GAMING MARKET STUDY: STATE OF NEW YORK

Prepared for the New York State Gaming Commission
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Note: This report includes an Executive Summary and Appendices that are provided in separate documents.

Introduction

The New York State Gaming Commission ("NYSGC" or "Client") on September 10, 2019, issued Request for Proposal ("RFP") No. C190013V2 to "to provide a gaming market study in relation to the evaluation of the gaming market in New York State and potential impacts of changes to that market both within and outside of the State." Spectrum Gaming Group ("Spectrum," "we" or "our") was selected on November 14, 2019, to undertake the study based on our RFP response.

The Client subsequently requested that Spectrum analyze the impacts that the COVID-19 pandemic would have on the New York gaming industry.

1. About This Report

a. RFP Questions and Requirements

The RFP issued by the NYSGC requires the following:

A. An analysis of the performance of commercial casinos, video lottery gaming facilities, and Native American gaming facilities, including:

- Actual performance vs. market potential for all gaming activities, and if applicable, reasons for deviation;
- Total economic impact of the industry including an analysis of the incremental economic impact of the [Upstate NY Gaming Economic Development] Act.

  The analysis shall include factors impacting the New York gaming market, including a review of relevant economic, demographic, tourism (domestic and international), and other commercial factors that impact or may impact the gaming industry in New York such as changes in status in neighboring states;

B. The economic, fiscal, and social implications of the awarding of up to three (3) additional commercial casino licenses, including:

1. An understanding of the size and scope of the potential market, including economic, social and fiscal implications;
2. Analysis of potential gross gaming revenue scenarios based on specific siting locations;
3. Examination of the impact Downstate legalization would have on the existing gaming industry in New York and neighboring states;
4. Potential impact on any Downstate development should full-scale casino gambling be authorized elsewhere in the region; and
5. Evaluation of optimal license fees and taxation rates;

C. The impact an Orange County-based VLT facility will have on existing gaming facilities and State revenues, and the impact of such facility in the analysis conducted pursuant to Section 3.2 (B);

D. The impact of a change in taxation rates for existing video lottery and commercial casino games and activities, including:

1. An assessment of the impacts of rate equalization for video lottery gaming, commercial casino gaming and Indian gaming activities;
2. Recommendations on modification of tax and commission rates under various scenarios;
3. An analysis of how a change in tax rates would affect the competitive dynamics of the existing VLTs/casinos and tax revenues for the state; and

E. Analysis of the size and scope needed to achieve full revenue potential at each of the existing VLTs and casinos, and analysis of the associated impacts of any such changes on surrounding gaming facilities.

F. Analysis of the potential market for other gaming and the impacts of each on the existing gaming markets, including:

1. Sports wagering, only at commercial casinos;
2. Sports wagering expanded to video lottery gaming facilities and off-track betting facilities; and
3. Online sports wagering, lottery and video poker;

G. Analysis of the current distribution of pari-mutuel horse racing revenue, including:

1. The competitive market fundamentals of the Off-Track Betting corporations; and
2. Recommended modifications to the distribution schedules; and

H. The effect of modification of live racing requirements for pari-mutuel facilities, including evaluation of impacts on purses and awards and the likely effects on the breeding industries.

b. Primary Methods Used

Spectrum deployed a 21-person team for this project, eight of whom are based in New York. We relied on the following primary methods for our research and analysis:

- Data collection: The NYSGC provides ample performance metrics for the forms of gambling analyzed in this study, and it publishes them on a regular basis. Data used in this study were the latest available. Spectrum also relied on other public data from state and federal agencies. We also received private data for use in our analysis but which are not disclosed in this report.
- Interviews: Spectrum interviewed 157 people in person, by telephone, or by email (Appendix A). We endeavored to contact a wide range of stakeholders, whether they worked in the gaming realm or not. Some desired interview subjects did not respond to, or declined, our requests.
- Financial modeling: Spectrum used a number of analytical tools and models to analyze gaming data, population data, and geography. We further used some of these data as inputs for an input-output economic forecasting model from Regional Economic Models Inc. (see Appendix B), which measured the economic impacts of New York's gaming industry at status quo and under difference scenarios.
- Field research: In 2019 and 2020, Spectrum visited 23 gaming facilities in New York and conducted in-person interviews with numerous stakeholders. In addition to our eight New York-based project professionals, Spectrum project professionals have spent a total of 14 person-days in New York.

- Our experience: Spectrum has been providing independent research and professional services related to the gaming industry since 1993, and many of Spectrum's executives and associates have been gaming regulators, operators or analysts for decades. We have conducted studies or consultations in 40 U.S. states and territories and in 48 countries on six continents, including for numerous state, tribal and national governments. Among Spectrum's projects are statewide gaming studies for the state governments of Connecticut, Florida, Iowa, Louisiana, Massachusetts, North Carolina, Ohio, and Washington. Spectrum professionals participating in this project included experts in financial analysis, economics, finance, gaming law and regulation, casino operations, sports wagering analysis, lottery operations, pari-mutuel operations and analysis, public policy, tax policy, construction, and journalism.

Throughout the course of this project, we received a high level of cooperation from our research sources and interview subjects throughout the state.

c. About Spectrum Gaming Group

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

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

Our 250-plus clients have included government entities of all types, and gaming companies (national and international) of all sizes, both public and private. In addition, our professionals have testified or presented before the following governmental bodies:

- Brazil Chamber of Deputies
- British Columbia Lottery Corporation
- California Assembly Governmental Organization Committee
- Connecticut Public Safety and Security Committee
- Florida House Select Committee on Gaming
- Florida Senate Gaming Committee
- Georgia House Study Committee on the Preservation of the HOPE Scholarship Program
- Georgia Joint Committee on Economic Development and Tourism
- Illinois Gaming Board
- Illinois House Executive Committee
- Indiana Gaming Study Commission
- Indiana Horse Racing Commission
- International Tribunal, The Hague
- Iowa Racing and Gaming Commission
- Louisiana House and Senate Joint Criminal Justice Committee
- Massachusetts Gaming Commission
- Massachusetts Joint Committee on Bonding, Capital Expenditures, and State Assets
- Michigan Senate Regulatory Reform Committee

- Missouri House Special Interim Committee on Gaming
- National Gambling Impact Study Commission
- New Hampshire Gaming Study Commission
- New Jersey Assembly Regulatory Oversight and Gaming Committee
- New Jersey Assembly Tourism and Gaming Committee
- New Jersey Senate Legislative Oversight Committee
- New Jersey Senate Wagering, Tourism & Historic Preservation Committee
- New York Senate Racing, Gaming and Wagering Committee
- New York State Economic Development Council
- North Dakota Taxation Committee
- Ohio House Economic Development Committee
- Ohio Senate Oversight Committee
- Pennsylvania Gaming Control Board
- Pennsylvania House Gaming Oversight Committee
- Puerto Rico Racing Board
- Resilient Louisiana Commission, Gaming Task Force
- U.S. House Congressional Gaming Caucus
- U.S. Senate Indian Affairs Committee
- U.S. Senate Permanent Subcommittee on Investigations
- U.S. Senate Select Committee on Indian Gaming
- U.S. Senate Subcommittee on Organized Crime
- Washington State Gambling Commission
- West Virginia Joint Standing Committee on Finance
- World Bank, Washington, DC

Disclaimer

Spectrum has made every reasonable effort to ensure that the data and information contained in this study reflect the most accurate and timely information possible. The data are believed to be generally reliable. This study is based on estimates, assumptions, and other information developed by Spectrum from its independent research effort, general knowledge of the gaming industry, and consultations with the New York State Gaming Commission and its representatives. Spectrum shall not be responsible for any inaccuracies in reporting by the State or its agents and representatives, or any other data source used in preparing or presenting this study. The data presented in this study were collected through the cover date of this report. Spectrum has not undertaken any effort to update this information since this time.

Some significant factors that are unquantifiable and unpredictable – including, but not limited to, economic, governmental, managerial and regulatory changes; and acts of nature – are qualitative by nature and cannot be readily used in any quantitative projections. No warranty or representation is made by Spectrum that any of the projected values or results contained in this study will actually be achieved. We shall not be responsible for any deviations in the project's actual performance from any predictions, estimates, or conclusions contained in this study.

This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions and considerations.

d. Common Terms and Definitions

The following terms and definitions are used throughout this report:

- Advance Deposit Wagering ("ADW"): A form of pari-mutuel wagering in which a person establishes an account with an account wagering licensee and subsequently communicates via telephone or other electronic media to the account wagering licensee wagering instructions concerning the funds in such person's account and wagers to be placed on the account owner's behalf.
- Betting Interest: Commonly called a "bint," this is one or more horses identified by a single program number for wagering purposes.
- Class: Indian gaming is classified as follows:
    - *Class III* games are comprised of typical games found in commercial casinos – slots and live table games.
    - *Class II* allows only bingo and bingo-format games, whether or not electronic, computer or other technical aids are involved.
    - *Class I* involves traditional tribal games, as well as social gaming for Indian tribes for minimal prizes and is not related to gaming facilities; is not relevant in this project for the State of New York.
- Commercial Casino: A State-regulated casino offering both slots and table games, of which there are four in New York.
- Commingled Pari-Mutuel Pool: Wagers from different operators or jurisdictions bet into a single pool (or tote, or pari-mutuel) to calculate/determine the odds and payoffs.
- Digital: Betting that takes place via internet or mobile channels, as opposed to retail.
- Electronic Gaming Device ("EGD"): Umbrella term for any slot-like gambling machine, including a casino slot machine, video gaming terminal, video lottery terminal, video poker machine, and historical horse racing machine. Regardless of their internal configuration, all are designed to provide a gambling experience similar to that of a traditional casino slot machine or video poker machine.
- Electronic Table Game ("ETG"): An automated, electronic version of traditional casino table games such as blackjack, roulette, baccarat and others.
- Field Size: The number of horses in a race.
- Gaming Facility: Umbrella term for commercial casinos, Indian casinos, and VLT facilities.
- Gross Gaming Revenue ("GGR") or Win: The amount of money players wager minus the amount players win (Handle X Hold% = GGR), before any expenses or taxes have been deducted.
- Handle: The total amount of money wagered.
- Hold or Gross Win Percentage: The percentage of money the bookmaker or house holds onto after all bets have been settled. It is the inverse of the payout percentage.
- Host Fee: The royalty for importing a horse-racing signal for simulcast wagering purposes.

- iLottery: Lottery games that are played or purchased online in formats that include draw games, digital-instant games, and other games of chance.
- Internet Gaming: Casino-style games played via mobile device, personal computer or other personal online device. Commonly called "iGaming."
- Mobile Gaming: A prominent channel for digital gaming, with games typically played via an operator's app.
- MSA: Metropolitan Statistical Area. A U.S. Census-designated market area.
- Off-Track Betting ("OTB"): Any state-sanctioned facility that accepts wagers on races run at locations other than where the wager is made.
- Pari-Mutuel: A form of wagering – typically used in horse racing – in which all bets on an event are pooled, and payoff odds are calculated by sharing the pool among all winning bets. The operator/provider deducts a "takeout" from all wagers.
- Racino: A term combining "racetrack" and "casino" used to identify a gaming facility that has both racing and gaming offerings. For example, New York's VLT facilities are frequently termed racinos.
- State: When capitalized, it refers to the State government of New York.
- Video Lottery Terminal ("VLT"): Similar to a slot machine but configured to conform to a state's lottery laws and regulations.
- VLT Facility:1 A New York facility authorized to operate video lottery terminals.
- Win: Another term for Gross Gaming Revenue; see above.
- Win per Unit ("WPU"): The average daily win (i.e., GGR) generated for each slot machine or VLT. A common industry measurement of gaming performance.

2. Sorting Pieces of New York's Complex Gaming Puzzle

The paradox that is gaming in New York begins with the unassailable fact that gaming is largely a creature of the political process, wholly dependent on decisions that are rarely put through an economic calculus. Often, the decisions have been more dependent on what is politically achievable or advantageous.

That hardly makes New York an outlier. Indeed, that can easily describe the growth of the gaming industry throughout the United States. Any industry that relies for its existence on political processes and calculations will be shaped by those political forces, which will determine everything from the location of gaming facilities to the tax rates, and to the forms of gaming that will be allowed.

Concurrently, the gaming industry in New York and elsewhere is being shaped by – and arguably roiled by – powerful trends that have nothing to do with politics, ranging from advances in technology to

[1] Five New York VLT facilities include the word "casino" in their proper name despite not being classified as casinos by the State of New York: Empire City Casino, Jake's 58 Casino Hotel, Resorts World Casino New York City, Saratoga Casino Hotel, and Vernon Downs Casino Hotel.

shifts in consumer preferences. Most significantly, the power of unforeseen forces was made clear by the global spread of COVID-19 and its social and economic impact. In New York, if the state's gaming facilities remain closed for two months, the economic loss to the State would exceed $1 billion, according to a study released by the American Gaming Association.[2]

The gaming industry in the United States – which saw roughly 1,000 casinos close their doors because of the pandemic, cutting off nearly all forms of revenue for several months – is emblematic of how consumer-facing industries have been pummeled by the pandemic, but is not alone. At the same time, the gaming industry is not alone in wondering what the long-term impacts of this pandemic will be, even after it has run its course.

Governor Andrew Cuomo summed this up in a March interview in the *New York Times*, stating: "We'll have a different country — better or worse, I don't know. It will have a different personality. It will be more fearful. Less trusting. But maybe there will be a greater need for intimacy."[3]

a. Adapting to Shifting Environment

Even prior to this pandemic, forces that were already shaping the future of gaming were themselves moving in new directions. The 2018 decision by the U.S. Supreme Court to overturn the 1992 Professional and Amateur Sports Protection Act ("PASPA") had been the most visible catalyst that was driving changes in gaming practices, but that decision was not an isolated phenomenon.

Years before that decision was handed down, the need for the gaming industry to adapt to a shifting environment was already apparent. Every major segment of the U.S. gaming industry – including casinos, pari-mutuel facilities and lotteries – has long recognized that its core demographic was aging, and emerging consumers were less likely to engage in the same behaviors.

The gaming industry – as with all consumer-facing industries – has been forced to create its own digital future, within those legal and political constraints. As consumers move more of their disposable time and income to a digital world, industries must adapt or wither away, regardless of political preferences. The best example of this is that gaming facilities recognize that the casino floor – as it has existed for decades – is declining in popularity, and operators face growing pressure to adapt. But they face political and regulatory limitations.

That reality is critical, but it does not paint the entire portrait of the gaming landscape in New York, or elsewhere. The reality is that gaming builds on what already exists.

This means that there are few "off switches" in gaming. For example, once a gaming facility has been approved and constructed and becomes operational, that decision cannot be easily undone without

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[2] Robert Harding, "NY could lose $1B in economic activity if casinos remain closed due to COVID-19," *Auburn Public Citizen,* March 25, 2020. https://auburnpub.com/news/local/govt-and-politics/ny-could-lose-b-in-economic-activity-if-casinos-remain/article_eaea02df-76ee-5d7d-97ea-bda31ddef8a6.html

[3] Maureen Dowd, "Let's 'Kick Coronavirus's Ass,' " *New York Times*, March 27, 2020. https://www.nytimes.com/2020/03/27/opinion/cuomo-new-york-coronavirus.html

prompting wrenching changes for communities, for the individuals who work there, and for those who work in businesses that sell to, or are dependent on, those facilities.

Similarly, once a state creates a lottery – relying on a particular business model that is quite similar to the business model adopted by lotteries in other states – the decision cannot, for all practical purposes, be undone without creating fiscal chaos for the state and economic upheaval for the retailers and others who have built their business models upon the lottery's operating model.

The notion that gaming must build upon what already exists started with the growth of the racing industry, which was not only among the first forms of legal gaming to dot the national landscape but has also been the first to face declines in popularity, wrought in part by demographic shifts.

This reality powered the expansion of gaming in New York and elsewhere, a result of the need to give pari-mutuel facilities new revenue streams that could be channeled into everything from enhanced facilities to increases in purses, among other benefits.

Notably, some of the current gaming facilities that were authorized to participate in expanded forms of gaming are situated on sites that have been hosting races for more than a century, such as Aqueduct, which opened in September 1894.[4] The first Thoroughbred meet in Saratoga Springs was run in August 1863, one month after the Battle of Gettysburg.[5]

Clearly, the present was built on the past, and the future must rest on the foundation of the present, regardless of whether decisions made decades ago – or centuries ago – present the most sensible foundation for future gaming policies.

The result is that New York has become the most visible example of yet another inherent paradox in gaming policy: An industry that rests on an old foundation cannot be easily steered in new directions. That challenge becomes particularly difficult when the technological, demographic and fiscal pressures for change are relentless.

b. Gaming in New York: Emblematic and Unique

Time pressures make the need for change even more acute in New York. Questions exist as to whether certain changes to the gaming landscape in New York – such as the introduction of mobile sports wagering – require amending the State Constitution. The amendment process in New York – as in many other states – was clearly designed to promote thoughtful change, rather than rapid change.

Spectrum's report makes clear that New York should acknowledge the benefits of fast-tracking but should rely significantly on which policies and licensing decisions will provide the greatest long-term benefit. A significant challenge is to avoid applying long-term solutions to solve problems of limited duration.

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[4] New York Racing Association, "History of Aqueduct." https://www.nyra.com/aqueduct/about/history-of-aqueduct (accessed February 16, 2020)

[5] Saratoga Race Track, "Discover the Storied History of Saratoga Race Course." https://www.saratogaracetrack.com/about/history-saratoga-race-course/ (accessed February 16, 2020)

New York does not, in any sense, hold a monopoly on such challenges, nor are most of its core issues unique. Numerous states have built gaming industries on the foundation of an existing pari-mutuel industry, and several states have the challenge of endeavoring to balance the interests of commercial gaming and Indian gaming operations.

The difference in New York is that the challenges are *most acute* here. Indeed, as New York also quickly became a domestic epicenter of the COVID-19 pandemic, the challenges compound. The State needs quick economic action, and it must simultaneously balance the needs and interests of multiple forms of gaming.

Quite significantly, every state that offers some form of casino gaming is also home to a state lottery – with the notable exception of Nevada, the state most dependent on gaming taxes. New York is home to the largest state lottery in terms of revenue, recording more than $8 billion in sales last year.[6] As lotteries expand and endeavor to capture new players, a trend is occurring throughout the nation in which lotteries and other gaming operators compete in the online space. New York will likely follow suit, but the State's dependence on its successful lottery will accentuate the need to ensure convergence, rather than competition between these forms of gaming.

Similarly, New York is not alone in hosting both commercial and Indian gaming. That duality is present to some degree in states such as Florida, Louisiana and Michigan. For example, Michigan hosts both commercial and Indian casinos, but the commercial casinos are concentrated in Detroit, not near the relatively rural areas where the Indian casinos operate. In New York, the commercial casinos, the VLT facilities and the Indian casinos are spread throughout the state, creating a variety of competitive scenarios between Indian and commercial properties, and between commercial casinos and VLT facilities.

The complexity of gaming in New York is more intense than in most states, not only because gaming is so expansive and in so many forms, but because of the state's intricate geography and economy.

While other states juggle the differing needs and policy goals of urban and rural areas, as well as between Indian and commercial gaming, New York again takes this to new levels in a state that fans out like a funnel in multiple directions.

The greatest paradox within gaming in New York State is the reality that, even though the state offers such a broad mix of gaming offerings, it is also home to the nation's largest urban center, the global capital of multiple industries ranging from finance to media.

c. Building Gaming's Future

The addition of a commercial casino in the New York City area – either through issuing commercial licenses to one or both VLT facilities in the region or by approving a new property – would profoundly alter the gaming landscape in New York, and arguably throughout the nation.

[6] "La Fleur's Fiscal 2019 Report," lafleurs.com. https://lafleurs.com/magazine-feature/2019/09/09/la-fleurs-fiscal-2019-report/

One canvas Upstate shows a portrait that is nearly complete, while another Downstate is nearly blank. In learning from its own past as well as from others, New York can best advance gaming policy by taking particular care with the nearly blank canvas of New York City.

As our report makes clear, policymakers need to ensure that whatever gets authorized in the nation's largest metropolitan area will serve the interest of New Yorkers for decades to come. Whatever entities are granted the privilege of commercial casino licensure in that market – whether they are existing VLT operators or new entrants – must rise to the challenge of developing projects that are iconic, that are sufficiently capitalized to capture and expand multiple market segments and that advance public policies that will serve the entire state.

Layered on to that paradox is the concept of expanding gaming by embracing new technologies and new ways to wager, such as the authorization of mobile gaming and sports wagering. Such potential expansions, however tantalizing they may be, need to be examined and implemented with the same level of care, without regard to the calendar or the current state of fiscal affairs.

A failure to meet those challenges means that the future will look much like the present: The state will have to live with what it has, and lost opportunities will never be regained.

A. Impacts of COVID-19 Pandemic

As Spectrum neared completion of its engagement for the State of New York, the impacts of the coronavirus disease 2019 ("COVID-19") pandemic became pronounced throughout the state and country, including the closure of all gaming facilities. Subsequently, the State requested that Spectrum assess and project how the pandemic could impact the state's gaming industry.

Note: Spectrum's analyses concerning the impacts of the COVID-19 pandemic were concluded at the end of October 2020 and reflect all available information as of that date. Subsequently, additional casino re-closures and restrictions on dining and travel have impacted the gaming industry.

