**

Source: Christiansen Capital Advisors, LLC, Casino Association of Louisiana

At $50 per machine per year slot system fees will total $962,000 annually. When slots at Fair Grounds and Evangeline Downs come online the State's slot machine population will rise to 22,000 machines and annual license fees will increase to $1.1 million. The $50 per-machine license fee sunsets on August 15, 2005, but the legislature, cognizant of the need for on-going maintenance of the central system in perpetuity, added an annual $5 per slot machine maintenance fee. For the approximately 22,000 slot machines Louisiana will have once Fair Grounds and Evangeline Downs slots are operating this $5 maintenance fee will come to $110,000 each year. All told, slot system-related fees will total $1.2 million in 2004.

This money, and whatever other money Louisiana's central slot system absorbs in installation and maintenance costs over its lifetime, could have been left with riverboat and racino operators to pay labor or other operating costs or it could have been collected by the State of Louisiana and used to fund government budgets. Either way, Louisiana's slot systems law represents a diversion of gaming revenue to the system supplier.

Cost Benefit

Is Louisiana's central slot monitoring system worth it? Duplicating the monitoring functions of riverboat/racino slot monitoring systems certainly doesn't hurt, but does the duplication materially improve slot machine integrity and the financial reporting computer monitoring systems at the operator level already provide?

One way to answer this question is to consider the experience of Nevada, New Jersey, and other States that have authorized casino gaming. These States require licensees to connect their slot machines to computer monitoring systems. Regulators have access to the audit and machine activity data generated from these monitoring systems—all of it. Licensees and regulators have common interests in accurate machine reporting and in ensuring the integrity of each and every machine game. Casinos don't want to be defrauded. The regime of gaming control developed through trial and error in Nevada and New Jersey and other States that allow gaming is designed to ensure that fraud is not committed—by licensees or by members of the public.

Gaming control works. Neither Nevada nor New Jersey, the jurisdictions with the longest experience of gaming, has created a central, State-operated slot monitoring system.

Louisiana's new central slot monitoring system adds nothing to existing controls. It simply duplicates controls that were already in place and being paid for by licensees. In retrospect, Louisiana might simply have emulated the regime of gaming control proven in Nevada, New Jersey and the other riverboat States and saved its taxpayers the substantial development and on-going maintenance costs of its brand new but probably unnecessary central slot monitoring system.

Delaware, West Virginia and Other Lottery Machine States

Delaware, West Virginia, Rhode Island, Oregon and several other States that have used lottery laws as the basis for machine gaming have their video lottery machines (however defined in law) connected to central monitoring systems. The genesis and early history of these lottery machine gaming industries is presented in an Appendix to this paper.

Because machine games were introduced in these jurisdictions through existing lottery laws instead of new gaming law, video lottery devices, whether programmed for video poker or video spinning reels, were installed on the lottery pattern: as player-operated terminals of lottery computer networks. Some of the problems encountered in Louisiana in connecting box games already operating in riverboats and racinos were thus avoided. But other problems, serious ones from the operator's point of view, remain.

Business Disadvantages of Central Systems

The fundamental disadvantage of a central system from the slot machine operator's point of view is that it limits the operator's choice of machines. As Louisiana's experience shows, the bewildering variety of box games on the market today confronts system designers with an insoluble problem: how to adapt a lottery-like central system designed to interface with one or a limited number of terminals for use with an ever-changing number of dissimilar devices connected by slot operators to a number of different operating systems?

By their nature, lottery central systems limit operator choice among machines. A central monitoring system makes it more difficult for casinos or racinos to swap machines in and out of casino floors. There are simply too many games to choose from, and too many more new games appearing each month. Casino slot managers trying to keep ahead of the torrent of new products pouring from machine manufacturers have a devil behind them in the form of ever-shifting consumer preferences for the next hot slot machine. What game will slot players want to play next year? Who knows? Only the consumer knows, and he or she isn't telling.

Especially when they operate in competed markets, slot managers must continually freshen the mix of games they offer consumers who demand hit games. If slot managers can't respond to shifts in consumer preferences because of central system limitations (or any other reason) slot business suffers and government gaming revenues decline. Slot floors are hard enough to reconfigure in jurisdictions (like Nevada and New Jersey) where central slot systems aren't required; increasing this difficulty by overlaying open architecture casino monitoring systems with closed architecture lottery monitoring systems cripples machine operators' ability to respond to changing consumer demand. In business terms this is dysfunctional.

The on-going conversion of casino machine games to cashless technology is creating an additional systems problem. Coins are dropping out of machine gaming. Cashless devices are replacing coin-in machines in machine operations throughout North America

as fast as replacement cycles will allow. Central systems currently in use in West Virginia and other jurisdictions limit operators who want to convert to cashless gaming to a single wire solution for ticketing. This limitation, like limitations on the kind of device that can be swapped in and out of a central system, introduces an unnecessary business dysfunction: operators lose flexibility in configuring their casino floors and find themselves at a competitive disadvantage with tribal and State-licensed casinos that aren't hampered by this central system technical limitation.