1. Economic Impacts on Gaming Industry

COVID-19 caused the temporary closure of every commercial and Indian gaming facility in the country. American Gaming Association ("AGA") President and CEO Bill Miller on March 19 said the closures would cost the U.S. economy $43.5 billion in economic activity if they remain closed for eight weeks. "Gaming is an economic engine, employing millions of local residents, generating community investment through vital tax revenue, and supporting small businesses in communities all across the country," Miller said.[7] The AGA said the closures affect 652,000 gaming facility employees as well as more than 1 million others who rely on gaming.[8]

As the gaming industry began to reopen, and initial results – both anecdotal and those reported by state regulatory agencies – indicate relatively strong results in the first month. However, Spectrum cautions that the longer-term impacts of the pandemic remain unknown, for the following reasons:

- The current result may not equal a trend.
- The $600-per-week federal unemployment benefit ended July 31, leaving the unemployed with solely their state unemployment benefits, which Goldman Sachs reported average $370 per week.[9] Some states are topping up the unemployment compensation by $300 a week.
- The ongoing impacts of COVID-19 may result in further adjustments or re-closure of leisure facilities, including those that provide gaming.
- Gaming patrons in different parts of the country, or within different regions of a state, may have different reactions or sensitivity to visiting enclosed, high-volume establishments such as gaming facilities.

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[7] "AGA CEO Statement on Economic Impact of COVID-19 on U.S. Casino Gaming Industry," American Gaming Association, March 19, 2020. https://www.americangaming.org/new/aga-ceo-statement-on-economic-impact-of-covid-19-on-u-s-casino-gaming-industry/

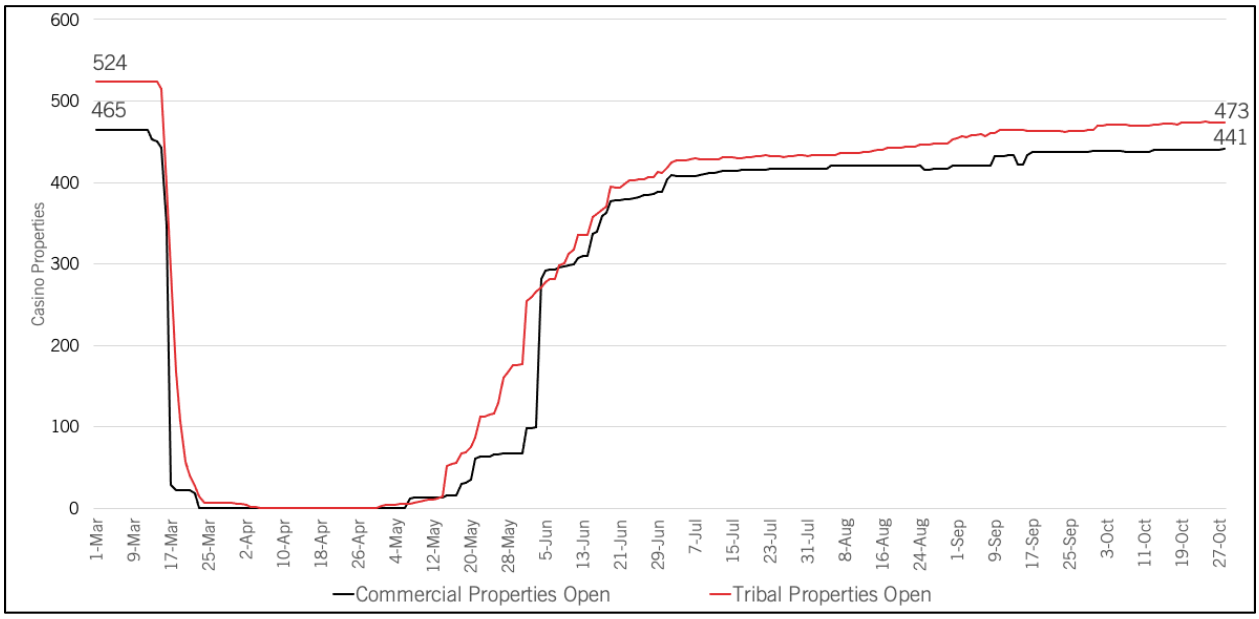
[8] "COVID-19's Impact on U.S. Casino Industry, Workers and Local Communities," American Gaming Association, April 13, 2020. https://www.americangaming.org/wp-content/uploads/2020/03/AGA_CV19_Factsheet-FINAL.pdf

[9] Pete Davidson, "Bye $600 jobless benefit, eviction reprieve, cash for small firms. COVID-19 relief ending," *USA Today*, June 22, 2020. https://www.usatoday.com/story/money/2020/06/22/cares-act-600-unemployment-other-covid-19-relief-set-end/3211921001/

- Either by state directive or by operator choice, numerous casinos have reopened smoke-free in light of COVID-19 being a respiratory disease. The implications of casinos being smoke-free is unclear at this time, as is whether such policies are temporary.

As of October 28, a total of 914 U.S. gaming facilities had reopened and 80 were closed, according to the AGA.[10]

Figure 1: U.S. gaming facility reopening tracker, as of October 28



Source: American Gaming Association. **Note:** AGA includes VLT facilities within commercial casinos.

A May 2020 national online survey of 3,851 casino patrons found material concerns about visiting a casino in the near future, as shown in Figure 2 below. Many patrons, according to the survey and according to the reality that has transpired since reopenings began, have made it clear that they are changing their gaming habits.[11]

Figure 2: Survey of casino patrons regarding reopening casinos

When Casinos Reopen, Do You Plan to:	**Visit Immediately**	**Visit After a Few Weeks**	**Visit after There's a Vaccine**	**No Plan to Return**
	41%	44%	12%	3%
When Casinos Reopen, Do You Plan to:	**Visit More**	**Visit the Same Amount**	**Visit Less**	
	4%	68%	28%	
Is Your Planned Daily Casino Gaming Budget Going to:	**Increase**	**Stay the Same**	**Decrease**	
	4%	71%	25%	

Source: Meczka Marketing Research & Consulting

[10] American Gaming Association, "COVID-19 Casino Tracker." https://www.americangaming.org/research/covid-19-casino-tracker/ (accessed September15, 2020)

[11] Meczka Marketing Research & Consulting, "Casino Reopening Survey – National Results," May 2020.

Nationally, gaming operations lost a quarter to half of their 2020 GGR – potentially about $20 billion – during the roughly three to five months that most were closed. States, in turn, have lost an estimated $2.6 billion in direct gaming-tax receipts from the commercial gaming facility sector.[12]

In New York, gaming facilities were ordered indefinitely closed by the governor on March 16, 2020.[13] The commercial gaming facilities were allowed to open at 25 percent capacity on September 9, 2020. Empire remained closed until September 21. State tax revenues for the current fiscal year in the April through September period declined by $526.5 million, or 91 percent, compared to with the same period in 2019. Figure 3 below shows the dramatic year-over-year changes in New York GGR and State gaming-tax receipts for the three-plus months after New York casinos and VLT facilities closed. In summary, New York's state-regulated gaming facilities have reported a year-over-year decline of $1.266 billion in gross gaming revenue ("GGR") for the April-through-September period. The State directs all of its VLT revenue and 80 percent of net casino revenue to education; the other 20 percent of casino revenue is directed to certain localities.

[12] Using blended U.S. gaming-tax rate of 23.3 percent on commercial gaming facilities, per American Gaming Association data in *State of the States 2020*.

[13] Joseph Spector, "Resorts World, Rivers closes casinos in New York City, Schenectady and Catskills amid coronavirus spread," *Poughkeepsie Journal,* March 16, 2020. https://www.poughkeepsiejournal.com/story/news/politics/2020/03/16/resorts-world-closes-casinos-nyc-and-catskills-amid-coronavirus-spread/5057589002/

Figure 3: New York gaming facility performance comparison, first half of FY 2019 vs. FY 2020

Gaming GGR	April - Sept 2019	April - Sept 2020	Difference	% Change
RWNYC	$349,232,613	$37,050,210	-$312,182,403	-89.4%
Nassau OTB	$95,011,076	$12,723,146	-$82,287,930	-86.6%
Empire Casino	$308,951,576	$18,838,070	-$290,113,506	-93.9%
Jake's 58	$114,280,687	$12,324,666	-$101,956,021	-89.2%
Batavia Downs	$32,314,274	$3,155,691	-$29,158,584	-90.2%
Fairgrounds Gaming	$32,722,601	$2,867,980	-$29,854,621	-91.2%
Finger Lakes	$54,474,669	$6,326,195	-$48,148,474	-88.4%
Saratoga	$66,833,180	$5,390,078	-$61,443,102	-91.9%
Vernon Downs	$15,888,957	$1,060,505	-$14,828,452	-93.3%
VLT Subtotal	**$1,069,709,634**	**$99,736,540**	**-$969,973,094**	**-90.7%**
Del Lago	$81,225,225	$5,333,093	-$75,892,133	-93.4%
Rivers Casino	$85,904,496	$7,776,664	-$78,127,831	-90.9%
RW Catskills	$113,219,519	$9,731,890	-$103,487,629	-91.4%
Tioga Downs	$42,659,165	$3,278,619	-$39,380,547	-92.3%
Casino Subtotal	**$323,008,405**	**$26,120,266**	**-$296,888,140**	**-91.9%**
Total GGR	**$1,392,718,039**	**$125,856,806**	**-$1,266,861,233**	**-91.0%**

State Taxes	April - Sept 2019	April - Sept 2020	Difference	% Change
RWNYC	$139,693,045	$14,820,084	-$124,872,961	-89.4%
Nassau OTB	$42,754,984	$5,725,416	-$37,029,568	-86.6%
Empire Casino	$155,372,231	$9,513,225	-$145,859,006	-93.9%
Jake's 58	$51,426,309	$5,546,100	-$45,880,210	-89.2%
Batavia Downs	$12,640,505	$1,230,719	-$11,409,786	-90.3%
Fairgrounds Gaming	$11,147,006	$975,113	-$10,171,893	-91.3%
Finger Lakes	$28,354,755	$2,941,680	-$25,413,074	-89.6%
Saratoga	$33,549,753	$2,506,386	-$31,043,367	-92.5%
Vernon Downs	$5,410,833	$360,572	-$5,050,261	-93.3%
VLT Subtotal	**$480,349,422**	**$43,619,296**	**-$436,730,126**	**-90.9%**
Del Lago	$24,400,311	$1,800,517	-$22,599,794	-92.6%
Rivers Casino	$29,988,724	$2,955,334	-$27,033,390	-90.1%
RW Catskills	$30,283,465	$2,977,414	-$27,306,051	-90.2%
Tioga Downs	$14,053,656	$1,187,125	-$12,866,532	-91.6%
Casino Subtotal	**$98,726,156**	**$8,920,390**	**-$89,805,766**	**-91.0%**
Total GGR	**$579,075,578**	**$52,539,685**	**-$526,535,893**	**-90.9%**

Source: New York State Gaming Commission. **Note:** Since the Monticello VLT facility permanently closed in April 2019, it is excluded from these tables.

2. Pandemic and Relevant Historic Experience

Based on the economic impacts that the severe acute respiratory syndrome ("SARS") virus had on the economies of Southeast Asia in 2003, and the slow period of recovery that followed the Great Recession of 2009, our analysis has suggested that the COVID-19 viral pandemic would cause U.S. gross gaming revenues to plunge initially and then slowly recover to pre-COVID-19 levels before 2023. In this section we examine how other events and conditions affected the gaming and leisure industries.

The damage from a natural disaster such as a hurricane, tsunami, earthquake or flood is physical and can destroy capacity. But once the damage is repaired, consumer habits and businesses gradually return to normal. The 9/11 terrorist attacks deeply scarred the American psyche, but two weeks later baseball returned, and the NFL season resumed after a one-week hiatus. In a viral outbreak, however, the capacity remains intact but the demand changes – either because of government action or consumer preference. People choose to stay away from potentially dangerous locales. The timing of their return is essential to the success of any rebound, as is the willingness to spend post-epidemic.

a. Leisure Industry Analogous Experiences

The COVID-19 pandemic is the largest and most widespread viral outbreak since the 1918 influenza pandemic. But there are other recent outbreaks that are worth looking at from a tourism perspective. Travel advisories are a primary reason for the decline in tourism; governments in the affected areas often limit travel in and out of the area, and governments in other parts of the world warn travelers not to visit the affected areas. Another primary reason is risk aversion. "The biggest driver of the economics of pandemics is not mortality or morbidity but risk aversion, as people change their behavior to reduce their chance of exposure," said Dr. Dennis Carroll, director of the U.S. Agency for International Development's programs on new and emerging disease threats.[14]

A look at some of the viral outbreaks in this century and their effects on the leisure industry:

SARS/Asia: During the SARS outbreak, which began in southern China in November 2002[15] and lasted about seven months, business and leisure travelers drastically cut back on flying. Asia-Pacific air carriers saw revenue plunge $6 billion and North American airlines lost another $1 billion. The SARS outbreak, as a result of its rapid international spread, predilection for medical personnel, and relatively high case fatality ratio, captured the attention of professionals, politicians and the public worldwide. Although the number of deaths from SARS was limited to 916 worldwide, it severely disrupted businesses and travel to affected destinations.[16] Based on figures from the World Tourism Organization, it reduced international passenger traffic by 2.6 percent in the first four months of 2003. Travel to Asia Pacific countries dropped by 10 percent to 50 percent in late March to April 2003. Tourist arrivals to Hong Kong in April and May of 2003, the peak SARS-affected months, dropped by 64.8 percent and 67.9 percent, respectively.

Singapore international tourist arrivals may serve as a proxy for how people react to epidemics and the pace at which they return to the prior behavior patterns. Figure 4 below shows that by December 2003, one year after SARS had crippled travel, international air arrivals in Singapore had rebounded and were only 11,739 arrivals, or 2.4 percent, below the December 2002 level.

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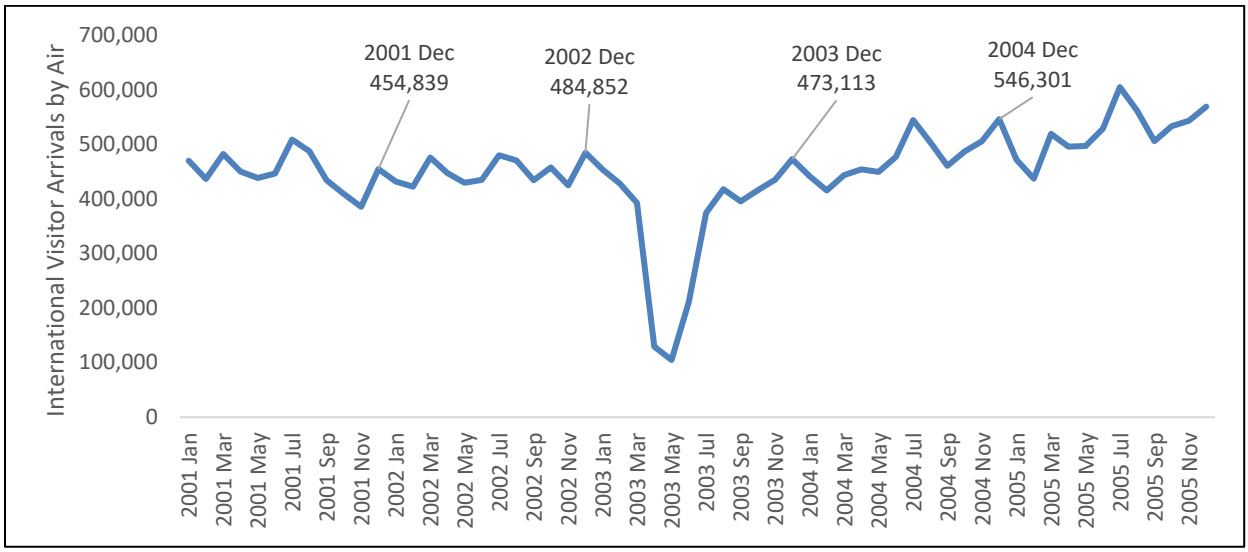
[14] Sharon Begley, "Flu-conomics: The next pandemic could trigger global recession," Reuters, January 21, 2013. https://www.reuters.com/article/us-reutersmagazine-davos-flu-economy/flu-conomics-the-next-pandemic-could-trigger-global-recession-idUSBRE90K0F820130121

[15] World Health Organization. https://www.who.int/ith/diseases/sars/en/ (accessed July 6, 2020)

[16] Ibid.

Figure 4: Singapore international visitor arrivals by air, 2001-2005



Source: Singapore Tourism Board

While the above parallel may fit Upstate markets that have been less impacted by COVID-19, the experiences of the Empire City, Resorts World New York City, and Jake's 58 VLT facilities may be quite different. These three properties are located in densely populated areas that were more heavily impacted by COVID-19. The virulence of COVID-19 Downstate means the propensity of patrons to return to those facilities may lag the opening of the Upstate operations. Many people remain hesitant to use public transit or board buses to casinos.

Ebola/Africa: Ebola was first identified in 1976, and the largest outbreak to date was the epidemic in West Africa, which occurred from December 2013 to January 2016, with 28,646 cases and 11,323 deaths. Most of the information regarding how that Ebola outbreak affected the leisure industry is anecdotal. A Safaribookings.com poll of 500 tour operators in Africa found that 50 percent of operators experienced cancellations due to fears about the virus and 69 percent said that they had experienced noticeable declines in their future bookings.[17] Liberia, one of the countries that was hit hard by Ebola, saw average hotel occupancy during the crisis drop from nearly 70 percent to about 30 percent. Some hotels reported occupancy as low as 10 percent as a result of the crisis. As a direct result, hotel workers were either laid off or had their working days reduced by half.[18]

MERS/South Korea: Middle East respiratory syndrome ("MERS") was first discovered in the Arabian Peninsula, but it was taken to South Korea by an infected traveler in 2015. The MERS outbreak in South Korea started in 2015 and resulted in 186 hospitalizations and 38 deaths, with more than 16,000

[17] Michelle Grant, "Ebola's impact on tourism in Africa," travelmole.com, December 23, 2014. https://www.travelmole.com/news_feature.php?news_id=2014738

[18] "The Economic Impact of the 2014 Ebola Epidemic: Short and Medium Term Estimates for West Africa," The World Bank Group, October 7, 2014. http://documents.worldbank.org/curated/en/524521468141287875/pdf/912190WP0see0a00070385314B00PUBLIC0.pdf

people quarantined because of potential exposures by December 23, 2015, when the World Health Organization declared the end of the MERS outbreak in South Korea. One study showed that the MERS outbreak resulted in a reduction of 2.1 million noncitizen visitors, corresponding with $2.6 billion in tourism loss for South Korea. Estimated losses in the accommodation, food and beverage service, and transportation sectors associated with the decrease of noncitizen visitors were $542 million, $359 million, and $106 million, respectively.[19] In the South Korean hotel industry, occupancy dropped 11.9 percent from 2014 to 2015, and RevPAR (revenue per available room) declined 18.9 percent, based on year-end figures. The MERS outbreak scare caused the country's occupancy level to drop considerably from 70.8 percent in May 2015 to 48.4 percent in June 2015.[20]

H1N1/Mexico: A new influenza strain, of apparent swine origin, emerged by the end of April 2009 in Mexico. According to a study done by the Economic Research Department of the Banco Bilbao Vizcaya Argentaria, the impact of "swine flu" on tourism became apparent as soon as the outbreak was announced, on April 24, "but mainly over the following three weeks, when hotel occupancy fell to 10 percent (from 60 percent before the epidemic) in areas such as the Riviera Maya. In both coastal destinations and mainland cities lodgings fell by around 50 percent in annual terms. … Based on the differences in occupancy in coastal resorts compared to mainland cities (with a more pronounced fall in the former) it can be estimated that tourism fell around 45 percent in annual terms during the second quarter, with foreign tourism recording a drop of between 55 and 60 percent, whereas for domestic tourism this was between 40 and 45 percent. Bearing in mind that the trend up until the epidemic was a decline of around 7.5 percent, it could be said that the flu outbreak itself caused an estimated 37 percent reduction in domestic tourism during the April-June period. If the impact was mainly during one quarter, as assumed, the result for 2009 as a whole could be a drop in tourism of between 16 and 17 percent."[21] In the midst of the outbreak, an NPR correspondent filed a story from Cancun: "In the past two weeks, the number of international tourists arriving in Cancun has dropped 82 percent and the number of tourists from other parts of Mexico is down 40 percent, according to Sara Latife Ruiz Chavez, secretary for tourism for the state of Quintana Roo, which includes Cancun and the beaches known as the Maya Riviera. Swine flu is costing the region millions of dollars in lost revenue and has forced 22 hotels to temporarily suspend their operations, she says. More than 10,000 waiters, cooks, maids and other hotel employees in Cancun have been furloughed from their jobs. … In April, before the swine flu virus, also known as H1N1, burst

[19] Heesoo Joo, et al, "Economic Impact of the 2015 MERS Outbreak on the Republic of Korea's Tourism-Related Industries," Health Security, April 19, 2019. https://www.liebertpub.com/doi/full/10.1089/hs.2018.0115, p. 100-108

[20] "South Korea Hotel Market Overview," STR.com, June 25, 2019. https://str.com/article/south-korea-hotel-market-overview

[21] Eduardo Torres Villanueva, "The impact of swine flu on tourism," Banco Bilbao Vizcaya Argentaria, June 25, 2009. https://www.bbvaresearch.com/wp-content/uploads/mult/090625_ObserSectorialMexico_3_eng_tcm348-197121.pdf

into the headlines, about 75 percent of Cancun's hotel rooms were occupied. Now, the occupancy rate is running at about 20 percent."[22]

Conclusion: Every outbreak of viral infections is different. Some are contained to one continent, or one part of a continent. Some are more easily transmissible than others. Some are more deadly than others. The degree to which they have a lasting effect on the leisure industry also varies, but in many cases tourism rebounds quickly. The World Economic Forum reported, "While research shows that the impact of pandemics can be steeper than other shocks, the affected countries bounce back to pre-shock levels faster. For instance, during the SARS pandemic of 2002 to 2004, occupancy levels fell by 10 percent before bouncing back to pre-crisis levels within the year. Another example is the swine flu outbreak. Data shows that Mexico City recorded a 50 percent decline in occupancy levels at the end of April and early May 2009, when it was confirmed that the outbreak originated in Mexico, and resorts suffered from cancellations. Yet, by early 2010, occupancy levels were on the mend."[23]

b. Relevant Experience

The U.S. gaming industry has experienced other relevant disruptions that have depressed revenues. Three such incidents that we examine in this section were physical events in which revenues began to recover shortly after the incidents ended. The other, the Great Recession, had a longer-lasting effect.

1) Terrorist Attacks, 2001

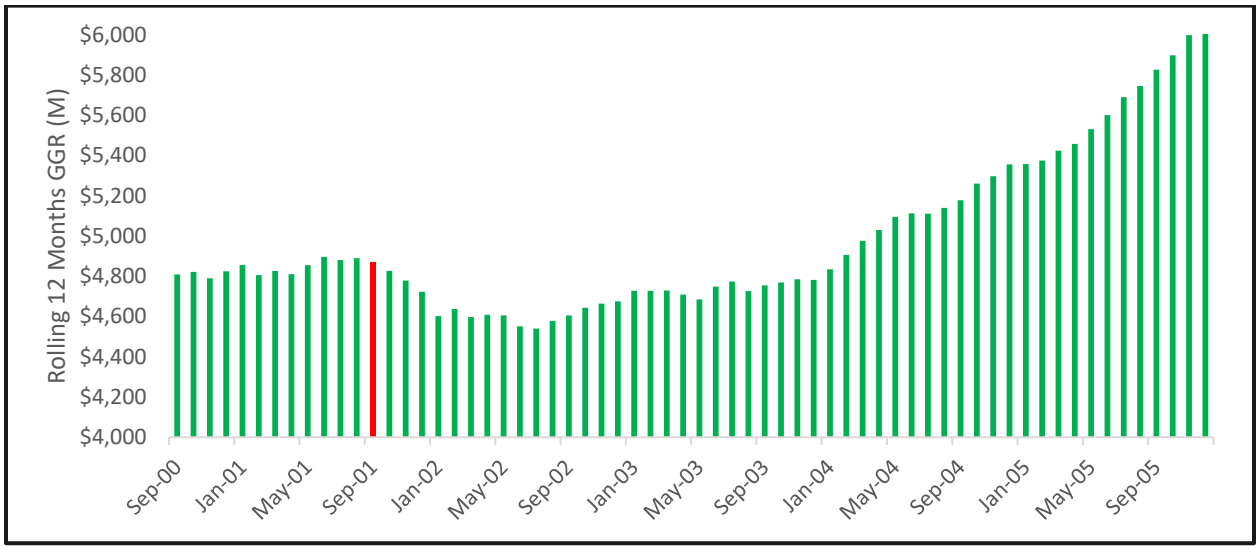
The terrorist attacks of September 11, 2001, created a shock to the economy, nationally as well as globally. Impacts to the casino industry included the closure of air travel and, less perceptibly, changes in consumer behavior – such as fears of gathering in public places that might be viewed as targets for future attacks.

Figure 5 analyzes results on the Las Vegas Strip, where GGR declines were apparent in the months following the attacks. Note that Las Vegas is a destination market where about half the visitors arrive by air. For a full year after the attacks, GGR declined by 7 percent, due in part to changes in consumer behavior and in part because of declines in discretionary spending. By January 2004, the Strip had fully recovered, generating $4.8 billion in last-12-months GGR. For the following two years, from 2004 through 2005, GGR grew by 25 percent.

[22] Jason Beaubien, "Swine Flu Takes Toll On Mexico Tourism Industry," NPR.org, May 14, 2009. https://www.npr.org/templates/story/story.php?storyId=104095754

[23] Tiffany Misrahi, "MERS: 5 implications for the tourism industry," World Economic Forum.org, June 15, 2015. https://www.weforum.org/agenda/2015/06/mers-5-implications-for-the-tourism-industry/

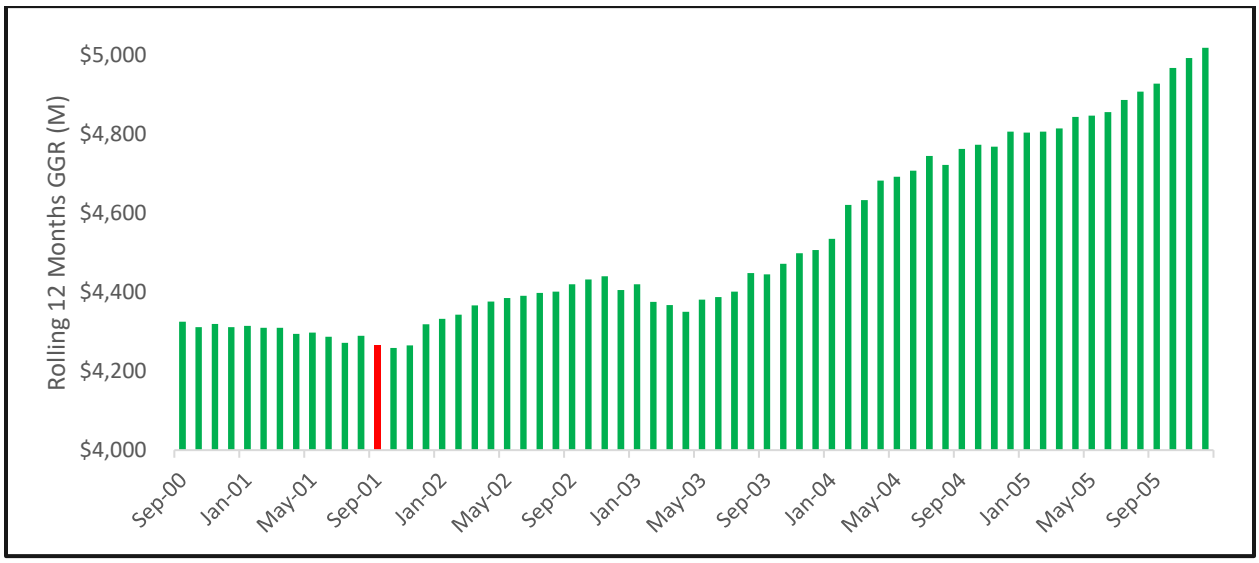
Figure 5: Las Vegas Strip rolling-12-months GGR, September 2000 through December 2005, showing impact from 9/11 attacks



Source: Nevada Gaming Control Board

We also examined markets that were more convenience-based and far less reliant on air travel, most notably Atlantic City, which at the time was the primary gaming choice for casino players in the metro New York area. For the 12-month period ending August 2001, Atlantic City – which is almost entirely a drive-in market – generated $4.3 billion in GGR. Following the 9/11 attacks, GGR in the 12-month period ending October 2001 dropped by 0.2 percent that month; the following month, the market began a modest rebound. By September 2003, Atlantic City GGR reached $4.45 billion in GGR, an increase of 4.5 percent from the pre-attack period. For the following two years (2004-2005), Atlantic City GGR increased by an additional $550 million, a 13 percent increase. Note that this is a period when Atlantic City had a near monopoly in the Mid-Atlantic area, thus serving as an effective proxy for the entire region.

Figure 6: Atlantic City rolling-12-months GGR, September 2000 through December 2005, showing impact from 9/11 attacks



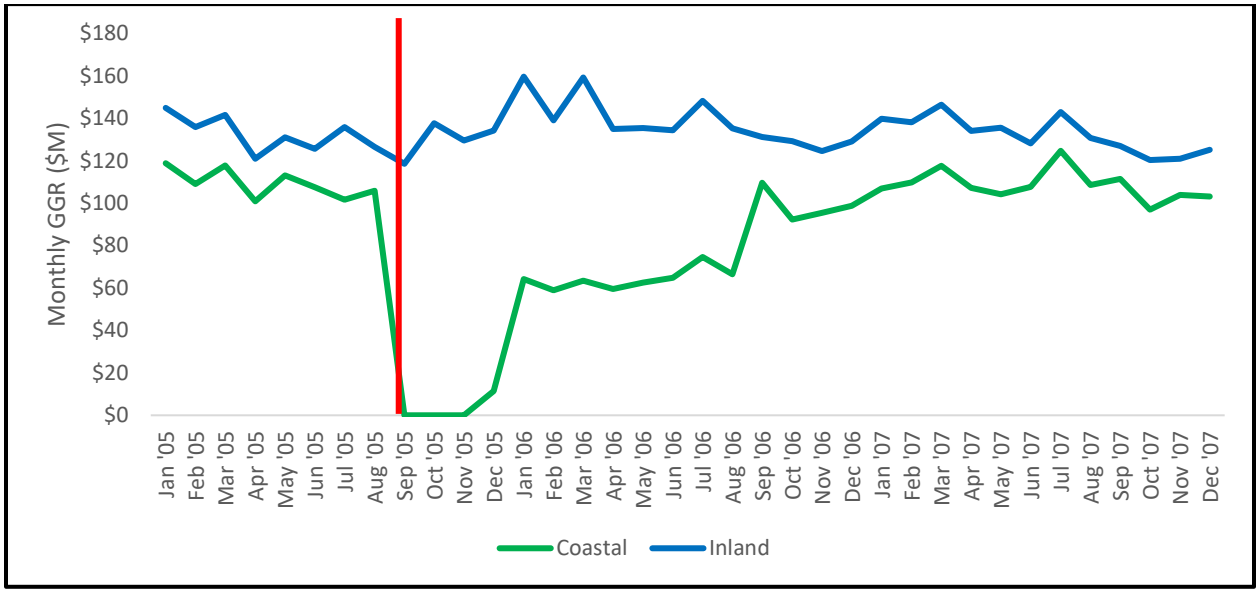
Source: New Jersey Casino Control Commission

The data in other markets are similarly conclusive in that consumer behavior can be expected to rebound, thus supporting Spectrum's New York projections that future years will not demonstrate any permanent effects on consumer spending or GGR from the current pandemic.

2) Hurricane Katrina, 2005

Following Hurricane Katrina, which ravaged the Mississippi Gulf Coast in late August 2005, coastal casinos were shut down for two months, and it took a full year for GGR to recover to pre-Katrina levels. Inland Mississippi casinos, which avoided the brunt of Katrina, outperformed the coastal casinos, as shown in Figure 7 below.

Figure 7: Mississippi coastal and inland casino GGR showing impact of Hurricane Katrina



Source: Mississippi Gaming Commission

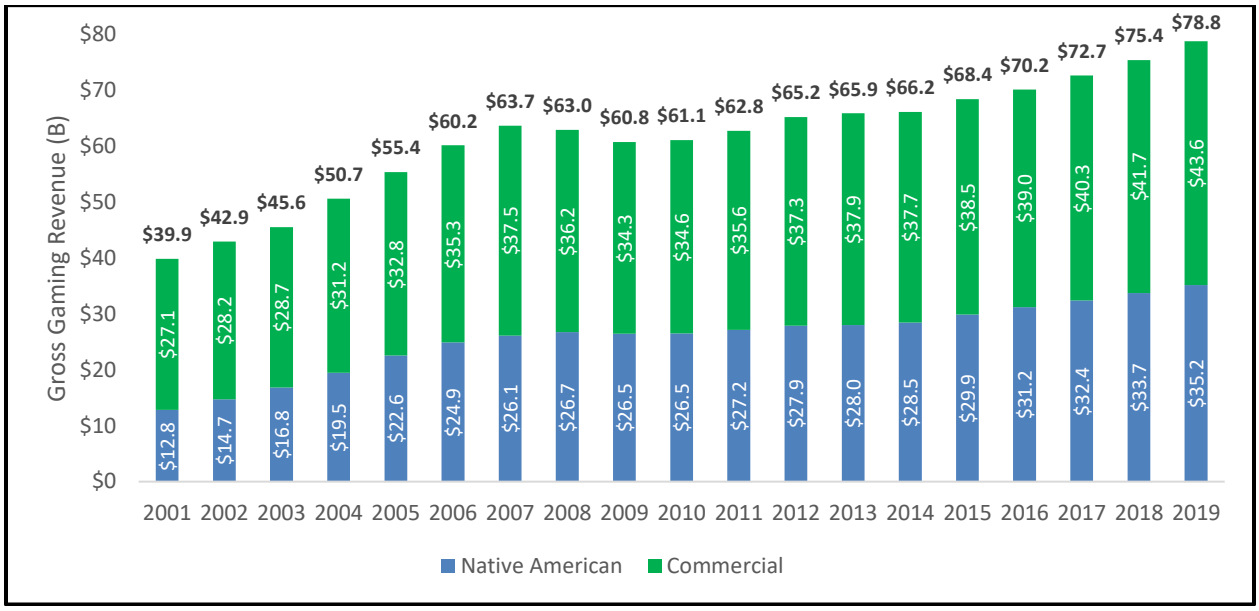
3) Great Recession, 2007-2009

Until the Great Recession, generally reported to have occurred from December 2007 through June 2009, gaming operators and analysts believed the gaming industry to be recession-proof. In good times consumers had ample discretionary dollars with which to gamble, and in down times they found casino gambling to be a diversion – one in which they might possibly improve their fortunes. That perception changed beginning in 2008.

As shown in Figure 8 below, the Great Recession had an immediate and lasting impact on the U.S. gaming industry. In 2008, for the first time, the gaming industry (commercial and Indian casinos combined) reported a year-over-year decline in GGR, dropping 1.1 percent – and then 3.5 percent the following year. It was not until 2012 – roughly four years after the recession began – that the industrywide GGR surpassed

its pre-recession level. However, when adjusted for inflation, it was not until 2019 – 12 years later – that casinos generated more GGR than in 2007.[24]

Figure 8: U.S. gross gaming revenue showing impact of Great Recession



Source: American Gaming Association, National Indian Gaming Commission. **Note:** Spectrum estimate for 2019 Indian GGR.

Whether the current, COVID-19-caused recession will have a similarly long negative impact on the U.S. gaming industry remains to be seen. While some economists predict a V-shaped recession in which the economy recovers as quickly as it declined, others are concerned about a "scarring" effect that could last for years. On June 8, the World Bank reported:

> "The COVID-19 recession is singular in many respects and is likely to be the deepest one in advanced economies since the Second World War and the first output contraction in emerging and developing economies in at least the past six decades," said World Bank Prospects Group Director Ayhan Kose. "The current episode has already seen by far the fastest and steepest downgrades in global growth forecasts on record. If the past is any guide, there may be further growth downgrades in store, implying that policymakers may need to be ready to employ additional measures to support activity."[25]

4) Las Vegas Mass Shooting, 2017

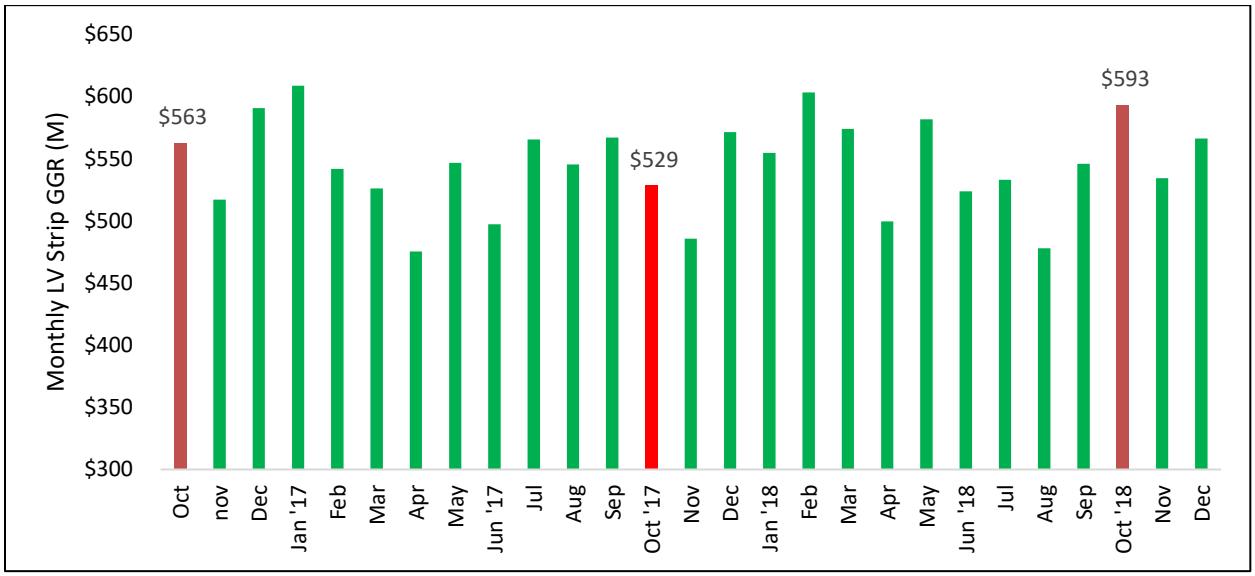
After the mass shooting in Las Vegas that occurred emanating from Mandalay Bay Hotel on October 1, 2017, the major Strip casinos did not close down as a result. They did institute patron checks, including examining luggage and requiring patrons to pass through metal detectors. As a result of the

[24] $63.7 billion in 2007 adjusted for inflation equaled $77.9 billion in 2019, according to the U.S. Bureau of Labor Statistics CPI Inflation Calculator. This equation does not factor the impacts of added supply over that period.

[25] The World Bank, "COVID-19 to Plunge Global Economy into Worst Recession since World War," June 8, 2020. https://www.worldbank.org/en/news/press-release/2020/06/08/covid-19-to-plunge-global-economy-into-worst-recession-since-world-war-ii

shooting, Strip GGR for both October and November declined 6 percent from the prior year, compared to the year-earlier months. A year later, in October 2018, Strip GGR was 12.2 percent higher than in 2017.[26]

Figure 9: Monthly Las Vegas Strip GGR showing impact of mass shooting July 2017 – December 2018



Source: Las Vegas Convention and Visitors Authority

Unlike the Great Recession, or the 9/11 terrorist attacks, the mass shooting incident in Las Vegas did not trigger nationwide economic impacts. The incident briefly impacted the perception of personal safety at Strip properties. However, as can be seen in the monthly data, the safety concerns were not long-lived. Strip resort patrons evidently recognized that the shooting was an isolated incident and returned to their prior ways.

5) Conclusion

The gaming industry is resilient. While once thought recession-proof, that has proven not to be the case. However, people enjoy gambling, socializing and entertainment. Spending on entertainment and other non-essentials declines in recessions, but it gradually returns as consumers gain confidence in their economic situation. Nor are fears of safety long-lived, as seen in the monthly data on Strip GGR in the period before and after the mass shooting incident. However, no one knows how consumers will react to an extended viral outbreak. The aforementioned events and incidents can shape estimates, but there is no precedent on which to predict future gaming revenues.

[26] We analyzed the Las Vegas mass shooting incident of 2017 on a monthly basis rather than on a rolling-12-months basis because the incident was an isolated incident without long-range economic repercussions. Using a rolling-12-months analysis would obscure rather than highlight the impact of the shooting on Strip GGR.

3. Forecasting Impacts

Any discussion of how, when, and to what extent gaming in New York will rebound to pre-pandemic levels rests on one premise: Uncertainty is the only certainty. Factors that must be considered when considering the recovery of the New York gaming industry include:

- The current disruption is more widespread and impactful than past disruptions, thus the recovery will be slower and deeper than was evidenced in past recoveries.
- As gaming facilities reopen, many operators will be constrained by State-imposed restrictions, as well as by self-imposed restrictions.
- Between now and our initial projection year of 2023, customers will be guided by their own concerns and fears, as well as by possible reductions in their incomes and discretionary spending.
- The recovery period will also affect non-gaming businesses such as lodging, dining and entertainment, and this will further damage revenues during this recovery transition.

Adhering to social-distancing guidelines by reducing available gaming positions in an economy that is still recovering from a pandemic is likely to reduce GGR by as much as 40 percent. That projection is based on factors that are more difficult to project but are quite real.

a. Effect on Decline in Discretionary Spending

1) COVID-19 Anxiety

The potential exists that a number of adults will continue to limit their attendance in public places out of a general fear that would still be present in the absence of a vaccine or a reluctance of a significant portion of the population to receive a vaccine. The precise number is unknowable but must still be considered.

Fitch Ratings, one of the premier credit rating agencies in the world, published its *U.S. Gaming Handbook: Navigating the Coronavirus Recovery*[27] in June 2020. Fitch said it believes that Las Vegas's heavy reliance on air travel and tourism will result in a slower recovery for Las Vegas than for regional operators. It projects gaming revenues will return to the 2019 level in 2023.