Machine Leasing Proposals

There are similar objections to machine leasing proposals. The expanded gaming initiatives that surfaced in 2003 stimulated debate over the proposition that it is in a State's interest to lease machines from a supplier rather than give a gaming facility operator the autonomy to deal with the suppliers directly. The argument put forward in favor of machine leasing proposals is that a State, by placing an order for the lease of all the machines to be installed in the jurisdiction, can obtain them at a lower price than individual operators making separate purchase or lease agreements. State purchasing of lottery systems and (in States with video lottery machines) video lottery terminals are cited as support for the proposition that government bidding procedures can be competitive with the private sector in contracting for machines.

This argument that State experience in contracting for lottery systems proves States can do a better job of negotiating machine lease agreements is difficult to evaluate. All U.S. lotteries are State agencies. There is no bidding from the private sector for lottery systems. Lottery agent-operated terminals (TIMs) are typically part of the system contract, making comparisons with private-sector performance impossible. It is perhaps worth noting that the lottery contract bidding process has proven to be a troublesome, litigious process in a number of jurisdictions.

There are, however, business arguments against State machine leasing agreements.

First, government purchasing agencies are typically required to select the low bidder or weight price heavily in the selection process. Slot machines, however, are not undifferentiated commodities. There are many hundreds of box games on casino floors today. Some of these games are much more popular with slot players than others. It is not true that one box game is as good as another, or that all box games will perform alike. Because of consumer preference, some slot machines will win much more than others if placed side by side on the casino floor. It is very unlikely that the cheapest slot machine will be the best slot machine. Government purchasing agents, required by law to weight price heavily in purchasing decisions, would be unable to lease the best machines if (as is likely) the best machines are more popular with consumers.

Second, government agencies are very unlikely to have enough understanding of consumer preferences among the hundreds of slot machines on the market today to make informed decisions as to what machines represent the best investment. Casino/racino operators, who deal with consumers directly every day, do have this understanding. No

one would seriously propose that government agencies should select movies for a State's cinema multiplexes: this decision is most effectively made by theater managers, who understand the preferences of local moviegoers. Slot machines are a similar case. Like movies, slot machines are highly differentiated entertainment products. Consumers play some machines and ignore others. Choosing machines that correspond to consumer preferences is one of the fundamental business tasks of casino/racino slot managers. Government leasing proposals in effect transfer this function to government purchasing agencies. Government purchasing agencies do not have the expertise to discharge this business function in an effective manner.

Third, lease agreements typically run for a number of years, locking operators into whatever machine the State chooses for long periods at a time when machine replacement cycles are contracting and consumer preferences among machine games are more volatile than at any point in the history of gaming.

Although impossible to quantify, these are serious disadvantages, especially for operators who compete in markets that are supplied by tribal or State-licensed casinos that do not operate under similar restrictions. States that authorize machine gaming have a vested interest in maximizing operator flexibility in business decision-making, not minimizing it. Operator choice among machines is fundamental to machine game operations. State machine leasing agreements that take the choice of machine out of individual operator hands deprive operators of a basic business tool. The long term effect of this policy would be to reduce operator revenue and thereby reduce gaming privilege tax receipts.

Systems Used in Gambling Industries

The assumption Louisiana's legislature made in 1999, that "[t]he present level of technology in electronic gaming devices makes it both feasible and efficacious to require all electronic gaming devices on licensed riverboats in this state to be linked by telecommunication to a central computer system", proved to be dead wrong in practice but is all too common. Legislators are lawmakers, not systems engineers. It is easy for people who aren't technicians to assume that computer systems can do anything. They can't. Computer systems do very particular things. Complex computer systems are like highly evolved forms of life: the products of lengthy trial-and-error adaptation to specific niches in business operations. System capabilities reflect business requirements: change the requirements and system performance degrades—or stops functioning altogether.

This is the pitfall Louisiana stumbled into in 1999. Because its video poker machines, designed as terminals of a computer network, had been connected to a central monitoring and control system since they were installed in the early 1990s Louisiana assumed, as anyone unfamiliar with the complexities of machine gaming might assume, that Louisiana's 15,000 widely scattered, dissimilar, self-contained box games could be connected to the same kind of monitoring and control system. Louisiana found out the hard way that central systems that work well with video lottery terminals don't work well at all with already self-contained installed box games.

This aspect of machine gaming is something that lawmakers considering expanded gaming need to understand. As Exhibit 4 shows, there are approximately 544,000 gaming machines installed in North America. [1] Approximately 73,000 of these machines are central system-friendly video lottery terminals but most of them are self-contained box games.