Figure 11: Fitch Ratings estimated GGR change rates by major region, 2020-2023

	Percent Change Relative to 2019 Levels			
	2020	2021	2022	2023
Macau	(50.0)	(15.0)	(7.5)	0.0
Singapore	(42.5)	(15.0)	(7.5)	0.0
Las Vegas	(45.0)	(20.0)	(7.5)	0.0
Regionals	(28.9)	(10.0)	(5.0)	0.0

Source: Fitch Ratings

[27] Alex Bumazhny, Colin Mansfield, and Connor Parks, Fitch Ratings; *U.S. Gaming Handbook: Navigating the Coronavirus Recovery*, June 2020.

It should be noted that the Fitch analysis lumps all regional operators into one category. Some states, including Mississippi and Louisiana, reopened casinos in May, as did several tribal casinos. New York permitted commercial casinos and VLT facilities to reopen September 9.

On a broader economic scale, the World Economic Forum[28] cited a report from global consultant McKinsey & Company stating:

> If the public health response, including social distancing and lockdown measures, is initially successful but fails to prevent a resurgence in the virus, the world will experience a "muted" economic recovery, says McKinsey. In this scenario, while the global economy would recover to pre-crisis levels by the third quarter of 2022, the US economy would need until the first quarter of 2023 and Europe until the third quarter of the same year. … If the public health response is stronger and more successful – controlling the spread of the virus in each country within two-to-three months – the outlook could be more positive, with economic recovery by the third quarter of 2020 for the US …

At this point, forecasting when consumers will revert to their pre-pandemic levels of discretionary spending may be largely dependent on two factors not yet known: the spread rate of the coronavirus and the deployment of a vaccine to prevent the virus.

In an effort to mitigate the economic contraction caused by the mandatory lockdown, the Federal Government passed the CARES Act and other measures to prop up consumer spending and confidence. The CARES Act included a provision to give each person filing for unemployment an additional $600 weekly on top of any state unemployment payments. In some cases, the total payments from the CARES Act and unemployment were greater than the base earnings prior to the crisis. Changes to unemployment benefits at the federal and/or state levels will impact consumers' discretionary spending, upon which gaming is dependent.

2) Great Recession Example

In the Great Recession, employment fell by 8,750,000.[29] The current pandemic has resulted in nearly three times the loss of employment that resulted from the Great Recession. So, while there may be interest in returning to entertainment and gaming as leisure activities, the level of demand would be affected by the current level of high unemployment. As a means to estimate the potential impact on the gambling industry as a whole, it may be instructive to review spending in the post-Great Recession years. Figure 10 presents the change in total taxable revenue for gambling industries (establishments subject to federal income tax) as reported by the U.S. Census Bureau and complied by the Federal Reserve Bank of St. Louis.

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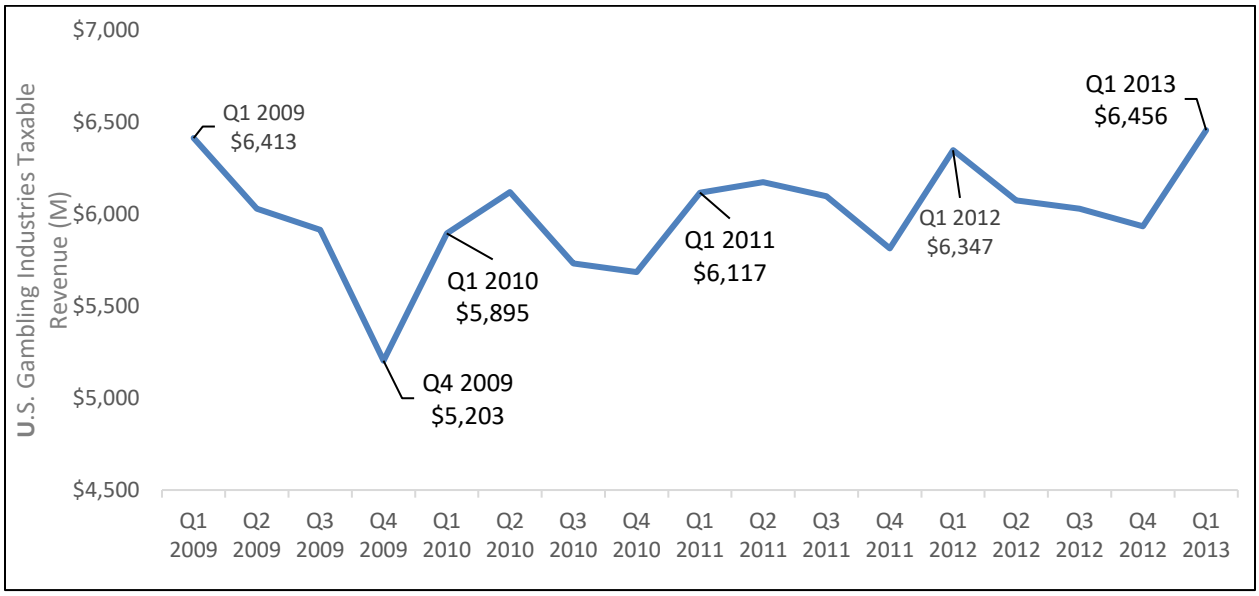
[28] Laura Oliver, "It could take three years for the US economy top recover from COVID-19," World Economic Forum, March 30, 2020 https://www.weforum.org/agenda/2020/03/economic-impact-covid-19/

[29] Christopher J. Goodman and Steven Mance, "Employment loss and the 2007-09 recession: an overview," *Monthly Labor Review,* April 2011. https://www.bls.gov/opub/mlr/2011/04/art1full.pdf

Figure 10: Quarterly taxable total revenue in U.S. gambling industries, 2009-2013



Source: Federal Reserve Bank of St. Louis, U.S. Census Bureau[30]

In the years following the Great Recession, GGR as measured in Figure 10 did not return to pre-recession levels until more than three years afterward.

Conclusion: A loss of 8.75 million jobs resulted in a decline of 18 percent in gambling revenues. The COVID-19 recession has resulted in three times the loss of jobs. Does that mean a 60 percent loss of gambling revenue? It is hard to say, for two reasons: First, unlike the COVID-19 experience that shuttered businesses, casinos did not shut their doors during the Great Recession; second, there has been a massive infusion of cash into the economy through the CARES Act, which was not present in the Great Recession. Finally, a recession caused by bad loans is different than a recession cause by a pandemic and the mandatory lockdowns meant to curb it.

b. Modeling Assumptions, Projections

Spectrum developed three scenarios in forecasting statewide GGR, by property: Mid Case, Low Case, and High Case. The scenarios depend on the opening dates of the gaming properties and many other factors, as noted above. Additionally, it is important to note that fiscal years are not the same as calendar years ("CY"). For example, FY 2023 runs from April 2022 through March 2023. In other words, FY 2023 is nine parts CY 2022 and three parts CY 2023.

Following are Spectrum's insights and assumptions that factor into modeling our COVID-19 impacts for New York.

[30] U.S. Census Bureau, Total Revenue for Gambling Industries, Establishments Subject to Federal Income Tax, retrieved from FRED, Federal Reserve Bank of St. Louis.
https://fred.stlouisfed.org/series/REV7132TAXABL144QNSA (accessed May 5, 2020)

1) Capacity Reduction

Social distancing and other capacity-reduction measures will reduce the available gaming capacity statewide. Gaming property managers will have to make decisions on how best to operate in the new environment. Some may choose to invite – via targeted marketing – their better players to the property while minimizing outreach to players who do not meet the criteria. Others may choose to change game rules, minimum bets, or hold percentages to generate the most GGR possible from the reduced capacity.

In a non-pandemic environment, cutting the number of available slot machines in half while limiting table positions could result in an estimated 30 percent decline in GGR. That projection is based on an understanding that:

- Operators would eliminate underperforming slot machines, thus focusing on those machines that are most popular, particularly in peak periods, such as weekends and holidays.
- A large percentage of slots are idle for most parts of the week in any event, thus minimizing downward pressure on revenue.
- Operators would likely counterbalance a reduction in table positions by raising table minimums, thus focusing on more profitable table players and increasing the relative efficiency of the remaining positions.

Notably, that estimate focuses on a non-pandemic environment in which we assume that the demand remains unchanged before and after the decline in gaming positions, and it also assumes that gaming operators will adjust their marketing programs to focus on higher-value customers, which would accompany any decline in supply irrespective of the reason.

Despite early results from the casinos in Louisiana and other states, no one knows for certain how gaming patrons will respond over the longer term. Further, and specific to New York, commercial casinos and VLT facilities were permitted to open at 25 percent capacity on September 9, 2020. Given the raft of unknowns, Spectrum developed a hypothetical gaming floor showing the GGR impact that may result from restrictions on capacity and from new procedures on handling cards, dice and chips. First, we examine the table-games sector. To understand a table games department, it is important to understand basic terms and how they interact to generate GGR.

- **Spots** refers to the number of players who can physically be present at a game.
- **Occupied Spots** refers to the number of spots actually played at a game.
- **Carnival Games** include games that are often derivatives of traditional casino games. 3 Card Poker, Let It Ride, Caribbean Stud, Texas Hold ‘Em, and Casino War are examples of these types of game.
- **Decisions per Hour** refers to the speed of play, or how many betting decisions the guest makes in an hour.
- **Average Bet** is the average amount bet per decision by the guest. Table games have minimum and maximum bets. Often during high-demand periods, the table game minimums are raised to maximize the value of the spot to the casino. In our hypothetical pre-COVID-19 casino we have assumed an average bet of $40 at all games except roulette.

- **House Advantage** is the edge that goes to the house. In blackjack, for example, the house over the long term will win 51 of 100 bets.

Figure 11 below presents a pre-COVID-19 hypothetical casino floor table games department. In the casino floor described below, the table games are operating at a low level of capacity on a daily basis. Some tables may be open only on busy weekends. In a normal operating environment, it is profitable for a casino to have these games available to meet demand during peak times.

Figure 11: Pre-COVID-19 hypothetical table games department

Game	No. Tables	Spots per Table	% Spots Occupied	Decisions per Hour	Average Bet	House Advantage	GGR per hour	Daily Hours	Est. Annual GGR
Blackjack	50	6	35%	75	$40	0.51%	$1,607	24	$14,070,000
Baccarat	8	6	35%	40	$40	1.25%	$336	24	$2,940,000
Carnival	20	6	35%	65	$40	2.50%	$2,730	24	$23,910,000
Craps	8	12	35%	40	$40	1.40%	$753	24	$6,590,000
Roulette	6	8	35%	50	$15	5.25%	$662	24	$5,790,000
Total	**92**	**612**							**$53,300,000**

Source: Spectrum Gaming Group

In Figure 12 below, we present the same gaming floor with restricted capacity as a result of COVID-19 health requirements. In response to the restrictions, we have assumed that casino management will increase the minimum bets at the tables. We have estimated that to comply with social distancing and sanitation rules, casino management reduced the number of available spots at each table by 50 percent. In an effort to offset the reduced capacity in this example, the casino has raised the minimum bet but made no changes to game rules. Further we have assumed that the percentage of occupied spots increased to 75 percent of the available restricted capacity.

To comply with sanitation requirements, we have cut our assumption on decisions per hour to allow time for cleaning chips and changing cards and dice on a more frequent basis. We have also assumed that rather than operating on a 24-hour schedule the gaming floor will be closed from 3 a.m. to 9 a.m. to allow time for deep cleaning surfaces and carpets.

Figure 12: Post-COVID-19 hypothetical table games department

Game	No. Tables	Spots	% Spots Occupied	Decisions per Hour	Average Bet	House Advantage	GGR per hour	Daily Hours	Est. Annual GGR	% Change in GGR
Blackjack	50	3	75%	45	$50	0.51%	$1,291	18	$8,480,000	-40%
Baccarat	8	3	75%	24	$50	1.25%	$270	18	$1,770,000	-40%
Carnival	20	3	75%	40	$50	2.50%	$2,250	18	$14,780,000	-38%
Craps	8	6	75%	24	$50	1.40%	$605	18	$3,970,000	-40%
Roulette	6	4	75%	30	$20	5.25%	$567	18	$3,730,000	-36%
Total	**92**	**306**							**$32,730,000**	**-39%**

Source: Spectrum Gaming Group

A similar exercise can demonstrate the potential impacts that restricting capacity on electronic gaming devices (or "EGDs," an umbrella term for slot machines and video lottery terminals) can have.

Again, we have assumed that to partially offset the loss of capacity, property management has increased the hold percentage (i.e., the inverse of the payout percentage to patrons) and increased the minimum bet on the EGDs. In Figure 13, the shaded row represents the pre-COVID-19 gaming floor. The lower rows present possibilities based on decisions made by management on how best to address the new situation.

Figure 13: Potential COVID-19 EGD floor operating and GGR changes

EGDs on Floor	Available Floor	Hold	Bets per Min.	Average Bet	Mins. on Game with $100	EGD Occupancy	GGR per Hour	Guests on Floor	Daily Hours	Est. Annual GGR	% Change in GGR
1,500	**100%**	**8.50%**	**10**	**$1.08**	**118**	**25%**	**$20,655**	**375**	**24**	**$180,940,000**	
1,500	66%	8.75%	10	$1.15	114	40%	$23,909	396	18	$157,080,000	-13%
1,500	50%	9.00%	10	$1.25	111	50%	$25,313	375	18	$166,300,000	-8%
1,500	33%	9.25%	10	$1.35	108	70%	$25,962	347	18	$170,570,000	-6%

Source: Spectrum Gaming Group

In the case of EGDs, we have assumed that while the number of games is reduced, each game will be played more intensely; i.e., rather than having a 24-hour average occupancy of 25 percent, a smaller floor will have higher occupancy. The number of guests on the floor holds fairly constant throughout the example.

It may be the case that a reduction in capacity is not critical. The games do not play themselves; rather, the major determinant is player behavior. If a casino has 1,500 slot machines and only 300 players on the floor, a reduction in capacity to 750 machines would have little impact.

2) Reduction in Attendance, Average Spend per Visit

For our New York reopening model, Spectrum developed three scenarios, the primary differences being the change in visitation for the calendar year. For Fiscal Year 2020-21 (FY 2021), the commercial casinos and VLT properties were shuttered for 23 weeks. The Oneida casinos reopened on June 10. Seneca Niagara Falls reopened June 18, Seneca Buffalo Creek reopened June 25, and Seneca Allegany opened July 2. Currently, the Seneca casinos are operating under new conditions that include no table games, no drink service on the casino floor, no smoking, numerous slot machines shuttered to ensure social distancing, and customers required to wear face masks. On July 27, the new Oneida Lakehouse casino opened. The St. Regis Mohawk Akwesasne Casino Resort opened August 31 to New York patrons living within 300 miles of the property.

The great unknown is how players will react to the reopenings. We expect that visitation to properties that reopen sooner will decline less than at properties that reopen later, as the properties that reopen sooner will retain an advantage as players become comfortable with the protocols in place.

Spectrum has based its reopening estimates on the relative severity of the COVID-19 unemployment picture vs. unemployment in the Great Recession, with allowances for the income support provided by the CARES Act, an eye on casino reopenings in other states and consumer behavior, and the reaction of travelers to the SARS epidemic.

Gross gaming revenue is a function of the number of visits and the value of those visits to the gaming property. A change in either or both of these numbers will change the GGR derived from the property. When seeking to develop estimates of visitation and spend per trip after the mandatory lockdown, it may be instructive to review behavior that was evident prior to the mandatory lockdown.

A reduction in attendance may be the most critical factor impacting GGR. Many players are considered casual patrons who visit on a regular basis but are of low value to the host gaming facility as they spend little per visit. Based on Spectrum's experience studying – and operating in – the gaming industry, we believe the casual player is less likely to return to an environment where there is a risk of infection, whereas an avid player with a high value to the casino is more likely to resume his or her regular gaming activity, while we can expect casinos to prioritize their higher-value customers in their marketing efforts, and in determining which players are allowed on the floor during periods of limited capacity. The early reopening data from other states bear this out.

The Louisiana data in Figure 14 show a remarkable increase in win per visit, but a reduction in daily visitation of 76 percent in May, and a decline in GGR of 63 percent that month. The visitation slowly rose as people became more comfortable in the casino environment. We incorporated these data on win per visit and visitation into our modeling as we developed our cases for the reopening of New York's gaming industry.

Figure 14: Louisiana casino/racino year-over-year change in visits, win per visit, and GGR, 2020 vs. 2019

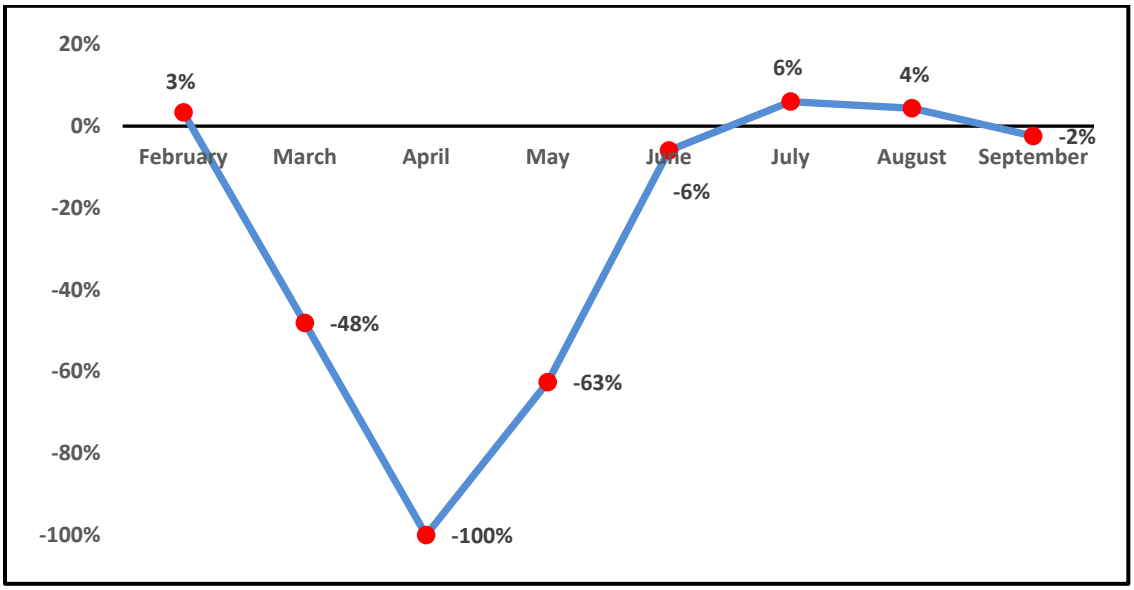
2020 vs. 2019			
Month	**Visits**	**Win/ Visit**	**GGR**
Feb	-4%	8%	4%
Mar	-61%	1%	-60%
Apr	-100%	-100%	-100%
May	-76%	54%	-63%
June	-38%	40%	-38%
July	-34%	36%	-9%
August	-43%	24%	-30%
Total	**-50%**	**23%**	**-39%**

Source: Louisiana Gaming Commission

Win per visit is a function of the number of people who feel comfortable visiting a gaming facility. Initial visits will be from players who are either invited by the property or who are avid players. The spend-per-visit for these players will be higher than average. As more people become comfortable in the new environment, more players of lesser value will return, driving down the average spend-per-visit.

Mississippi saw a return to pre-pandemic GGR in July. Visitation has been down. As has been the case in other jurisdictions, the win per visit has been higher. The reductions in capacity have not had any impact on gaming revenues.

Figure 15: Year-over-year change in Mississippi casino GGR, 2020 vs. 2019



Source: Mississippi Gaming Commission

Other factors in the resurgence of GGR include pent-up demand and increases in discretionary income, resulting from federal relief and employment growth.

Figure 16: Year-over-year change in Mississippi casino visits, win per visit and GGR, 2020 vs. 2019

2020 vs. 2019			
Month	**Visits**	**Win/ Visit**	**MS GGR**
February	-6%	10%	3%
March	-60%	31%	-48%
April	-100%	-100%	-100%
May	-79%	76%	-63%
June	-35%	45%	-6%
July	-36%	65%	6%
August	-28%	46%	4%
September	-11%	10%	-2%
Total	**-45%**	**35%**	**-27%**

Source: Mississippi Gaming Commission

It may be the case that casual players do not return quickly to casinos. Once people break their usual entertainment pattern of casino visitation, they may not return as often as they had in the past. That was the case in the period following the Great Recession.

Using data from Oneida County, we can assess performance of the Oneida Nation casinos post-pandemic. The county receives compacted exclusivity payments equal to 25 percent of the State's payment from the Oneida Nation. Recently, the State reported receiving a first-half 2020 payment of

$5.175 million from the Oneida Nation.[31] As shown below, GGR for the first half of 2020 is 41 percent below the prior year. When compared on a daily basis, GGR for the first half of 2020 was down 15.6 percent. Under the terms of the settlement agreement, the County received another $2.5 million payment, which is paid from the State to the County, and is to be paid annually for 19.25 years from the effective date of the agreement.[32]

Figure 17: Estimated Oneida gaming performance, first half 2020 vs. first half 2019.