Exhibit 4: North American Machine Population

States	2002 Number of Machines
Deadwood, South Dakota	2,801
Michigan	7,600
Nevada	209,584
New Jersey	38,117
Casino States (sub total)	**258,102**
Illinois Riverboats	9,549
Indiana Riverboats	17,024
Iowa Riverboats	8,620
Louisiana Riverboats (& Harrahs Jazz)	17,770
Mississippi Riverboats	40,427
Missouri Riverboats	16,599
Riverboat States (sub total)	**109,989**
Delaware	5,339
Iowa	3,504
Louisiana Tracks	1,500
*Louisiana VGD	14,241
*Montana VGM	18,074
New Mexico	2,300
*Oregon	9,450
Rhode Island	2,478
South Dakota	8,000
West Virginia	7,523
Racino & VLT States (sub total)	**72,409**
**Indian Facilities(E)	102,347
Total	**542,847**

* 2003 number of machines

** Estimated number of devices at Class III facilities in the following States: Wisconsin, Michigan, New York, Washington, New Mexico, California, Connecticut

Source: Christiansen Capital Advisors, LLC

Connecting slot machines to a central system is not a simple task. Even when it can be accomplished the controls the central system provides may not be as extensive as the control central lottery systems provide for video lottery terminals, as Louisiana learned.

[1] The machine count for Indian facilities in Exhibit 4 considerably understates the actual number of Class II and Class III machines actually installed in Indian Class II and Class III facilities. A lack of reliable statistics for Indian facility machines in some States and uncertainty as whether some machines are Class II or Class III devices are the principal reasons for the understatement.

And central systems degrade the performance of casino slot operations by making it harder for slot managers to swap machines in and out of the system, making it impossible to compete with casino machine operations that are not encumbered by a central system's technical limitations.

Aside from casino table games, poker and similar card games, paper or board games, instant (ticket) lotteries, bingo, pull-tabs, punch-boards and the like gaming and betting in the United States today is transacted through or monitored by online computer systems. These systems evolved in different industries at different times for different purposes, but they fall into two broad categories: ticket issuing machine (TIM) systems, and monitoring/accounting systems used to control random devices on casinos floors. A third systems category may be emerging: server-based systems, in which game software is downloaded from a central system onto PC-like devices on casino floors. Cyberview Technologies, the pioneer in this new approach to machine gaming, is making headway with it in Germany and the United Kingdom, but the enormous size of the North American machine population and the inherent conservatism of gaming regulators where technological innovation is concerned are formidable barriers to the rapid adoption of server-based gaming in the U.S. and Canada.

Exhibit 5: Systems Used in Gambling

System Type	Purpose	Terminals	Operator
Ticket Issuing Machine (TIM) Systems			
Totalizator (pari-mutuel)	Control Terminals (TIMs)	Dumb	Agent
Lottery	Control Terminals (TIMs)	Dumb	Agent
Monitoring Accounting and Control System			
Casino Machines	Account for & Control Random Stand Alone Machines	Active	Player
*Server Based Gaming			

*Cyberview Technology systems, operating in the United Kingdom and Germany

Source: Christiansen Capital Advisors, LLC

Exhibit 5 summarizes the salient characteristics of the computer systems in use in gambling industries today. Each developed under particular laws (pari-mutuel law, lottery law, casino gaming law) over decades; over time these industry-specific applications have become remarkably specialized. In no sense are these systems interchangeable. None are one-size-fits-all solutions for every systems application in the complex and rapidly changing gambling industries of today. A brief discussion of the general characteristics of these system categories follows.

Lottery and Totalizator Systems

Lottery and totalizator systems activate and control agent-operated ticket-issuing machines (TIMs), rather in the manner of online supermarket cash registers. Customers don't interface with these systems or with their terminals (the machines that issue pari-mutuel or lottery tickets) directly. They interface with operators (lottery agents, pari-mutuel cashiers, supermarket checkout girls). The systems' terminals are data entry devices: bettors or lottery players ask agents to enter the bets they wish to make; these data are then transmitted to a central computer system which processes it, generates a number by which the bet can be validated if it proves to be a winner, and sends the result back to the TIM, which then prints a ticket recording the bet. This ticket is handed by the agent-operator to the customer as a record of the wagering transaction.

Totalizator and lottery systems are true wagering systems, in that wagers are transacted through them. The wagering software resides in the system's central processor; by altering this software new wagers (new horse race bets or new lottery games) can be introduced, which then can be accepted by the agents who operate the system's TIMs. The TIM itself is dumb. Unless it is connected to the online lottery or pari-mutuel betting system and the system is up it can't do anything.

Because players do not interface directly with TIMs consumer preferences aren't immediate concerns for lotteries and pari-mutuel businesses. TIMs are updated when system contracts are renewed, or, less frequently, when and if system vendors develop a new and improved TIM. Customer preference does not drive TIM selection: there is typically a very limited choice of TIMs available to lotteries and racetracks, often limited to the terminals manufactured by the totalizator or lottery systems vendor. The fact that TIMs are married to these wagering systems is not a disadvantage, since the interface with the consumer is through the agent operating the TIM, not the TIM itself. Although customer-operated TIMs somewhat like bank ATMs have made limited progress in the pari-mutuel industry the overwhelming majority of pari-mutuel wagers and online lottery sales are transacted through agents or cashiers.