Est. Oneida Slot GGR, 6 Months 2020		Days Open
For Q1 2020	$3,700,000	127
For Q2 2020	$1,475,000	
Est. Oneida Co. Portion	$5,175,000	
% of Rev share to Co.	25.0%	
Est. Total Rev Share	$20,700,000	**Win/Day**
Est. Total Slot Rev	$82,800,000	$651,969

Est. Oneida Slot GGR, 6 Months 2019		Days Open
For Q1 2019	$4,168,890	182
For Q2 2019	$4,613,597	
Est. Oneida Co. Portion	$8,782,487	
% of Rev share to Co.	25.0%	
Est. Total Rev Share	$35,129,947	**Win/Day**
Est. Total Slot Rev	$140,519,790	$772,087
Change	**($57,719,790)**	**($120,118)**
% Change	**-41.1%**	**-15.6%**

Source: Oneida Indian Nation, New York State Commissioner of Taxation

During this 2020 period, the Indian casinos were the only form of entertainment open in the area. The CARES Act was providing an additional unemployment payment of $600 per week. As such, there may have been pent-up demand and additional disposable income. It remains to be seen what will happen to casino revenue after other forms of entertainment open and the CARES Act payments cease.

In each of Spectrum's three New York scenarios, we have assumed that GGR in CY 2020 and FY 2021 will decline by the same amount from prior-year number. The difference in the following two years is in the angle of ascent of GGR as the industry pulls out of the crisis and people adapt to the new environment. The return of the lower-value players may take time. As has been documented in other portions of the report, win-per-visit nationwide is about $100.

We have modeled the scenarios with the GGR per trip in our Mid and Low scenarios, whereby GGR returns to the CY 2019 level in CY 2023, albeit at different paces. We modeled the High scenario with

[31] New York State Commissioner of Taxation and Finance Report of Moneys Received New York State Gaming Commission, July 30, 2020.

[32] Settlement Agreement by the Oneida Nation the State of New York the County of Madison and the County of Oneida. thttps://www.tax.ny.gov/pdf/publications/oin_settlement_agreement.pdf

a more rapid return of the lower-value player, and return to the 2019 levels of GGR in 2022, based on the return of revenues based on the recovery from the Great Recession, albeit modified for the CARES Act interventions.

As noted above and elsewhere in the report, GGR is a product of the number of visits and the amount of casino spending each player generates on a trip. As states have started reopening casinos, a common trend has been that there have been fewer visits than in the prior year but each visitor has spent more than usual at the casino. High-value customers are returning first. Spectrum believes that lower-value customers are waiting for clarity on their economic and physical health. At the same time, casino operations are focusing more of their marketing efforts on their higher-value customers. As the fear of contagion diminishes, some lower-value players will return. As this happens, the spend per trip will decline. We estimate that the spend per visit in the three scenarios we have developed will evolve as shown in Figure 18.

Figure 18: Assumed average gaming spend-per-visit in New York, FY 2020-2023

Spend per Trip by Scenario			
Fiscal Year	Low	Mid	High
2020	$100	$100	$100
2021	$135	$135	$135
2022	$120	$115	$115
2023	$110	$105	$100

Source: Spectrum Gaming Group

The investment bank Jefferies made similar remarks on visitation and player value in a May 31 report to clients:

> We note, however, that the level of revenue will not necessarily mirror the level of traffic for several reasons, with initial reports of coin-in being up YoY [year over year]. Our discussions with management teams and operators suggest the mix of customers during the initial ramp [up] should shift toward top-tier database, higher-spending customers. Operators have maintained active communication with their top-tier customers and are providing priority access and services. …
>
> The information thus far raises important questions. First, how long the pent-up demand and constrained businesses can continue in the context of all markets and properties opening which will level the playing field? Second, at what point does the severe impact to the economy and employment show up in revenue trends?[33]

3) Marketing Spend Reduction

With the COVID-19-induced reduction in capacity and ongoing demand, there is less capacity to fill, and so less of a need for expensive marketing schemes. For example, some marketing programs have been designed around the idea that spending 95 cents to earn $1 is still profitable, and that an empty slot stool generates no revenue or income. Such programs are not feasible, nor would they likely be implemented in the current environment, in Spectrum's opinion.

[33] David Katz, Khoa Ngo, and Cassandra Lee, "All feet do not have equal value," Jefferies Gaming Lodging & Leisure Weekly Matters. May 31, 2020.

In conversations with operators that have reopened, they note that their first weeks were by invitation only to high-value players. As casino marketing evolves it is likely that the focus will be on the value of the player and the total profit from the play. In the next 12 to 24 months it is likely that marketing expenditures will decline, as there is less supply and apparently plenty of demand.

c. Results of Modeling

Each Spectrum scenario as modeled has GGR fully recovering by CY 2023. As noted above, for example, FY 2023 includes nine months of CY 2022 and three months of CY 2023. Using the estimated effective "tax rates"[34] discussed in other sections of the report, we then derived annual State revenue estimates for each property in each scenario. For FY 2021, Spectrum estimates the same impact for all three scenarios.

Seven Upstate casinos, operated by the Oneida and Seneca Indian nations, reopened in June and July, followed by Akwesasne Mohawk Casino in late August. All VLT facilities and commercial casinos except one reopened on September 9; Empire City reopened September 21.

Figure 19: Actual or Potential New York property reopening dates

Gaming Facility	Reopen Date
All Oneida	10-Jun
Seneca Niagara	18-Jun
Seneca Buffalo Creek	25-Jun
Seneca Allegany	2-Jul
Akwesasne	28-Aug
Hamburg	9-Sep
Batavia Downs	9-Sep
Finger Lakes	9-Sep
Tioga Downs	9-Sep
Vernon Downs	9-Sep
Del Lago	9-Sep
Saratoga	9-Sep
Rivers	9-Sep
RW Catskills	9-Sep
Jake's 58	9-Sep
RWNYC	9-Sep
Empire	21-Sep

Source: Spectrum Gaming Group

Whether current economic conditions persist into FY 2023 is unknown and is dependent on health and economic situations that are unknowable at this time. With those factors in mind, Spectrum

[34] Spectrum recognizes that Indian gaming facilities are not taxed, but share revenue as per state compacts, and that VLTs are not taxed, but remit a percentage of lottery revenue to the state. For purposes of this analysis, we view them all as effective tax rates.

conservatively projects that upon opening and through the rest of FY 2021 gaming at existing VLT facilities and commercial casinos will decline by nearly 70 percent from the comparable FY 2020 levels. All New York VLT and commercial casinos were closed for 5.5 months of the current fiscal year.

Figure 20: New York gaming facilities estimated GGR recovery – Mid Case scenario

Property	FY 2020 GGR (M)	Est. FY 2021 GGR (M)	Est. FY 2022 GGR (M)	Est. FY 2023 GGR (M)
Akwesasne	$100.5	$30.2	$52.8	$85.4
Batavia Downs	$62.1	$18.6	$32.6	$52.8
Del Lago	$158.0	$47.4	$83.0	$134.3
Fairgrounds	$71.8	$21.5	$37.7	$61.0
Finger Lakes	$105.3	$31.6	$55.3	$89.5
Oneida	$383.0	$172.4	$301.6	$325.6
Rivers	$168.9	$50.7	$88.7	$143.6
RW Catskills	$204.6	$61.4	$107.4	$173.9
Saratoga	$126.4	$37.9	$66.4	$107.4
Seneca	$610.0	$233.1	$407.9	$518.5
Tioga Downs	$83.1	$24.9	$43.6	$70.6
Vernon Downs	$29.3	$8.8	$15.4	$24.9
All Upstate	**$2,103.0**	**$738.5**	**$1,292.3**	**$1,787.6**
Empire	$613.1	$153.3	$306.6	$521.1
Jake's 58	$225.9	$67.8	$135.5	$192.0
RWNYC	$882.3	$176.5	$352.9	$750.0
All Downstate	$1,721.3	$397.5	$795.0	$1,463.1
Statewide	**$3,824.3**	**$1,136.0**	**$2,087.3**	**$3,250.7**

Source: New York State Gaming Commission, Spectrum Gaming Group

Spectrum developed three scenarios of gaming revenue recovery. The projections were based on our experience in understanding the relationship between the supply and demand of gaming products, as well as on independent research. In developing the Mid Case scenario, Spectrum incorporated insights from the SARS epidemic, the Great Recession, the visitation and revenue results from recent re-openings of casinos, and Spectrum's own gaming industry expertise to develop GGR estimates. Other factors taken into account include:

- The seasonality of the closure; some properties fare better in the summer months.
- Some properties are more reliant on table games, and with social distancing may see a greater decline in GGR.
- Accessibility and transportation.

Factors that could also affect these results include the type of marketing efforts reopened gaming facilities may undertake. For example, aggressive marketing and promotional efforts may serve to boost GGR to unusually high levels but at the cost of a property's profits. Importantly, such variables affect each customer's decision-making on whether to resume his or her usual gaming activity.

1) Mid Case Scenario

Based on quantitative factors that are important for forecasting GGR, as well as knowledge of the New York gaming facilities, Spectrum modeled visitation changes by property (or collectively by Indian nation) in our Mid Case scenario, as presented in Figure 21 below. After reviewing the "V-shaped" SARs recovery in Singapore and the much slower four-year recovery of gaming revenue following the Great Recession, and the reductions in GGR caused by a loss of employment and income, we believe the New York recovery in our Mid-Case scenario will be a crash in GGR, followed by a slow return over the next years to the FY 2020 levels.

Figure 21: Mid Case estimated change in visits by property, FY 2020 – FY 2023

Gaming Facility	FY 2021 % Change In Trips from 2020	FY 2022 % Change in Trips from 2020	FY 2023 % Change in Trips from 2020
Akwesasne	-78%	-54%	-19%
Batavia Downs	-78%	-54%	-19%
Del Lago	-78%	-54%	-19%
Fairgrounds	-78%	-54%	-19%
Finger Lakes	-78%	-54%	-19%
Oneida	-67%	-32%	-19%
Rivers	-78%	-54%	-19%
Resorts World Catskills	-78%	-54%	-19%
Saratoga	-78%	-54%	-19%
Seneca	-72%	-42%	-19%
Tioga Downs	-78%	-54%	-19%
Vernon Downs	-78%	-54%	-19%
All Upstate	**-74%**	**-47%**	**-19%**
Empire	-81%	-57%	-19%
Jake's 58	-78%	-48%	-19%
Resorts World NYC	-85%	-65%	-19%
All Downstate	**-83%**	**-60%**	**-19%**
Total State	**-78%**	**-53%**	**-19%**

Source: Spectrum Gaming Group

After estimating the declines in numbers of patron trips to the gaming facilities, we developed our Mid Case GGR forecasts by using the spend per trip estimates shown above in Figure 18, and adjusting the number of visits. GGR is the product of (visits *x* spend per visit). We believe that spend per visit will decline as fears of the contagion wane and more casual patrons return to play.

Figure 22: New York gaming facilities estimated GGR recovery – Mid Case scenario

Gaming Facility	FY 2020 GGR (M)	Est. FY 2022 GGR (M)	Est. FY 2023 GGR (M)	Est. Effective "Tax Rate"	Est. State Receipts FY 2020 (M)	Est. State Receipts FY 2022 (M)	Est. State Receipts FY 2023(M)
Akwesasne	$100.5	$52.8	$85.4	21%	$21.1	$11.1	$17.9
Batavia Downs	$62.1	$32.6	$52.8	39%	$24.2	$12.7	$20.6
Del Lago	$158.0	$83.0	$134.3	30%	$46.9	$24.6	$39.9
Fairgrounds	$71.8	$37.7	$61.0	34%	$24.4	$12.8	$20.8
Finger Lakes	$105.3	$55.3	$89.5	37%	$38.4	$20.2	$32.7
Oneida	$383.0	$301.6	$325.6	21%	$80.4	$63.3	$68.4
Rivers	$168.9	$88.7	$143.6	35%	$58.4	$30.7	$49.7
RW Catskills	$204.6	$107.4	$173.9	26%	$53.8	$28.3	$45.7
Saratoga	$126.4	$66.4	$107.4	37%	$46.1	$24.2	$39.2
Seneca	$610.0	$407.9	$518.5	21%	$128.1	$85.7	$108.9
Tioga Downs	$83.1	$43.6	$70.6	33%	$27.4	$14.4	$23.3
Vernon Downs	$29.3	$15.4	$24.9	20%	$5.9	$3.1	$5.0
All Upstate	**$2,103.0**	**$1,292.3**	**$1,787.6**		**$555.3**	**$331.1**	**$472.0**
Empire	$613.1	$306.6	$521.1	51%	$309.6	$154.8	$263.2
Jake's 58	$225.9	$135.5	$192.0	45%	$101.7	$61.0	$86.4
RWNYC + OTB	$882.3	$352.9	$750.0	41%	$361.7	$144.7	$307.5
All Downstate	**$1,721.3**	**$795.0**	**$1,463.1**		**$773.0**	**$360.5**	**$657.1**
Total State	**$3,824.3**	**$2,087.3**	**$3,250.7**		**$1,328.3**	**$691.6**	**$1,129.1**

Source: New York State Gaming Commission, Spectrum Gaming Group

2) Low Case Scenario

The slower recovery could result from a resurgence of the virus and another round of mandated lockdowns. The massive loss of income during the lockdowns would, in this scenario, mean that consumers would largely seek to rebuild their financial stability and cut back on all forms of entertainment and discretionary spending, including gaming. Or, in this scenario, we assume there may be a general unease about visiting gaming facilities and other entertainment venues. In this case, the rate of recovery is slower in 2021 and 2022. With that in mind, we adjusted the visitation numbers, which vary by property. We still believe that there will be a full recovery of GGR to pre-COVID-19 levels by CY 2023.

We adjusted the Low Case scenario based on several factors including:

- The expected speed of reopening, meaning that not all properties will be expected to open in the same time frame
- The location of population
- Income recovery
- Access to the property
- Lingering fears of contagion and public gatherings

The assumptions vary from property to property, with such allowances based on Spectrum's knowledge of the properties, as well as our overall experience in gaming. For example, the recovery of physical confidence is vital, as are the recovery of economic confidence (disposable income), and the willingness of participating adults to be in public settings.

Figure 23: Low Case estimated change in visits by property, FY 2020-2023

Gaming Facility	FY 2021 % Change in Trips from 2020	FY 2022 % Change in Trips from 2020	FY 2023 % Change in Trips from 2020
Akwesasne	-78%	-63%	-27%
Batavia Downs	-78%	-63%	-27%
Del Lago	-78%	-63%	-27%
Fairgrounds	-78%	-63%	-27%
Finger Lakes	-78%	-63%	-27%
Oneida	-67%	-44%	-27%
Rivers	-78%	-63%	-27%
RW Catskills	-78%	-63%	-27%
Saratoga	-78%	-63%	-27%
Seneca	-72%	-52%	-27%
Tioga Downs	-78%	-63%	-27%
Vernon Downs	-78%	-63%	-27%
All Upstate	**-74%**	**-56%**	**-27%**
Empire	-81%	-62%	-27%
Jake's 58	-78%	-54%	-27%
RWNYC	-85%	-63%	-27%
All Downstate	**-83%**	**-62%**	**-27%**
Total State	**-78%**	**-58%**	**-27%**

Source: Spectrum Gaming Group

As in each of the three cases that Spectrum has modeled, we assumed a reasonable win per visit (see Figure 18) and then multiplied that by an expected level of visitation. In the Low Case scenario, we assume players return more slowly to the gaming properties, meaning fewer visits at higher spend-per-visit levels.

Figure 24: New York gaming facilities estimated GGR recovery – Low Case scenario

Gaming Facility	FY 2020 GGR (M)	Est. FY 2022 GGR (M)	Est. FY 2023 GGR (M)	Est. Effective "Tax Rate"	Est. State Receipts FY 2020 (M)	Est. State Receipts FY 2022 (M)	Est. State Receipts FY 2023(M)
Akwesasne	$100.5	$45.2	$80.4	21%	$21.1	$9.5	$16.9
Batavia Downs	$62.1	$27.9	$49.7	39%	$24.2	$10.9	$19.4
Del Lago	$158.0	$71.1	$126.4	30%	$46.9	$21.1	$37.5
Fairgrounds	$71.8	$32.3	$57.4	34%	$24.4	$11.0	$19.5
Finger Lakes	$105.3	$47.4	$84.2	37%	$38.4	$17.3	$30.7
Oneida	$383.0	$258.5	$306.4	21%	$80.4	$54.3	$64.3
Rivers	$168.9	$76.0	$135.1	35%	$58.4	$26.3	$46.8
RW Catskills	$204.6	$92.1	$163.7	26%	$53.8	$24.2	$43.0
Saratoga	$126.4	$56.9	$101.1	37%	$46.1	$20.8	$36.9
Seneca	$610.0	$349.7	$488.0	21%	$128.1	$73.4	$102.5
Tioga Downs	$83.1	$37.4	$66.5	33%	$27.4	$12.3	$21.9
Vernon Downs	$29.3	$13.2	$23.4	20%	$5.9	$2.7	$4.7
All Upstate	**$2,103.0**	**$1,107.7**	**$1,682.4**		**$555.3**	**$283.8**	**$444.3**
Empire	$613.1	$268.2	$490.5	51%	$309.6	$135.5	$247.7
Jake's 58	$225.9	$118.6	$180.7	45%	$101.7	$53.4	$81.3
RWNYC	$882.3	$370.6	$705.8	41%	$361.7	$151.9	$289.4
All Downstate	$1,721.3	$757.4	$1,377.0		$773.0	$340.8	$618.4
Total State	**$3,824.3**	**$1,949.6**	**$3,059.4**		**$1,328.3**	**$624.5**	**$1,062.7**

Source: New York State Gaming Commission, Spectrum Gaming Group

3) High Case Scenario

In the High Case scenario, we still forecast GGR plunging in FY 2020 but fully recovering by FY 2023. Factors that could make this scenario happen include:

- Widespread distribution of a coronavirus vaccine
- A quick recovery of jobs and economic growth after the mandated lockdowns
- A general easing of fear of social contacting
- A return to the social behavior of the pre-COVID-19 environment

Figure 25: High Case estimated change in visits by property, FY 2020 – FY 2023

Property	FY 2021 % change in Trips from 2020	FY 2022 % change in Trips from 2020	FY 2023 % change in Trips from 2020
Akwesasne	-78%	-45%	0%
Batavia Downs	-78%	-45%	0%
Del Lago	-78%	-45%	0%
Fairgrounds	-78%	-45%	0%
Finger Lakes	-78%	-45%	0%
Oneida	-67%	-18%	0%
Rivers	-78%	-45%	0%
RW Catskills	-78%	-45%	0%
Saratoga	-78%	-45%	0%
Seneca	-72%	-31%	0%
Tioga Downs	-78%	-45%	0%
Vernon Downs	-78%	-45%	0%
All Upstate	**-74%**	**-36%**	**0%**
Empire	-81%	-55%	0%
Jake's 58	-78%	-45%	0%
RWNYC	-85%	-64%	0%
All Downstate	**-83%**	**-58%**	**0%**
Total State	**-78%**	**-46%**	**0%**

Source: Spectrum Gaming Group

As noted above, we have assumed a win per visit (see Figure 18) and then multiplied by an expected level of visitation. In the High Case scenario, we assume players return more quickly to the gaming properties, meaning more visits and a return to FY 2020 spend-per-visit levels more quickly.

Figure 26: New York gaming facilities estimated GGR recovery – High Case scenario

Property	FY 2020 GGR (M)	Est. FY 2022 GGR (M)	Est. FY 2023 GGR (M)	Est. Effective "Tax Rate"	Est. State Receipts FY 2020 (M)	Est. State Receipts FY 2022 (M)	Est. State Receipts FY 2023(M)
Akwesasne	$100.5	$70.4	$100.5	21%	$21.1	$14.8	$21.1
Batavia Downs	$62.1	$37.3	$62.1	39%	$24.2	$14.5	$24.2
Del Lago	$158.0	$94.8	$158.0	30%	$46.9	$28.2	$46.9
Fairgrounds	$71.8	$43.1	$71.8	34%	$24.4	$14.6	$24.4
Finger Lakes	$105.3	$63.2	$105.3	37%	$38.4	$23.1	$38.4
Oneida	$383.0	$344.7	$383.0	21%	$80.4	$72.4	$80.4
Rivers	$168.9	$101.3	$168.9	35%	$58.4	$35.1	$58.4
RW Catskills	$204.6	$122.8	$204.6	26%	$53.8	$32.3	$53.8
Saratoga	$126.4	$75.8	$126.4	37%	$46.1	$27.7	$46.1
Seneca	$610.0	$466.2	$610.0	21%	$128.1	$97.9	$128.1
Tioga Downs	$83.1	$49.9	$83.1	33%	$27.4	$16.5	$27.4
Vernon Downs	$29.3	$17.6	$29.3	20%	$5.9	$3.5	$5.9
All Upstate	**$2,103.0**	**$1,487.0**	**$2,103.0**		**$555.3**	**$380.5**	**$555.3**
Empire	$613.1	$306.6	$613.1	51%	$309.6	$154.8	$309.6
Jake's 58	$225.9	$135.5	$225.9	45%	$101.7	$61.0	$101.7
RWNYC	$882.3	$352.9	$882.3	41%	$361.7	$144.7	$361.7
All Downstate	$1,721.3	$795.0	$1,721.3		$773.0	$360.5	$773.0
Total State	**$3,824.3**	**$2,282.0**	**$3,824.3**		**$1,328.3**	**$741.0**	**$1,328.3**

Source: New York State Gaming Commission, Spectrum Gaming Group

4) Conclusion

Spectrum has presented three potential GGR-recovery scenarios built on differing assumptions as to the recovery timeframe for gaming to New York. With the industry shuttered for the first quarter of FY 2021, and with potentially slow recovery and possible reclosures of gaming facilities, it is impossible to forecast the recovery with the same level of confidence as a normal gaming forecast. A vaccine launched in December 2020 could change the outlook dramatically for the better. A mutation to a more virulent and contagious disease would have the opposite effect. Whether current economic conditions persist into 2022 is unknown and is dependent on statewide health and economic conditions that are unknowable at this time.

All VLT facilities and commercial casinos were closed for the essentially the first half of the fiscal year. If gaming were to return to prior-year levels for the next two quarters, GGR would be 50 percent of the prior year. If gaming were to return for the next two quarters at 75 percent of the prior year level, GGR would be 38 percent of the prior year.

Figure 27: Summary of estimated New York effective gaming-tax implications from COVID-19

	FY 2021	FY 2022	FY 2023	Change from 2020	FY 2021	FY 2022	FY 2023
Mid Case							
Upstate	$189.2	$331.1	$472.0	Upstate	$(366.1)	$(224.3)	$(83.3)
Downstate	$180.2	$360.5	$657.1	Downstate	$(592.8)	$(412.5)	$(116.0)
Total	**$369.4**	**$691.6**	**$1,129.1**	**Total**	**$(958.9)**	**$(636.8)**	**$(199.3)**
Low Case							
Upstate	$189.2	$283.8	$444.3	Upstate	$(366.1)	$(271.5)	$(111.1)
Downstate	$180.2	$340.8	$618.4	Downstate	$(592.8)	$(432.3)	$(154.6)
Total	**$369.4**	**$624.5**	**$1,062.7**	**Total**	**$(958.9)**	**$(703.8)**	**$(265.7)**
High Case							
Upstate	$189.2	$380.5	$555.3	Upstate	$(366.1)	$(174.8)	$0
Downstate	$180.2	$360.5	$773.0	Downstate	$(592.8)	$(412.5)	$0
Total	**$369.4**	**$741.0**	**$1,328.3**	**Total**	**$(958.9)**	**$(587.4)**	**$0**

Source: Spectrum Gaming Group

As for whether Spectrum's projections throughout the report are impacted by the pandemic, note that the base year for our financial projections was 2019, and the forward projections are for 2023 and beyond. This means that the baseline for the projections was unaffected by the pandemic and the projections for 2023 and beyond will be similarly unaffected. Relying on 2023 as a recovery point is supported by economists, for example, Moody's Analytics projects 2023 as the year in which the national economy will make up all the jobs lost as a result of the pandemic.[35]

Mark Zandi of Moody's has suggested a "W-shaped recovery," consisting of some interim smaller ups and downs in which "the rebound will take time — until mid-2023 in Spectrum's outlook — to get back to full employment."[36]

Still, between the reopenings and 2023 there will be a ramp-up period. Many variables must be considered in projecting how the industry will ramp up, as well as the potential for resurgence and reclosures. As casinos have begun to open in other jurisdictions, there has been a surge of pent-up demand. Some operators have reported higher revenues in the first few days after opening than in pre-COVID-19 periods. It is unclear if this pent-up demand will last. No one can be certain that after the initial thrill of being able to socialize after the mandated lockdown (albeit at a distance) guests will retreat and retrench due to the loss of income many suffered during the mandated lockdown.

[35] Yahoo Finance Interview with Moody's Analytics Economist Maria Cosma, May 12, 2020 https://www.youtube.com/watch?v=Uq1P44o0CPM; and Jim Tankersley, "As Job Losses Mount, Lawmakers Face a Make-or-Break Moment," *New York Times*, May 9, 2020. https://www.nytimes.com/2020/05/09/business/as-job-losses-mount-lawmakers-face-a-make-or-break-moment.html?action=click&module=Top%20Stories&pgtype=Homepage

[36] Bernice Napach, "What Shape Will the Economic Recovery Take?" *Think Advisor*, April 13, 2020 https://www.thinkadvisor.com/2020/04/13/what-shape-will-the-economic-recovery-take/

d. Implications

1) Potential Regarding Obligations and Debts

Most gaming company debt is not investment grade. There have been downgrades to debt issues by gaming companies, and some transactions have been canceled – likely related to pandemic impacts, but there may be other factors involved in particular transactions as well. New York-based Saratoga Hotel and Casino had a contract to acquire Wildwood Casino in Cripple Creek, CO, and did not close the deal in an effort to conserve cash and financial flexibly.[37] It may be that other operators with properties in New York face similar decisions. Much depends on the balance sheet of the individual operator and the willingness of management to take on more risk. Another regional operator, Maverick Gaming, had signed a deal to acquire properties from Eldorado Gaming in Lake Tahoe and Shreveport, LA, and terminated the deal.

> "At this time it is more important for Maverick to nurture and protect their existing assets than it is to expand our asset base" said Eric Persson, owner of Maverick Gaming. "They are great assets, and in a normal environment, we would be very excited to own them," he added.[38]

Deutsche Bank Securities publishes a weekly *High Yield Gaming Lodging and Leisure* report that covers the ratings and makes recommendations on debt securities. The report is extensive and covers many different companies and their issued debt. Spectrum has used two of the Deutsche Bank reports, one from February 28, 2020, and one from June 19, 2020. We focused on five U.S. gaming companies including regional operators and a single-asset operator, to be representative of the New York operators. The table below presents a summary of the same selected securities issued by these gaming companies in February – before the COVID-19 impacts – and the outlook in June. It is important to note that different debt issues from the same company may have different ratings based on the assets underlying the debt, the maturity of the issue, and the seniority of the debt. (EBITDAR is "earnings before interest, taxes, depreciation, amortization and restructuring or rent costs.")

[37] Robin K. Cooper, "Owner of Saratoga Casino Hotel terminates deal to buy Colorado casino and hotel," *Albany Business Review*, May 20, 2020. https://www.bizjournals.com/albany/news/2020/05/20/saratoga-casino-terminates-colorado-casino-deal.html

[38] Maverick Gaming Company press release, "Maverick Gaming Foregoes Purchase of Eldorado Shreveport and Montbleu Resort Lake Tahoe," April 24, 2020. https://www.maverickgaming.com/maverickgamingforegoespurchases42020

Figure 28: Deutsche Bank representative gaming company debt instruments ratings and EBITDAR estimates, February 2020 vs. August 2020

Company	Security	Moody's/ S&P Rating	Amount	Maturity	Historical ($M)	
					Revenue	EBITDAR
Report Date: February 28, 2020						
Boyd Gaming	BYD 4.750% Sr Unsecured due 2027	B3/B+	$1,000M	12/01/27	$3,326	$897
Churchill Downs	CHDN 4.750% Sr Unsecured due 2028	Ba3/B+	$500M	01/15/28		$452
Golden Nugget	NUGGET 8.750% Sr Subordinated due 2025	Caa1/CCC+	$670M	10/01/25		$719
Motor City	MOTOR 6.000% Sr Unsecured due 2022	B3/BB-	$200M	03/15/22	$484	$138
Penn National	PENN 5.625% Sr Unsecured due 2027	B2/B+	$400M	01/15/27		$1,690
Total estimated EBITDAR						**$3,896**
Report Date: August 27, 2020						
Boyd Gaming	BYD 4.750% Sr Unsecured due 2027	Caa1/B-	$1,000M	12/01/27	$2,543	$602
Churchill Downs	CHDN 4.750% Sr Unsecured due 2028	B1/B+ *-	$500M	01/15/28	$1,025	$247
Golden Nugget	NUGGET 8.750% Sr Subordinated due 2025	Caa3/CCC	$670M	10/01/25		$470
Motor City	MOTOR 6.000% Sr Unsecured due 2022	Caa1/BB-	$200M	03/15/22	$348	$77
Penn National	PENN 5.625% Sr Unsecured due 2027	B3/B *-	$400M	01/15/27	$4,117	$1,084
Total estimated EBITDAR						**$2,480**
Change from February 29 to August 20						
Boyd Gaming	BYD 4.750% Sr Unsecured due 2027	Down	$1,000M	12/01/27	$(783)	$(295)
Churchill Downs	CHDN 4.750% Sr Unsecured due 2028	Down	$500M	01/15/28	N/A	$(205)
Golden Nugget	NUGGET 8.750% Sr Subordinated due 2025	Down	$670M	10/01/25	N/A	$(249)
Motor City	MOTOR 6.000% Sr Unsecured due 2022	Down	$200M	03/15/22	$(136)	$(61)
Penn National	PENN 5.625% Sr Unsecured due 2027	Down	$400M	01/15/27	N/A	$(606)
Change in total estimated EBITDAR from February 28 to August 27						**$(1,416)**

Source: Luis Ricardo Chinchilla, Deutsche Bank, High Yield Gaming, Lodging and Leisure weekly, February 28, 2020, August 27, 2020

Figure 28 presents a range of gaming operators, from Motor City, with a single operation in Detroit, to Penn National Gaming, with 41 casinos across the country. It is notable that of all five selected securities had ratings downgrades. Since February, the estimated EBITDAR for these companies has fallen by $1.4 billion, or 36.3 percent. EBITDAR is a non-GAAP measure of operational performance commonly used in the gaming industry. Lower EBITDAR means less cash to pay interest on debt.

The implications for the New York gaming industry are difficult to ascertain due to the opacity of the financials of the state's operators. The operators of three of New York's four commercial casinos are private companies, as are the operators of the VLTs at Vernon Downs, Hamburg, Finger Lakes, Jakes's 58 and Saratoga. Batavia Downs is owned and operated by Western Regional Off-Track Betting ("WROTB"), a public-benefit corporation.

A quick review of the operators' portfolios and sources of income may prove informative. All the New York operators are focused on hospitality and tourism, two of the hardest-hit segments in the COVID-19 economic crisis. All have likely endured, and are enduring, drastic reductions in cash flow.

Delaware North Companies ("DNC") is a Buffalo-based company that operates the VLTs at Finger Lakes, Hamburg and Jake's 58. In addition to the New York gaming operations, the company owns a casino in Illinois and operates casinos in Arkansas and Ohio. DNC began as a concession company and now provides concessions to 30 sports franchises around the world. All these operations are closed, or have been closed. A second major line of business for DNC is "destination retail." Delaware North operates stores in airports, state and national parks, resorts, and at toll plazas. But with all sports venues closed and a collapse of air travel and tourism, the company's cash flow has likely been hit.

As noted above, the owners of Saratoga chose not to close on a casino purchase in Colorado to preserve capital. American Racing and Gaming owns Vernon Downs, a VLT operator and Tioga Downs, which converted to a commercial casino in 2016. The company also has racing operations at the Meadowlands in New Jersey, where the grandstand opened for fans at 25 percent capacity on July 3.

The Rivers Casino and Resort in Schenectady is owned by the Chicago-based Rush Street Gaming. In addition to the New York property, Rush Street has operations in Philadelphia, Pittsburgh, and a Chicago suburb – all operating under the Rivers brand. The Pennsylvania casinos reopened June 10. The Illinois casino reopened July 1. Peninsula Pacific the owner and operator of del Lago, like all the New York operators with the exception of WROTB, is geographically diversified. Peninsula Pacific has casinos in Iowa and Louisiana and racing operations in Virginia.

MGM owns and operates Empire Casino at Yonkers Raceway. MGM, like Genting Americas, operator of the VLTs at Aqueduct and owner and operator of Resort World Catskills, has a diversified portfolio of gaming properties around the world. It is possible that these operators find New York an attractive market for investment over Las Vegas, Macau, or Singapore.

All the New York operators have proven track records of success. And all of these operators have seen gaming and gaming-related revenues evaporate. The implications for their operations and continued investment in their New York gaming facilities remain to be seen.

2) Reinvestment, Marketing and Capital

Gaming operators today are evaluating maintenance budgets and rethinking marketing strategies to focus on value, not volume. Some new projects will be expedited. Projects that enhance air circulation, promote social distancing, or assist in disinfecting surfaces will take priority over other tasks and projects. Maintenance capital will be in short supply as cash flows dry up. Some properties may replace carpet with solid-surface flooring to ease in disinfecting. In the near term, there will be fewer restaurant remodelings, less investment in amenities such as spas and entertainment pavilions, and a focus on environmental safety. Without these vital risk-mitigation projects, players may not be comfortable returning.

Historically, casinos were built to meet the potential capacity needs of Friday and Saturday nights. A popular saying when planning a casino project was "build the church for Easter Sunday" while acknowledging that much of that gaming capacity was unused Monday through Thursday. To fill the property during these low-demand periods, casinos developed elaborate marketing plans to draw players during these slower periods. With the COVID-19-induced reduction in capacity and ongoing demand, there is less capacity to fill, and so less of a need for expensive marketing schemes.

In conversations with operators that have reopened, they note that their first weeks were by invitation only to high-value players. As casino marketing evolves, it is likely that the focus will be on the value of the player and the total profit from the play. In the next 12 to 24 months it is likely that marketing expenditures will fall, as there is less supply and plenty of demand.

While certain operating expenses may fall, others will increase. Cleaning crews may be increased, an increase in air circulation means that boilers and air conditioners will run more intensely and thus increase utility costs, and spending on protective gear for employees and patrons will increase. These expenses are ongoing costs that erode company profitability.

Each New York operator will react differently to the stresses caused by the shortfalls in revenue. Some highly leveraged operators may see difficulties while others with less debt may take advantage of the opportunity to increase marketing spend to draw business. There is no way to be certain.

3) Restructuring

To generate additional liquidity during the mandatory lockdown, some gaming companies issued notes, equity, or, in the case of Penn National Gaming, both.[39] Expending maturities and selling assets to real estate investment trusts ("REIT") also were tactics employed to generate working cash. Typically, a REIT buys the physical plant of the casino and hotel from the operator. The operator essentially becomes a tenant of the REIT and pays the REIT rent for use of the premises. This device has been used for decades in the hotel industry, and in more recent years the casino industry. Such a transaction can bring a quick infusion of cash to an operator, with the promise of a future rent stream to the REIT. The securities noted

[39] "Penn National Gaming Announces Exercise and Closing of Greenshoe Option in First Ever U.S. Dual Tranche Equity/Convert Offering for a Gaming Operator, Penn National Gaming," press release, May 19, 2020. https://www.businesswire.com/news/home/20200519005895/en/Penn-National-Gaming-Announces-Exercise-Closing-Greenshoe

in Figure 28 above were issued before the closures to present a picture of how the debt market view of casino securities has changed.

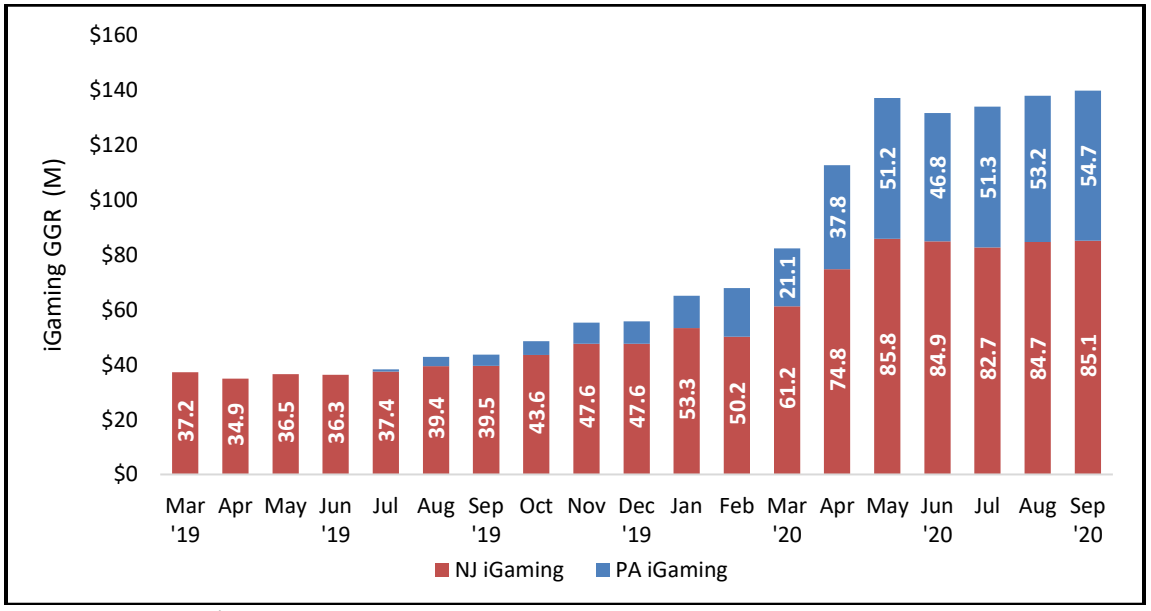
Spectrum is unaware of any New York gaming operations that have sought to restructure as a result of the COVID-19 impact. Whether they ultimately will depends on the pace of the recovery of their business operations and their own balance sheets.

4) Migration of the Gambler: Have They Returned? Will They Return?

There are preliminary results from casino openings in several states, as shown above in figures 14 through 16, It is evident that casino gamblers have returned – at least for the immediate, post-opening period. As stated throughout this chapter, it is too soon to know the longer-term trend due to the uncertainties over health and economic conditions.

While retail gaming facilities were generating zero dollars of gaming revenue during the closure of gaming facilities nationwide, digital casino gaming ("iGaming") flourished in the three primary states in which it is available – Delaware, New Jersey and Pennsylvania.[40] As shown in Figure 29 below, the sequential monthly combined iGaming GGR increased by 25 percent in March 2020, 38 percent in April 2020, and 15 percent in May 2020. The key state for analysis is New Jersey, because Delaware volumes are not meaningful for this analysis and Pennsylvania iGaming is still ramping up, having launched in July 2019. For New Jersey, its year-over-year monthly GGR increased 66 percent in March 2020 (the casinos closed on March 16), 119 percent in April 2020, and 121 percent in July 2020.

Figure 29: New Jersey and Pennsylvania iGaming gross gaming revenue, March 2019 – September 2020



Source: State gaming/lottery commissions, Spectrumetrix. **Note:** Pennsylvania iGaming began in July 2019.

[40] Internet poker is offered in Nevada, but results are not publicly reported because there are too few participants.

Although digital sports wagering was/is also available during the casino closures, GGR for that activity was depressed significantly during a period in which virtually all professional sports globally had ceased.

Spectrum believes that the COVID-19 closures and the accompanying loss of perhaps $2.6 billion in collective state retail gaming taxes nationwide will accelerate the legalization of iGaming (including digital sports wagering) in other states that heretofore balked at such measures, as it provides a fiscal safety net should there be future disruptions to their gaming revenue streams. As it stands, only two additional states have authorized iGaming: West Virginia, which launched in July 2020, and Michigan, which is not expected to launch until 2021.

B. Overview of New York Gaming Facilities

New York offers three forms of legal casino-style gaming operations: Indian casinos, VLT facilities at racetracks, and commercial casinos (collectively, "gaming facilities"). The following table provides an overview of the size and scope of each facility.