As with everything else in gambling, the integrity of these wagering systems is a paramount design consideration. In theory, activity on TIMs is absolutely controlled, meaning that the system is secure from attempts by agents (or anyone with access to the system or its terminals) to defraud it—including employees of the system vendor who have access to some part of the central computer system or its software. In practice, as the recent Breeders' Cup scandal all too clearly demonstrated, wagering systems, and by implication central monitoring systems, are vulnerable. In the case of the Breeders' Cup scandal an employee of the system's vendor who had access to the system in his capacity as a software engineer was able to generate and cash fraudulent winning tickets. No comparably serious instance of a compromised casino slot monitoring system has come to light, an indication that the established regimes of gaming control that utilize data generated by casino slot monitoring systems is a better guarantee of machine integrity than a central system.

Central systems of the kind used to connect video lottery terminals fall into this general category. Video lottery terminals are player-operated, not agent-operated; but because they were initially designed with lottery system requirements in mind they interface well with lottery central systems. States like New York that for legal (not business) reasons bring machines in under lottery laws instead of enacting new law specifically authorizing casino gaming are, in effect, deciding on video lottery machines controlled by a central lottery system.

When video lottery machines have to compete with casino environment machines that aren't hampered by central lottery system technical limitations they are placed at a disadvantage. Louisiana's experience with racetrack machines illustrates this point. Central system video poker machines were authorized at Louisiana racetracks in 1992: the State's riverboat and Class III Indian casinos were just getting underway, and in these grossly undersupplied market conditions racetrack video poker did very well. Today, as Exhibit 3 shows, Louisiana has more than 15,000 casino slot machines—including slot machines at its racetracks. Consumers prefer slot machines, and racetracks are phasing central system video poker out of their machine gaming operations. Over the next three years video poker will be entirely replaced by slot machines in Louisiana racetracks operations.

Casino Monitoring and Accounting Systems

Another kind of system monitors self-contained random devices (slot machines and similar machine games) on casino floors. The prototypes of these monitoring systems were developed in Nevada in the 1970s by Bally and, internally, by casino companies, using mainframe computers to provide casino management with real-time slot accounting and controls. Although first deployed as an accounting and control system, slot monitoring systems evolved into the online player-tracking systems that are ubiquitous in casino slot operations today—and are the guts of the industry's customer relationship management (CRM) programs.

Casino operators and regulators use the data generated from casino machine monitoring systems to ensure that every dollar passing through every machine is accurately accounted for—and that gaming privilege taxes are fully and accurately paid. Nevada, New Jersey, Illinois, Indiana, Mississippi, Iowa and Missouri have all established regimes of gaming control that utilize the output of casino machine monitoring systems for these purposes. In all these jurisdictions this system of gaming control has worked satisfactorily: as noted, no cases of casino slot machine monitoring systems being compromised have come to light, and the integrity of computer-monitored casino slot machines, a common concern of licensees and regulators, is something slot players are able to take for granted. The central slot system Louisiana will bring up later this year will essentially duplicate the monitoring functions of casino slot systems.

Issuing Tickets vs. Monitoring Random Devices

Slot gaming, pari-mutuel betting and lotteries are fundamentally dissimilar activities, and slot machines and TIMs differ in several crucial respects.

As already noted, TIMs are dumb. The randomizing device in horse racing is the horse race; in online lotteries it is a random number generator in the central computer system. Horse and lottery players do not try these devices directly: they wager on them through TIMs operated by agents or cashiers.

Slot machines are player-operated random devices. Prior to the introduction of online monitoring systems slot machines were stand-alone devices. Slot players play the machine, not a computer system behind the machine.

Market pressures have forced the evolution of centrally controlled video lottery machines that are nearly perfect versions of casino slot machine offerings, particularly in Delaware, West Virginia and Rhode Island. Someone playing a video lottery machine connected to central computer in these States enjoys an experience that is not fundamentally dissimilar to playing a slot machine that is not connected to central computer. As a consequence, video lottery machine operators ("racinos") in these States have the business needs casinos have—not the business needs of lottery ticket agents. This is especially true for video lottery machines in racetrack ("racino") operations.

Consumers are indifferent to the terminals agents use to issue tickets: it is the ticket they receive as the physical record of the bets they make (win-place-show, exacta, quinella and so forth in horse racing, pick 3, pick 4, lotto and so forth in lotteries) that matters, not the machine that issues it. In contrast, consumer preference among player-operated machines is extremely important, whether the machine is a casino slot or a video lottery machine in a racino.

The thousands of new games exhibited at G2E, the frenzied licensing of intellectual property (brands) by slot manufacturers seeking to differentiate their machine games, the shortening product replacement cycles for slot machines as casinos seek to keep up with shifting consumer preferences all testify to this. Slot machine gaming has become a hit-driven business: players, not suppliers, decide which games are hits, and when a hit materializes every casino and racino and riverboat is forced by consumer preference to offer it. The fact that casinos devote floor space to popular participation machines games, the revenue from which they unwillingly share with machine manufacturers, is the best proof of how powerful a force consumer preference among slot machines is in casino operations today.

The consumer preference for particular machines makes the slot area of casino floors highly dynamic. Slot managers change the mix of games as consumer preferences change. The open architecture of casino slot monitoring systems facilitates this never-ending process. Lottery systems, where the TIM and the system are married, frustrate it. Operators of machines connected to central lottery systems have less flexibility in their choice of machines than casinos do. As a result, central systems that make sense in instant ticket environments make no sense at all in casino/racino environments.

Appendix A

This Appendix presents a summary of the experience with gaming devices (video poker, video reel displays, and reel-spinning slot machines) in other North American markets.

Background

Gaming devices made their first legal appearance outside State-licensed casinos in the late 1980s. The watershed event was the introduction of video poker lottery terminals, or VLTs, in South Dakota in 1989, followed by the introduction of similar non-lottery devices in Montana in 1990. The South Dakota and Montana devices were close substitutes for casino machine games: video slot machines, video poker, and video facsimiles of other games of chance that paid players their winnings not in cash but in the form of vouchers redeemable at the cashier of the establishment in which the machines were located.

The South Dakota and Montana machines joined older, reel-spinning slot machines in Nevada route operators and in charitable and fraternal organizations on Maryland's Eastern Shore to create a new U.S. gambling industry: machine gaming outside casino environments, available in local retail businesses at the neighborhood level. In both States (and later in Oregon and most provinces of Canada, which followed this model), these devices were restricted to liquor-licensed establishments. Depending upon the jurisdiction, each retail location was allowed five, ten or twenty such machines.

At first the racing industry viewed neighborhood gaming devices as a destructive combination of two of their worst competitors, lotteries and casinos. Some racetracks, however, financially distressed and desperate for revenues, decided to emulate South Dakota's video poker operators and seek permission for the addition of VLTs in their facilities. In this way a new chapter in the evolution of North American racetrack operations began. In the past decade video poker machines ("VLTs" when operated pursuant to State lottery laws as video lottery terminals) and reel-spinning slot machines have been installed at racetracks in a number of States, with (especially in the case of slot machines) spectacular financial results.

West Virginia

West Virginia was the first State to accept this argument and allow the introduction of a substantial number of VLTs at a racetrack. On June 9, 1990, approximately 80 terminals[2] were installed at Mountaineer Park, in the State's northern panhandle. The number of VLTs was soon raised to about 165; rather than concentrating the machines in one place Mountaineer Park scattered them in various spots throughout the facility.

Mountaineer Park's new machines were popular, but not wildly so. Slot-type games and even video poker were initially not allowed. Mountaineer Park and West Virginia's lottery embarked on a trial-and-error process of experimenting with types of games, locations, prize structures, revenue allocation, and hours of operation. Device win improved incrementally: from a total of about $2.5 million in the first twelve months to

2 Owned by the State lottery, which permits racetracks to operate them.

$4.2 million in 1992 and $5.3 million in 1993. CCA estimates that the latter figure was equivalent to about $21 per year per adult within the track's local market area; by comparison, land-based casino slot facilities typically average about $300-400 per local adult per year.

The West Virginia experiment was limited to Mountaineer Park for four years. In the late summer of 1994, however, West Virginia's other three tracks were allowed (subject to local approval) to provide more substantial numbers of more attractive machines (reel-type games remained prohibited), with up to 400 machines permitted at each location. Charles Town, near Washington, D.C., a moribund racing facility, did not receive local approval, but two Greyhound tracks (at Wheeling and Charleston) did. The new machine gaming facilities at these tracks, and the Mountaineer Park expansion, opened early in September, 1994, and immediately proved very popular. The annualized rate of win at Mountaineer Park more than doubled, and the other two tracks' VLT facilities attracted similar rates of spending. In June of 1995, the number of machines at each track was increased to approximately 800, and machine revenues increased further. Learning from the experience of Iowa and Delaware (described below), the State authorized reel-type games in 1996, and gaming revenues took yet another step upward. Following several unsuccessful efforts to obtain local approval for devices, the Charles Town track (with the assistance of Penn National Gaming) finally obtained a favorable vote in November of 1996.

In the fall of 1996, Penn National Gaming obtained an option to acquire Charles Town racetrack. In November of 1996, following a favorable referendum on gaming devices, Penn National Gaming exercised its option, bought the Charles Town facility at a cost of $16 million, and on October 17, 1997 installed 400 VLTs. Results were overwhelmingly positive. Penn Nationals revenue has risen from $55.6 million in 1995 to $154 million in 1998. The machines substantially increased Penn National's EBITDA and boosted its stock price. From a trading range of 10-12 in the third quarter of calendar 1996, Penn National common rose to a high of 20 in November of 1996, and has since declined to $7.50 as of March 30, 1999 due to, ironically enough, declining pari-mutuel revenues from competition in Delaware and the failure of legislation that would have allowed slots at racetracks in Pennsylvania.

Iowa and the Birth of the "Racino"

If the use of VLTs at racetracks was pioneered in West Virginia, the history of Prairie Meadows encapsulates the "racino" experience that is driving the expansion of this form of gambling in North America today.