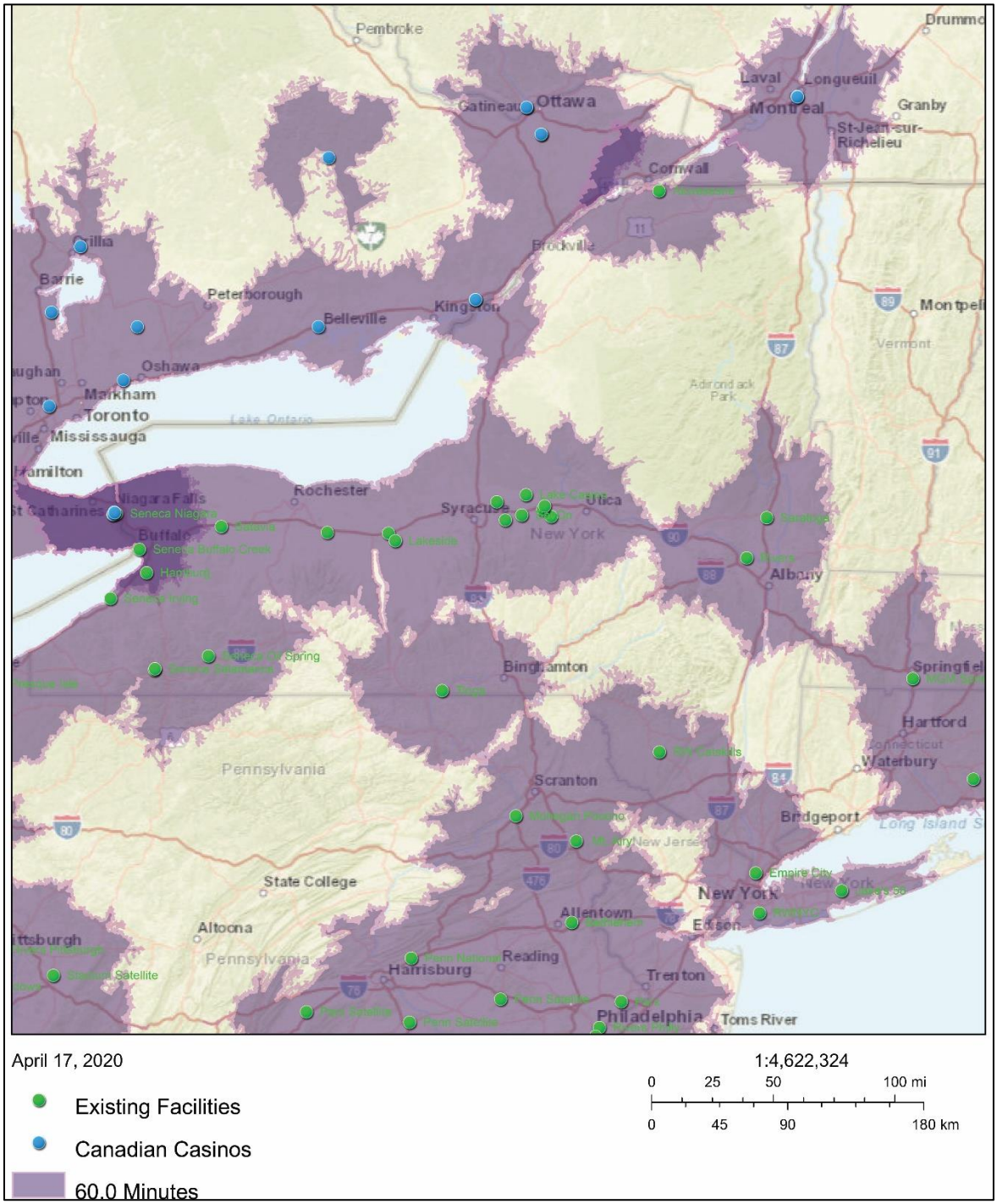
Figure 30: Key specifications of New York gaming facilities

Property (Grouped by Type)	City	Operator	Class	EGDs*	Tables	Poker	Sports	Hotel Rooms	Dining Venues	Golf
Indian Casinos/Gaming Facilities										
Seneca Niagara	Niagara Falls	Seneca Nation	III	3,000	80	Y	Y	604	8	1
Seneca Allegany	Salamanca	Seneca Nation	III	1,500	30		Y	413	5	
Seneca Buffalo Creek	Buffalo	Seneca Nation	III	1,100	36		Y		4	
Seneca Entertainment Irving	Irving	Seneca Nation	II	650					1	
Seneca Ent. Salamanca	Salamanca	Seneca Nation	II	350					1	
Seneca Ent. Oil Spring	Cuba	Seneca Nation	II	110					1	
Lakeside Entertainment	Union	Cayuga Nation	II	86						
Turning Stone	Verona	Oneida Nation	III	2,000	126	Y	Y	707	12	5
Yellow Brick Road	Chittenango	Oneida Nation	III	400	14		Y		3	
Point Place	Bridgeport	Oneida Nation	III	600	20		Y		3	
PlayOn	Sherrill	Oneida Nation	II	16						
PlayOn	Upper	Oneida Nation	II	15						
PlayOn	Oneida	Oneida Nation	II	16						
PlayOn	Oneida Lake	Oneida Nation	II	21						
SavOn CStore	Verona	Oneida Nation	II	35						
SavOn CStore	Canastota	Oneida Nation	II	14						
Lake House Casino	Sylvan Lake	Oneida Nation	III	100						
Akwesasne Mohawk	Hogansburg	Saint Regis Mohawk	III	1,600	30	Y	Y	150	5	
VLT Facilities										
Batavia Downs	Batavia	Western Regional OTB	VLT	869				84	3	
Hamburg Gaming	Hamburg	Delaware North	VLT	898					3	
Finger Lakes	Farmington	Delaware North	VLT	1,195					2	
Vernon Downs	Vernon	American Racing & Gaming	VLT	646				175	6	
Saratoga	Saratoga	Saratoga	VLT	1,706				117	6	
Resorts World NYC/Nassau OTB	Queens	Genting	VLT	6,548					3	
Empire City	Yonkers	MGM	VLT	5,222					3	
Jake's 58	Islandia	Delaware North	VLT	1,000				227	1	
Commercial Casinos										
Tioga Downs	Nichols	American Racing & Gaming		943	32	Y	Y	161	4	1
Del Lago	Waterloo	Peninsula Pacific		1,959	81	Y	Y	206	5	
Rivers	Schenectady	Rush Street Gaming		1,150	67	Y	Y	185	6	
Resorts World Catskills	Monticello	Genting		2,155	133	Y	Y	437	9	

Source: New York State Gaming Commission, Spectrum Gaming Group research. *EGDs = electronic gaming devices, whether slot machines, video lottery terminals, or Class II gaming machines

The following map shows the locations of New York gaming facilities and places them into regional context. As shown, large portions of this region are now within a one-hour drive of a gaming facility – both within New York and in bordering jurisdictions, as depicted in Figure 31.

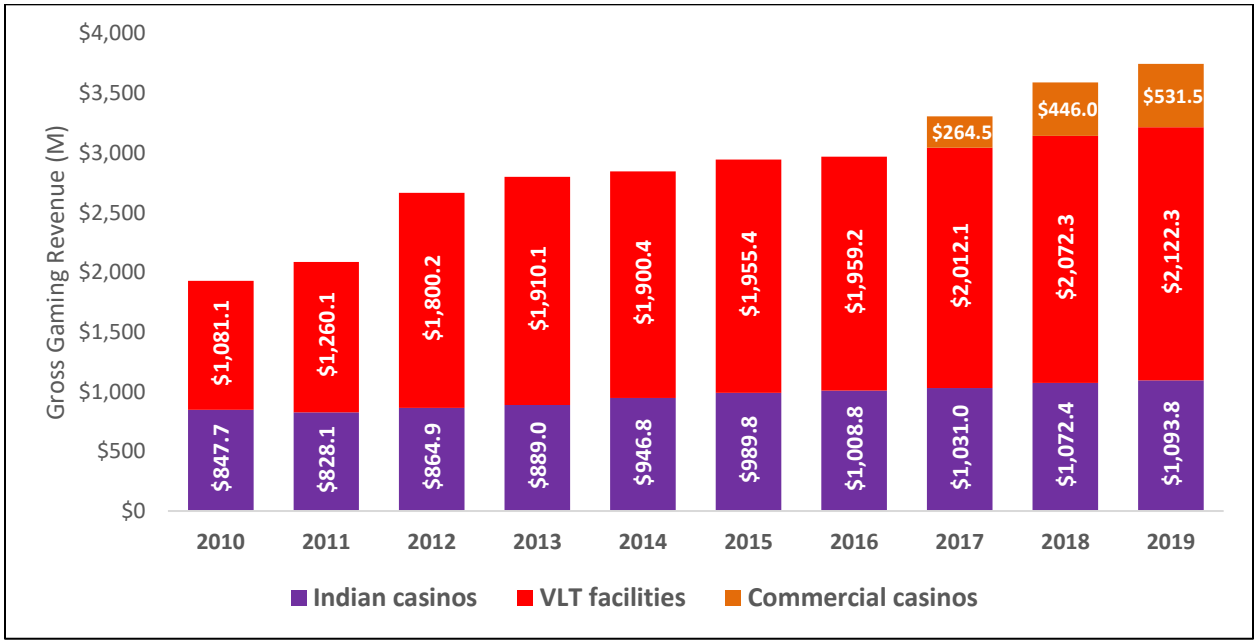
Figure 31: Map of regional gaming facilities with 60-minute drive-time regions



Source: State regulatory agencies, gaming facility websites, ESRI

Figure 32 shows the gross gaming revenue ("GGR") performance of New York's gaming facilities by sector. The results clearly show the impact of Resorts World New York City opening in late 2011 as well as the addition of commercial casinos in Upstate New York beginning in 2017.

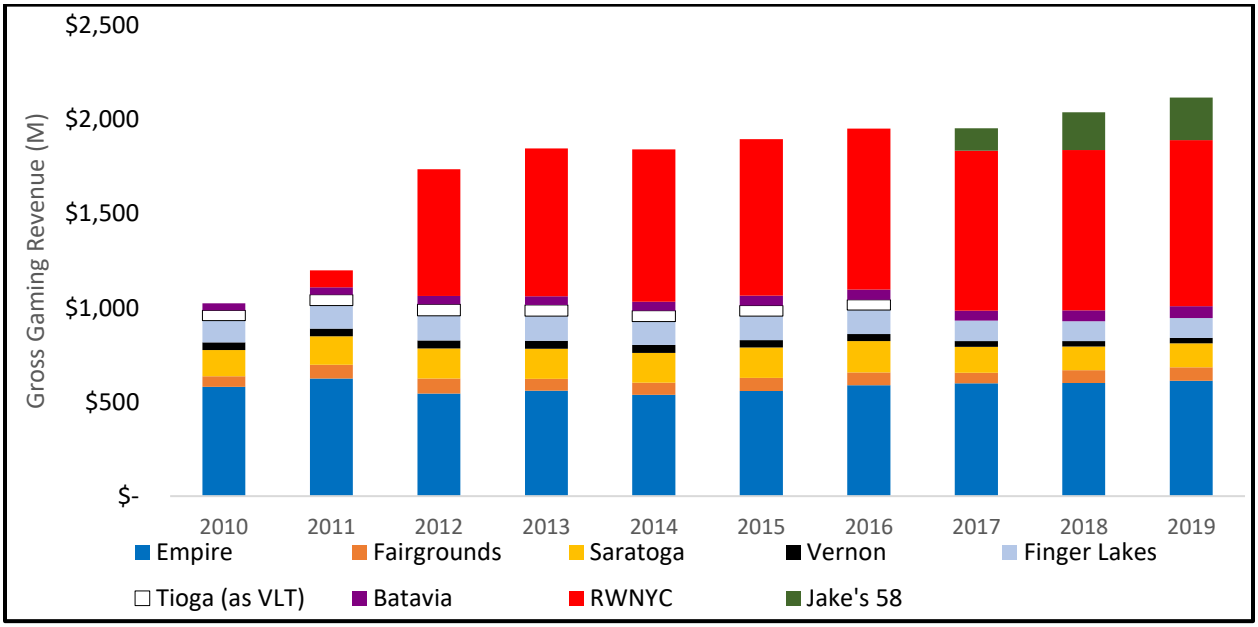
Figure 32: New York gross gaming revenue by sector, 2010-2019



Source: New York State Gaming Commission, Spectrum Gaming Group

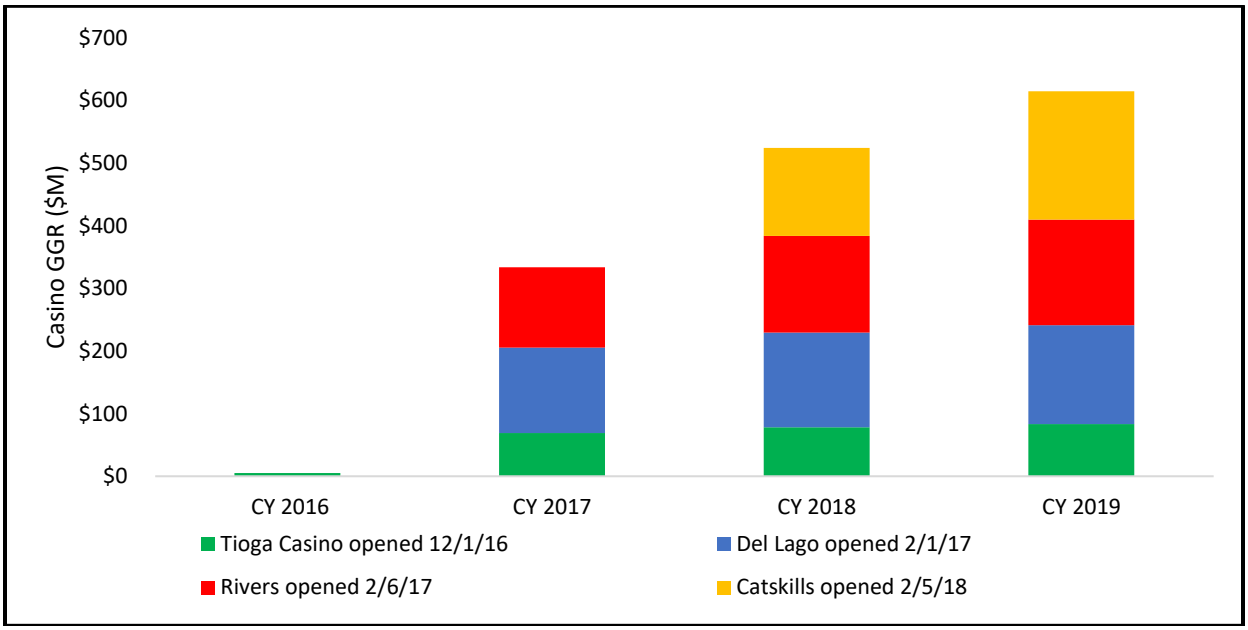
Following are more detailed performance charts of each of New York's three gaming sectors.

Figure 33: New York VLT GGR by facility, 2010-2019



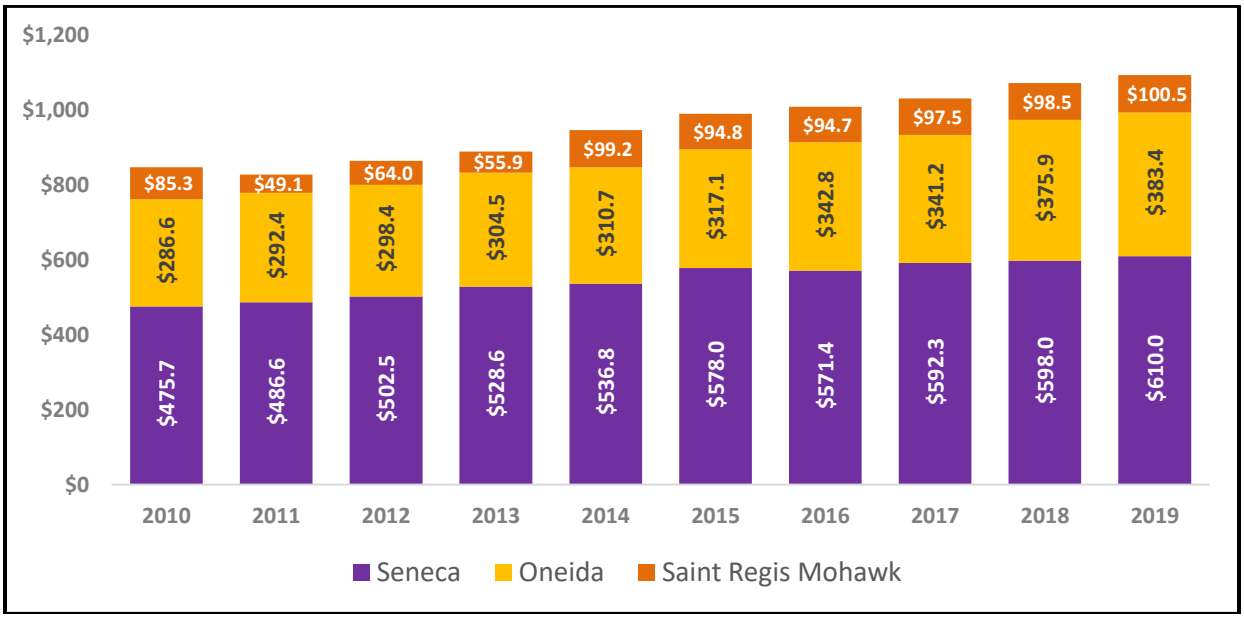
Source: New York State Gaming Commission

Figure 34: New York commercial GGR by facility, 2017-2019



Source: New York State Gaming Commission

Figure 35: Estimated New York Indian casino GGR by tribal operator, 2010-2019



Source: Spectrum Gaming Group

See **Appendix E** for overviews of each of New York's gaming facilities.

Each New York gaming sector pays gaming taxes at different rates. Within the commercial casino and VLT sectors, there are differences in rates between properties. The Indian nations, via compact with the State of New York, pay 25 percent of their slot revenue to the State for the exclusive right to operate Class III gaming in their exclusivity zones. The State in turn distributes 25 percent of the exclusivity payments back to the host communities of the Indian casinos and 10 percent to non-host communities.

Figure 36: Estimated state revenue from gaming calendar years 2010 -2019

CY Ests.	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
VLT	$503.4	$593.6	$822.7	$877.7	$864.2	$888.4	$918.0	$917.4	$940.7	$956.3
Casino							$1.7	$105.2	$160.9	$188.3
Indian Casino PILOT*	$108.8	$105.2	$110.7	$144.7	$157.6	$188.1	$197.1	$200.9	$206.0	$221.0
Total	$612.2	$698.8	$933.4	$1,022.4	$1,021.8	$1,076.5	$1,116.8	$1,223.4	$1,307.6	$1,365.5

Sources: Oneida Indian Nation, New York State Gaming Commission, Spectrum Gaming Group. * Spectrum estimate of tribal payments in lieu of taxes.

The Lottery revenue from the VLTs is directed toward elementary or secondary education. Eighty percent of the tax revenue from the commercial casinos is directed to education and 20 percent of the revenue is directed to host and non-host communities. Of this 20 percent, half goes to host county and municipality evenly split and half goes to non-host counties in the region.

C. Economic Impact of New York Gaming Industry

The present and future landscapes for gaming in New York will, in no small measure, be shaped by the state's demography. A vast state of 47,126 square miles,[41] New York holds much diversity and many stark contrasts both culturally and demographically (See **Appendix C**). From Wall Street to Niagara Falls and from wealthy suburbs to struggling agricultural communities, New York boasts the most populous city in America (with 28,209 people per square mile[42]), amid a state with immense rural swaths, including farming towns with only two people per square mile.

Although each region and city may have a separate story to tell, there are two main trends that emerge from New York's demographic statistics:

- Population decline
- Division in a state segmented by geography

With few exceptions, there is little difference in the trajectory of population across the state: the number of residents is shrinking. However, there is a marked difference in the characteristics of residents across the state. Neighboring counties share more than borders. They share values, workforce opportunities, educational resources, and industries. They share their sameness or their diversity. In New York, this sharing of characteristics among neighbors results in an Upstate and Downstate bifurcation.

While *Upstate* and *Downstate* may be an intangible state of mind to many New Yorkers, it is also a very real geographic designation. Upstate is considered all of New York except New York City, Long Island, Westchester, Rockland, Orange, Putnam, and Dutchess counties. Geographically, most of New York is Upstate. With respect to population, most of its inhabitants are Downstate.

In some ways, New York mirrors the demographic characteristics of the rest of the country. Both New York and the United States as a whole have an aging population, with the percentage of people over 65 years of age hovering in the 16.4 percent range, up from 13 percent in 2010. The median ages for New York State (39 years) and the United States (38.2 years) are climbing toward 40. Other basic attributes – such as the percentage of men to women, household size, high school graduation rates, and the percentage of adults in the labor force – are all similar.[43]

The Upstate-Downstate pattern is repeated in household income and education. Long Island, where the per capita income is $78,769, and the nearby regions of Hudson Valley and New York City top the list of wage earners. This threesome also earns the top marks for the most residents with bachelor's degrees. The Capital District, which includes Albany, the seat of New York government, and wealthier

[41] New York State Department of Health, Vital Statistics of New York State 2016, "Table 2: Population, Land Area, and Population Density by County, New York State – 2016." https://www.health.ny.gov/statistics/vital_statistics/2016/table02.htm

[42] Ibid.

[43] U.S. Census Bureau, "Quick Facts: New York and U.S. Population Estimates," *ACS, CPH, CPS*, 2018. https://www.census.gov/quickfacts/fact/table/NY,US/PST045218

communities such as Saratoga, comes next in both per capita income and education. At the other end of the spectrum are the North Country and Mohawk Valley, with the lowest income and the fewest college graduates.[44]

For the most part, changes in the gaming landscape in neighboring states and Ontario will have little impact on existing New York gaming properties. Tioga Downs may lose GGR if there is an extensive buildup of convenience gaming at truckstops in Pennsylvania, but generally, the four existing New York commercial casinos are not located in areas where out-of-state competition is a significant issue. The recent privatization of the provincial OLG casinos in Ontario may result in refinements to the Ontario properties that would make a U.S. trip less appealing to a Canadian, but of greater importance is the exchange rate. When the Canadian dollar is strong, visitation from Canada to U.S. casinos rises.

1. Gaming and Tourism

Tourism defies simple definitions, while raising important questions:

- If a gaming facility attracts adults from one region of New York to another, is it increasing tourism?
- Can a casino attract out-of-state visitors when nearly every existing or potential visitor already lives near a casino?

For purposes of this analysis, tourist GGR is revenue generated from out-of-market visitors to New York gaming properties – those who live outside of New York or beyond the boundaries of a day trip. But such a neat definition does not address the policy-related questions or identify the opportunities to grow revenue.

In-state transfers of GGR from, say, Rochester to Syracuse, or from Binghamton to Nichols are important for the individual cities, but not for the state as a whole. A shift of revenue from a lower-taxed property to a higher-taxed property may result in an increase of revenue to the State, but no change in the overall GGR.