Like many other States, Iowa had no legal gambling (other than charity bingo) until 1982. Around this time, the North American racing industry, in response to the economic pressures that had begun to affect it in the 1970s, was seeking to expand into new markets. Racing promoted itself as economic development, with large numbers of jobs, beneficial impacts for agribusiness, and a relatively soft form of gambling, with ample precedent in the fact that 29 States had seen fit to make it legal by 1980.

These arguments were persuasive in Iowa. A Thoroughbred/harness racetrack in Altoona (Des Moines), Prairie Meadows, was built with $40 million of bonds guaranteed by Polk

County through a lease-purchase agreement. The racetrack opened in March 1989 and failed to meet feasibility projections by a wide margin. In 1991 the track filed for bankruptcy; in March 1992 the track's operator folded. In 1993 Polk County purchased the track outright in a $38,830,000 refunding.

In the meantime, Iowa had legalized limited casino gambling on riverboats in the spring of 1989, shortly after Prairie Meadows opened, but before the full extent of its difficulties had been recognized. Iowa was the first State to legalize riverboat casinos; as it had been with racetracks, the motivation was economic development: to attract tourists, generate jobs, create incentives for new investment in depressed riverfront areas, and so forth. [3]

In 1994, Iowa voters authorized reel-spinning slot machines at Iowa racetracks (including Greyhound tracks).[4] Polk County spent an additional $26 million to convert the Prairie

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3 In an effort to keep Iowa from turning into another Las Vegas (or Atlantic City), many limitations were codified in that first statute: no one could bet more than $5, no individual could buy in for more than $200 per cruise, gaming could only occur while the riverboats cruised, no more than 35% of the floor area could be devoted to gaming, Iowa-related live entertainment must be provided on board, etc.

4 Polk County was joined in its distress over one failing gambling operation (Prairie Meadows) by other areas of Iowa that were suffering a similar problems with their riverboats, which were departing Iowa, with its onerous restrictions on bet limits and hours of operation, for less restricted opportunities in neighboring Illinois. Moreover, Iowa's Greyhound tracks had by now realized that their ongoing declines would be terminal without drastic action. This confluence of forces led to an omnibus bill in the Iowa legislature which (a) removed most of the restrictions on the State's riverboat casinos, and (b) allowed gaming devices at its racetracks. In one last gasp of anti-gambling/misplaced consumer protection sentiment, a key legislator demanded that since he understood video gaming machines to be the most addictive type, they should be banned from the racetracks -- meaning that only traditional slot machines with real reels could be installed there. Accepting half a loaf as better than none, the racetracks acquiesced in this amendment, the legislation passed, and was signed by the governor.

This last-minute amendment ironically added to the ultimate success of Iowa's soon-to-be-built racetrack gaming facilities. Since 1990, a variety of experiments with video lottery terminals, or VLTs, had been going on at the racetracks of West Virginia, Louisiana, and Rhode Island. (Even earlier, beginning in 1989, VLTs had been introduced on a widespread basis in South Dakota, followed by Montana, Oregon, and a number of Canadian provinces. As these machines were very successful, and always video devices, it appears likely that complaints against them formed the basis for the Iowa legislator's objections to video devices at the tracks.) The initially-fumbling attempts in these other States with racetrack devices were leading, unbeknown to the politicians of Iowa, to the conclusion that slot machines, video or not, were what the gambling public wanted.

Slot machines were therefore what the public in Iowa got. The citizens of Polk County dug deeper into their pockets and came up with another bond issue of $26.6 million to remodel the grandstand at Prairie Meadows into a casino and purchase 1,100 slot machines. The private owner/operators of Bluffs Run Greyhound Park, in Council Bluffs, Iowa, financed and constructed a similar facility there. The Bluffs Run slot casino was actually the first to open, on March 15, 1995; it was packed on opening night, and on every night thereafter. Day after day, its slot machines won roughly $370 apiece, for totals of $400,000 per day, $2.8 million per week, and an annual rate of more than $140 million. This was mildly astonishing, but perhaps comprehensible given the population of the greater Omaha/Council Bluffs area (about 620,000) and its easy access from Kansas City and the whole State of Nebraska. Prairie Meadows, on the other hand, was located near a metropolitan area of just 350,000 (Des Moines).

Yet when Prairie Meadows opened its slot facility at the beginning of April, 1995, the story was the same: standing room only, slots winning $330 per day, roughly $360,000 per day, $2.5 million per week, an annual rate of about $130 million. This rate has since slackened only slightly; for the 12 months ending 3/31/97, total slot win amounted to $122 million. This compares with approximately $8

Meadows clubhouse into a casino and install 1,100 slot machines. On April 1, 1995 the slot casino (or "racino") opened for business. In the 12 months ended March 31, 1996 machine revenues totaled $119.3 million, enabling Polk County to pay off the $27 million bond issue that paid for the clubhouse casino conversion within that initial year and retire the track's initial $38.8 million bond issue 17 years early. Racing returned to Prairie Meadows, subsidized by revenue from slot machines. Purses, also subsidized by slot machine revenues, were increased, attracting higher-quality horses. In turn, these higher-quality races are being exported by Prairie Meadows to other racetracks and simulcast facilities throughout North America, a high-margin, profitable business. Slot machines also appear to have had a positive impact on Iowa horse breeding.[5]

Prairie Meadows demonstrated to the racing industry the enormous popularity and potential profitability of casino (slot-machine) gaming, and, moreover, its potential for increasing purses and quality of racing. With only a small portion of the revenues from its slot machines, Prairie Meadows has already raised its purses by a factor of six, from about $20,000 per day prior to slots to a planned $126,000 per day over the 1997 racing season.[6]

Similarly positive experiences with gaming devices occurred at the Iowa Greyhound tracks. Bluffs Run's casino was joined by two riverboats that opened in its market area in early 1996, but the riverboats took only a modest portion of Bluffs Run's slot win. Over the twelve months ending 3/31/97, Bluffs Run slots won $111 million, while the two riverboats slots won just $99 million over the same period (plus $46 million in table-game win, for a total win of $145 million on the riverboats). The racetrack slot facility is, in fact, winning more than its fair share: Bluffs Run has 1,200 slot machines, and its average daily win per machine is currently about $253; the two riverboats combined have 1,905 machines, and an average daily win of about $142. (Note that Iowa riverboats, while not as similar to land-based casinos as Mississippi boats are, now need cruise only briefly.) [7]

A third Iowa trackside slot facility, at Dubuque Greyhound Park, did not open until November of 1995. In a smaller market, and in competition with two riverboats (one on the Iowa side of the Mississippi and one in East Dubuque on the Illinois side), its 544 slots won a total of $21.7 million in the twelve months ending 3/31/97. Again, the racetrack facility appears very competitive with nearby riverboats. Its small scale is perhaps a detriment, however, as its daily win per machine is only about $110, versus $125 at the nearby Dubuque *Diamond Jo* riverboat. (Slot win on the Illinois riverboats, which unlike the Iowa riverboats *must* cruise when the weather permits, is a paltry

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million in gambling revenues (total pari-mutuel commissions) from Prairie Meadows's racing operations, little changed from the last year before slot machines, for total gambling revenues of $130 million.

5 Randy D. Parvin and Steven G. Koven, "Limits on Economic Development Policy: State-supported Gambling in Iowa", Policy Studies Review (Autumn/Winter 1995/1996), contains a thorough evaluation of the Prairie Meadow experience.

6 Including purse supplements for Iowa-bred horses. The racing department's biggest problem at Prairie Meadows now is no longer one of attracting horses, any horses, but of finding some way to reward the owners and trainers of those lower-level horses who stuck by the track through its lean years but are now being squeezed aside by recent arrivals from other States by the much more attractive level of purses.

7 In addition, there are two Indian casinos at a distances of 40 to 60 miles from the metropolitan area providing additional competition.

$10-13 per machine per day.) And at both Dubuque and Bluffs Run, contributions from the slot revenues toward purses have substantially raised the standing of each track as an attractive location for better-quality racing stock to run.

Delaware

Learning from the experience of other States, when Delaware authorized VLTs at its racetracks in 1995, it left the numbers and types of devices to be installed up to the discretion of the State Lottery. After a long period of study and negotiation, the lottery opted for real-reel slots (as well as video devices). Two of these slot facilities opened late in 1995 and one in early 1996. They have been an instant success. In calendar 1996, the three Delaware facilities slots won $184 million, with wins per machine per day in the range of $230 to $360. In 1998, the three Delaware facilities slots won $351 million, with win per machine per day in the range of $272 to $463. At $463 per slot per day, machines at Delaware Park are the most profitable in the country. Based on the 1998 net win of $351 million, the tracks' share from the operation of slot machines should be roughly $173 million for calendar year 1998.

Table A.1: Calendar 1998 Delaware Racetrack Device Performance

	Delaware Park	Dover Downs	Harrington	Totals
Amount Played	$2,247,038,800	$1,285,846,900	$665,255,900	$4,198,141,600
Amount Won	$2,075,136,600	$1,172,731,500	$599,452,300	$3,847,320,400
Net Proceeds	$171,902,200	$113,115,400	$65,803,600	$350,821,200
Avg. Terminals	1,017	1,031	661	2,709
Win/Unit/Day	463	300	273	355

Source: Christiansen Capital Advisors, LLC

Furthermore, it appears that the introduction of slot machines has benefited racing in Delaware as well. The contributions slots have made to Delaware purses (around $40 million in 1998) are already upsetting the balance of power among horse tracks in the Northeast. Maryland, Pennsylvania (which also borders West Virginia) and Massachusetts are seeing quality horses leave their tracks for Delaware. This flow of horses following slot machine money is adding to the political pressures for slots at tracks in Maryland, Pennsylvania and Massachusetts.

Delaware slot machines have attracted money from other States. To the north in Pennsylvania, Philadelphia Park has seen its business shrink by almost 30 percent since 1996. Other Pennsylvania tracks are suffering nearly as badly.

Louisiana

Louisiana authorized video poker machines in 1992 for restaurants, bars, truck stops, racetracks, and OTB facilities. These machines are regulated not by the State lottery but by the State Police, but are still usually referred to as VLTs. Most premises were initially limited to a maximum of three machines, but truck stops were allowed 50 and the number at pari-mutuel facilities was not limited.

Louisiana Downs, in Bossier City/Shreveport, installed 540 machines on July 1, 1992; by November of that year it had increased their number to 716.[8] This number was then reduced to approximately 500, where it remained until lower volumes of business following the opening of nearby riverboat casinos prompted another reduction, to 386, in the spring of 1994.

8 The experience at the other tracks in Louisiana was similar, but reported results are complicated by the openings, at various times, of OTB facilities and riverboat casinos, and the closing of one of the two tracks in the New Orleans area. With no nearby OTB facilities, and nearby riverboats opening in a group, Louisiana Downs provides in our opinion the clearest illustration of the Louisiana experience.

Appendix E: VLTs and Slot Machines

Video lottery terminals are gaming devices authorized under lottery laws (the "lottery exception" to State gambling prohibitions, which may be constitutional). What constitutes a VLT can and does vary greatly from jurisdiction to jurisdiction; a device that may qualify as a VLT in one jurisdiction may not qualify as a VLT in another jurisdiction even if it allows VLTs. Moreover, racetrack gaming devices are sometimes called "VLTs" even when they are in fact slot machines (as, for example, the gaming devices at Woodbine Racetrack in Ontario). "VLT" and "slot machine" are common words that are often loosely used. West Virginia racetracks, for example, advertise "slot machines", even though as a matter of law West Virginia racetrack machines are video lottery terminals.

In some jurisdictions racetrack machines are, legally, VLTs; Delaware and New York are examples. In other jurisdictions racetrack machines are slot machines; Iowa, Louisiana, Pennsylvania (authorized but not yet operational) and Ontario are examples.

VLTs are *central system devices*. Some jurisdictions require *central determination system* video lottery terminals; others permit video lottery terminals where the *determination software (typically a chip) resides in the device*, not in the central system. New York, for example, requires central determination system VLTs; Delaware and West Virginia permit VLT gaming where the determination software resides in the device. In Delaware and West Virginia VLTs approximate random slot machines, and the consumer experience of playing Delaware and West Virginia VLTs is close to or indistinguishable from the experience of playing casino slot machines.

A further material variable in VLT gaming environments is the *decision logic* required. New York, for example, requires lottery decision logic in VLT gaming: this means that players of New York VLTs are participating in a State-wide multi-player drawing for each of the 50 video lottery games authorized in New York. Machine gaming facilities in New York, or in jurisdictions with requirements similar to New York's, cannot approximate casino slot machine gaming experiences.

Slot Machines

Slot machines are random devices. When someone plays a slot machine ("tries the device") the outcome is determined *by the device*. *Hit frequency* and *pay table*, the two basic variables in machine game design, can be set individually for *each* slot machine on a casino floor. Players gamble against slot machines one-on-one *unless* the slot machine is a *linked progressive game*, a gaming product that links many slot machines to a computer to provide a multi-device, multi-player, large jackpot experience.

Casinos have thousands of slot machine games (or "titles") to choose from. These games or titles are packaged or presented in boxes (the actual machine cabinet and audio/visual display) that vary greatly in size, shape, color, lights, sound effects, and so forth.

The intellectual property used to *theme* the slot machine game is typically licensed from rights holders in the movie, music, television or other entertainment media. As a result, slot machines, once undifferentiated commodities ("if Bally made it you played it"), are today as highly differentiated in the consumer's eye as are movies, music, or video games. Slot machine players prefer some games or titles over others, and these consumer preferences can change rapidly. As a consequence, a slot manager may need to replace 25% of the machines on his floor every twelve months—or fall behind the shifting curve of consumer preferences in slot gaming. For obvious reasons, slot machine vendors encourage this process, since vendors benefit from shorter machine replacement cycles.

Slot machines are made by many manufacturers in many jurisdictions; IGT, Aristocrat, Atronic (a German company controlled by the Gauselmann family, being acquired by Scientific Games), Bally (Alliance Gaming), and WMS are among the principal slot machine suppliers. Progressive Gaming (formerly Mikohn) is a well-known supplier of game content that no longer makes the box component of slot machines.

In modern casinos slot machines are linked to computer monitoring and control systems, for both accounting and control and player tracking loyalty program purposes. These systems record and monitor slot machines and slot machine activity but do not determine machine game outcomes.

In the United States slot machines operate pursuant to State casino (gaming) law or on tribal lands as a Class III activity pursuant to the Federal Indian Gaming Regulatory Act (IGRA) and compacts between tribes and States. IGRA also defines Class II gaming, essentially bingo; a number or vendors, notably Multimedia Games (MGAM) and Sierra Designs, supply Class II machines that in some tribal gaming facilities provide a playing experience relatively close to the playing experience provided by casino slot machines.