The New York gaming facilities are importers of play from Canada and Pennsylvania. Canadian play accounts for approximately 40 percent of GGR at the Saint Regis Mohawk's Akwesasne Mohawk Casino.[45] The property has converted about 100 of its slot machines[46] to handle Canadian currency. Seneca Niagara, located near the Rainbow Bridge in Niagara Falls, also draws players from Canada. It is estimated that approximately 15 percent of the GGR at Seneca Niagara comes from Canadian players. Given the proximity to state lines, players from Pennsylvania account for a portion of play at the Seneca Allegany

[44] Indiana Business Research Center & U.S. Commerce Department's Economic Development Administration, "StatsAmerica: Innovation in American Regions." http://www.statsamerica.org/innovation/anydata/custom.asp (accessed March 13, 2020)

[45] Interview with Akwesasne Mohawk Casino management.

[46] Akwesasne Mohawk Casino, "Akwesasne Mohawk Casino Resort Installs Slot Machines That Accept Canadian Currency." https://mohawkcasino.com/news/akwesasne-mohawk-casino-resort-installs-slot-machines-accept-canadian-currency/ (accessed March 27, 2020)

property, and at Tioga Downs. Turning Stone Resort in Verona, while not near a state or international border, attracts visits from out of state and Canada due to its accessibility and the extensive amenities at the property. The property has invested heavily in non-gaming amenities including hotels, golf courses and a spa to attract patrons from beyond its traditional market catchment area. These patrons are likely resort guests rather than casino/VLT visitors.

In the past 30 years, casino/VLT gaming has become a major industry in the United States, evolving from a niche market with a somewhat forbidding mystique to mainstream entertainment. Prior to the 1990s, casino gambling was legal only in Nevada and Atlantic City, NJ. Since then, commercial casino/VLT gaming has spread across 24 states. Indian casinos are present in 28 states. Twelve states have both commercial and Indian casinos. In all, there are more than 1,000 gaming facilities of all types in 42 states, including land-based casinos, riverboat casinos, racetrack casinos, and casinos that use historical horse racing machines in lieu of true slot machines.

With the expansion of gaming across the country, gaming as a tourist draw has fallen dramatically. Prior to the expansion of gaming, the Indian casinos in New York drew from Pennsylvania, Ohio, Massachusetts and other states. Today, there is no compelling reason for a Cleveland resident to drive three hours to a New York casino/VLT facility when there are three gaming facilities within 15 miles of downtown Cleveland.

New York has expanded gaming in this period, too. Clearly, some of the decline in visitation to Atlantic City is attributable to the addition of VLTs at Empire City and at RWNYC. Much the same has happened to gaming markets across the country. The first movers have seen their market reach erode as more convenient options opened, as Spectrum has observed across the country.

Consider that Atlantic City gaming revenue reached its peak of $5.2 billion in 2006, declined by half in less than a decade, and has since risen to $3.29 billion in 2019, still a dramatic decline from its height.[47] That decline coincided with the expansion of gaming elsewhere in the region, a case in which correlation equates to causation.

Does that mean that gaming revenue in the eastern United States is finite, and that all states can do is rearrange their respective shares, perhaps shifting revenue from one state to another or from one region to another? Or can the pie expand?

The addition of mobile and digital betting in New York would repatriate some dollars that New Yorkers now spend across the Hudson River to gamble remotely in New Jersey, but that in no sense would qualify as growing tourism. At the same time, there is no reason to expect that visitors from anywhere in the world will travel a long way – even to a proven global destination such as New York City – simply for the opportunity to gamble. The goal then is to leverage casinos as an element that can enhance a visit by emphasizing both the gaming and non-gaming amenities. Oneida County, for example, promotes both Turning Stone and Vernon Downs in its marketing campaign as attractions that feature golf, dining, entertainment, racing and other lures.

[47] New Jersey Casino Control Commission revenue reports.

For commercial casinos in New York City, the opportunities are different. Creating destinations that can be characterized as integrated resorts can foster growth in different segments:

- Repatriating gaming dollars spent elsewhere in the region
- Attracting more MICE (meetings, incentives, conferences and exhibitions) business
- Extending the length of existing visits
- Packaging gaming into the overall visitor experience

Such efforts would allow New York to expand the overall gaming pie while advancing a range of other public policies.

The economic impacts of gaming extend beyond the casinos themselves. In a separate section detailing the impacts of various expansion scenarios, we evaluate how changes in tourism, in-state reallocation, and market development combine to create new economic activity within New York State and its regions. The estimates of gross gaming revenue that drive the impacts are based on a market analysis that evaluates population density, income, age composition, and household income within various drive-time radii. Given the socioeconomic conditions in New York and expected visitation, we found that on balance the gaming expansion scenarios evaluated in this study generally create positive economic and fiscal impacts for the state.

2. Modeling Existing Gaming

Spectrum employed the Regional Economic Models, Inc. ("REMI") PI$^+$ economic-impact model to assess the current and projected economic impacts of gaming in New York. (See **Appendix B** for a detailed description of the PI$^+$ model.)

a. Glossary

It is helpful to understand the following terms that are used to describe the results of the economic impacts of existing and expanded gaming in New York.

Employment: Employment is a count of jobs, not people, by place of work. It counts all jobs with the same weight regardless of whether the position is full-time or part-time or the labor of a self-employed proprietor. Jobs are counted as **Job-Years**, which are equivalent to one job lasting for one year. This is a similar concept to "person-hours." Jobs often carry over from year to year and therefore the jobs in one year include many of the same jobs as in the previous year. For example, if a new business opens with 10 employees, then the host community of that business will have 10 more jobs than it would have had in every future year that the company maintains its workforce. In that case, over 5 years, the business will have created 50 job-years (10 jobs at the company x 5 years = 50 job-years), though it is possible that it is not the same 10 people who are working there over time. When reviewing changes in employment across multiple years, knowledge of the concept of job-years is vital to proper interpretation.

Output: Output is the total economic value of production, sales, or business revenues, whether final (i.e., purchased by the end user) or intermediate (used by another business to produce its own output). It includes the value of inputs to production, wages paid to employees, capital expenses, taxes,

and profit. It is useful as an indicator of business activity, but it should not be construed as net new economic activity.

Personal Income: Personal income is income and benefits from all sources earned by all persons living in an area. It excludes the income earned by non-resident workers who commute into an area, but it includes the income of residents who commute out.

Value-Added: Value-added is the value of all final goods and services created in an economy. It represents new economic activity and is also known as gross product or net economic impact. It differs from output by the value of inputs to production. Value-added provides a useful summary of the economy, which is why all nations and U.S. states report their economic growth in this way, calling it either gross domestic product or gross state product, as appropriate. Its usefulness derives from the elimination of the double-counting inherent in output, which stems from the inclusion of inputs. An example of the double-counting of inputs can be found and simplified in the process of making and selling a loaf of bread. A farmer sells wheat to a mill, which then sells flour to a baker, who then sells bread to the final customer. The sale price of the bread includes the cost of all necessary inputs including growing the wheat, milling the flour, and baking the bread. Value-added counts only the sale price of the bread to the final consumer, which is the net new value created in the economy. On the other hand, output counts the revenues earned by every business in the supply chain, which means that the value of the wheat and flour are counted more than once.

b. Methodology

The following section describes the methodology used to develop the economic impact estimates specifically. The team derived much of the data used in this analysis in other parts of this study, e.g. market and tax analyses and gross gaming revenue forecasts developed in chapters I, V and IV of this report, as well as construction costs developed by our construction experts. Therefore, the methods behind much of the inputs to the economic impact analysis are described elsewhere in this report.

In essence, the economic impact analysis, whether of existing or expanded gaming, takes direct impacts and uses them to drive indirect and induced impacts. Direct impacts are those economic changes immediately tied to the issue being studied. In this case, direct impacts would be tied to the casinos themselves: construction spending, revenues, employment, taxes on GGR, etc. These changes become inputs to the model and describe the scenario for which we wish to measure ripple effects. The indirect and induced changes are the ripple effects. Stated simply, indirect effects are supply chain impacts: as one business grows, so too do its suppliers and their suppliers and so on. Induced effects are consumption impacts: as businesses grow, they hire workers who have more money to spend on goods and services, which in turn creates positive impacts for consumer-facing firms.

The model employed for this study is PI+, which is produced by Regional Economic Models, Inc. ("REMI") based in Massachusetts. (See **Appendix B** for detailed description of PI+ model.) The State of New York was divided into four regions: New York City, Long Island, Metro North, and Upstate. The county composition of the regions are as follows:

Figure 37: Economic models by region and county

Model Region	County
New York City	Bronx
	Kings
	New York
	Queens
	Richmond
Long Island	Nassau
	Suffolk
Metro North	Dutchess
	Orange
	Putnam
	Rockland
	Westchester
Upstate	All other counties

Source: Spectrum Gaming Group

3. Impacts of Existing Gaming and the Upstate New York Gaming Act

The New-York based casinos and VLT facilities could expect 2020 GGR of $3.8 billion and non-gaming revenues of $549 million and would employ about 15,700 people, with most revenues and jobs concentrated in the Indian casinos Upstate.[48] These revenues and jobs form the core of gaming's impacts on the state, with their ripple effects driving the total impacts described below.

In order to provide an assessment of all existing gaming as it is today and expanded Upstate gaming within that, Spectrum evaluated all gaming in New York in 2015 and 2020 and also just the expanded properties in 2020. We chose 2015 as the first year of our analysis because it preceded any of the developments of the Upstate New York Gaming Economic Development Act. We use the growth from 2015 to 2020 to show how existing gaming has changed over those years as context for the gaming expansion. We also show the impacts of the expanded properties alone as a share of 2015 to 2020 growth for additional context.

The total employment at New York casinos and VLT facilities has grown from about 12,000 jobs in 2015 to 15,700 jobs in 2020, of which roughly 3,400 are at the four commercial casinos that make up the Upstate expansion properties. The total employment impacts were about 25,000 jobs in 2015 and 32,360 in 2020, meaning that a little over one additional job elsewhere in New York was created for each gaming job. Of the 2020 total impact, 5,533 jobs, or 17 percent, are attributable to the expanded properties. Though contained to the Upstate region, the ripple effects of the changes spread throughout New York via trade, commuting, and government spending relationships.

Significantly, the Upstate expansion accounts for 75 percent of the growth in the employment contributions of gaming from 2015 to 2020, with robust contributions in all regions except Long Island.

[48] The forecasts for 2020 were made prior to the COVID-19-related shutdowns and thus represent expected gaming trends for New York.

The smaller contributions to Long Island are due to expansion of gaming that also occurred there during this span with the opening of Jake's 58, which accounts for 1,400 of the 1,577 jobs gained in that region during this time span.

Additionally, the Upstate expansion accounts for over 100 percent of the change in employment in the Metro North region, implying that the employment contributions of gaming would have decreased in that region without the expansion. Again, that effect is attributable to Jake's 58, which would reallocate economic activity away from that region, but that loss was offset by the government spending that is enabled in Metro North due to taxes on the expanded properties.

Figure 38: Employment impacts of existing gaming, job-years, 2015 and 2020

Total Employment	2015	2020	2020 Upstate Expansion Only	Expansion's Share of 2020	Expansion's Share of '15-'20 Growth
New York City	3,131	3,694	370	10%	66%
Long Island	1,705	3,290	216	7%	14%
Metro North	2,216	2,349	158	7%	119%
Upstate	17,964	23,032	4,789	21%	94%
State Total	**25,017**	**32,365**	**5,533**	**17%**	**75%**

Source: Spectrum Gaming Group, PI+

Increases in revenues typically drive increases in employment as firms usually do not hire unless they expect expanding sales. Gaming revenues rose from $2.9 billion to $3.8 billion from 2015 to 2020, while nongaming revenues rose from $400 million to $549 million, resulting in total revenues growing from $3.3 billion to $4.4 billion. The total output impacts grew from $4.7 billion to nearly $6.8 billion, resulting in roughly $0.50 of additional business revenues for each dollar of casino revenues. As expected, gaming employment and revenues grew by similar percentages, with both increasing by about 30 percent. However, the change in *impacts* was farther apart. Employment impacts grew by 29 percent from 2015 to 2020 while output impacts grew by 43 percent. This gap reflects the growing labor productivity seen in the economy where each worker is able to support more production. Expansion's share of 2020 output impacts is generally similar to its share of employment impacts, though expansion's share of 2015-to-2020 growth is generally smaller.

Much like the case with employment, Jake's 58 explains much of the discrepancy. By also contributing taxes, Jake's 58 creates statewide output impacts that exist in 2020 but did not exist in 2015, thus generally diluting the share of growth that is attributable to the Upstate expansion. Furthermore, because Jake's 58 contributes a larger share of its revenues to the State than the Upstate expansion properties, the addition of Jake's 58 dilutes the output effects more than the employment effects.

Figure 39: Output impacts of existing gaming, 2015 and 2020

Output	2015	2020	2020 Upstate Expansion Only (M)	Expansion's Share of 2020	Expansion's Share of '15-'20 Growth
New York City	$1,028	$1,299	$114	9%	42%
Long Island	$339	$590	$50	8%	20%
Metro North	$516	$585	$37	6%	54%
Upstate	$2,825	$4,279	$849	20%	58%
State Total	**$4,709**	**$6,753**	**$1,051**	**16%**	**51%**

Source: Spectrum Gaming Group, PI+

We have seen how State and local government spending enabled by revenues from gaming accounts for many of the wrinkles seen in the results thus far. Government spending explains the expansion's employment effects on Metro North and also its generally smaller share of output growth. The State revenue impacts presented below reflect the net result of the direct change in State revenues attributable to gaming: the increase in taxes and revenues from gaming, sales, and hotels and the reduction in sales tax revenues due to the reallocation of consumption away from other items toward gaming. The figure also includes revenues to the State supported by general economic activity. Taxes on gaming directly contributed $1.3 billion in 2015 and $1.6 billion in 2020, of which $188 million is attributable to the expansion. The other tax sources are net negative because the loss in sales tax revenues from reallocation is greater than revenues on hotels (both sales and bed taxes), other nongaming revenues, and general taxation on economic growth.

Figure 40: Tax impacts of existing gaming, 2015 and 2020

Total State Taxes	2015 (M)	2020 (M)	2020 Upstate Expansion Only (M)	Expansion's Share of 2020	Expansion's Share of '15-'20 Growth
New York City	$243	$307	$36	12%	57%
Long Island	$123	$157	$18	12%	52%
Metro North	$119	$147	$17	12%	60%
Upstate	$884	$1,103	$138	13%	63%
State Total	**$1,369**	**$1,714**	**$209**	**12%**	**61%**

Source: Spectrum Gaming Group, PI+

All the labor required to staff the casinos and provide the additional goods and services created by gaming's economic impacts also creates income. Total income impacts grew from $1.6 billion to $2.4 billion from 2015 to 2020. The Upstate expansion accounts for 14 percent of 2020 income impacts and 41 percent of the change from 2015. When these income impacts are paired with the employment impacts in Figure 38, average incomes are roughly $62,500, $74,200, and $62,400 for 2015, 2020, and expansion only, respectively.[49]

Figure 41: Personal income impacts of existing gaming, 2015 vs. 2020

Personal Income	2015 (M)	2020 (M)	2020 Upstate Expansion Only (M)	Expansion's Share of 2020	Expansion's Share of '15-'20 Growth
New York City	$267	$375	$34	9%	31%
Long Island	$176	$299	$26	9%	21%
Metro North	$173	$218	$19	9%	43%
Upstate	$948	$1,510	$266	18%	47%
State Total	**$1,564**	**$2,402**	**$345**	**14%**	**41%**

Source: Spectrum Gaming Group, PI+

All of the above economic impacts can be summarized in value added, also known as gross product. Value added captures the net change in economic activity and accounts for consumption, the value of inputs used up in production, imports, exports, government spending, and investment. Gaming

[49] Personal income includes wages, salaries, bonuses, benefits, government transfers, and all other sources of income and compensation. Therefore, it is not the same as the average annual pay of a worker.

contributed $2.9 billion to New York's gross state product in 2015, rising to $4.2 billion in 2020. The Upstate expansion accounts for $647 million of the net impact in 2020, or 16 percent. Because value added is a component of output, it is expected to see the two hew closely together as is seen in the expansion's share of 2020 and share of growth. The similarity in the two shares implies there are no notable differences in the economic structure of the firms impacted by gaming generally versus by the expansion specifically.

Figure 42: Value-added impacts of existing gaming, 2015 and 2020

Value-Added	2015 (M)	2020 (M)	2020 Upstate Expansion Only (M)	Expansion's Share of 2020	Expansion's Share of '15-'20 Growth
New York City	$645	$821	$75	9%	42%
Long Island	$218	$372	$32	9%	21%
Metro North	$317	$362	$24	7%	53%
Upstate	$1,735	$2,610	$516	20%	59%
State Total	**$2,915**	**$4,165**	**$647**	**16%**	**52%**

Source: Spectrum Gaming Group, PI+

D. Forecasts for Downstate Gaming Facilities

1. Historical Overview

Compared to industries such as financial services and health care, gaming would not be considered as a major economic driver in New York State. The State Department of Labor includes gaming in its list of the state's "significant industries," as a subset of the North American Industry Classification System ("NAICS") code for "Amusements, Gambling and Recreation," which is itself a subset of New York's Leisure and Hospitality Industry.[50] And while New York is hardly defined by its gaming industry, gaming facilities are already within easy reach of nearly every region in the state.

The state's gaming industry clearly increased in prominence on New Year's Day in 2014, when the Upstate New York Gaming Economic Development Act of 2013 went into effect, forever changing the state's landscape. That statute, which followed the 2013 referendum to amend the state constitution to allow for commercial casinos, spells out in great detail the letter of the law and how it would be implemented.

The spirit of that same law can also be found within the language of the statute, which notes:

- New York state is already in the business of gambling with nine video lottery facilities, five tribal class III casinos, and three tribal class II facilities;
- New York state has more electronic gaming machines than any state in the Northeast or Mid-Atlantic region;
- While gambling already exists throughout the state, the state does not fully capitalize on the economic development potential of legalized gambling;
- The state should authorize four destination resort casinos in upstate New York;
- Four upstate casinos can boost economic development, create thousands of well-paying jobs and provide added revenue to the state;
- The upstate tourism industry constitutes a critical component of our state's economic infrastructure and that four upstate casinos will attract non-New York residents and bring downstate New Yorkers to upstate;
- The casino sites and the licensed owners shall be selected on merit;
- Local impact of the casino sites will be considered in the casino evaluation process;
- Revenue realized from casinos shall be utilized to increase support for education beyond that of the state's education formulae and to provide real property tax relief to localities;
- Casinos will be tightly and strictly regulated by the commission to guarantee public confidence and trust in the credibility and integrity of all casino gambling in the state and to prevent organized crime from any involvement in the casino industry;

[50] "Significant Industries," New York State Department of Labor, 2019. https://labor.ny.gov/stats/PDFs/Significant-Industries-New-York-State.pdf

- The need for strict state controls extends to regulation of all persons, locations, practices and associations related to the operation of licensed enterprises and all related service industries as provided in this article;
- The state and the casinos will develop programs and resources to combat compulsive and problem gambling;
- The state will ensure that host municipalities of casinos are provided with funding to limit any potential adverse impacts of casinos;
- As thoroughly and pervasively regulated by the state, four upstate casinos will work to the betterment of all New York.[51]

The 2013 referendum received support from 57 percent of New York voters,[52] due in great measure to a successful political campaign led by a coalition of interests called "New York Jobs Now."[53] The New York effort deployed sophisticated advertising campaigns that largely focused on economic issues, including promises to rebuild local economies that had seen better days. Importantly, the referendum resulted a situation in which the reality of gaming will forever be measured against the promises.

2. Background and Forecast Scenarios

The 2013 Upstate New York Gaming Economic Development Act allowed for four resort-scale commercial casinos to be located in the Upstate market, all of which have since been developed and are operational. The Downstate market, specifically the New York City metro area, was considered for possible development in a second phase, after the performance of Upstate facilities was demonstrated. As shown in Part 2 of this report, Spectrum has insight into the performance of each of the new and incumbent gaming facilities in the market. We also have informed estimates of the gaming expenditure and visitation per capita by county in New York, as well as by non-New Yorkers at New York gaming facilities. As a result, we can use this insight to estimate the market demand for new, Downstate properties.

Starting with the model that we created at the statewide level, Spectrum created a more granular model for the Downstate region. This model, constructed at the ZIP Code level, includes 13 million fewer residents of legal gaming age than the statewide model, as it focuses on the New York City and Orange County potential feeder markets. The model is also much more detailed and specific, as the population for each ZIP Code and the drive-time from the centroid of each ZIP Code to every gaming facility in the market were considered. While Spectrum acknowledges the reliance of New York City-area residents on

[51] New York Senate, "The Laws Of New York / Consolidated Laws / Racing, Pari-Mutuel Wagering And Breeding Law / Article 13: Destination Resort Gaming / Title 1: General Provisions." https://www.nysenate.gov/legislation/laws/PML/1300 (accessed April 26, 2020)

[52] Thomas Kaplan, "Expansion of Gambling in New York is Approved," *New York Times*, Nov. 5, 2013. https://www.nytimes.com/2013/11/06/nyregion/referendum-to-expand-casino-gambling-in-new-york-is-approved.html

[53] Ibid.

mass transit, consistency dictates that drive-times be the distance factor input to the models. This distance factor is then modified/adjusted on a ZIP Code basis using a travel-friction factor, which essentially slows down or speeds up the travel time based upon real-world use and behaviors.

For the purposes of assessing the Downstate market potential, Spectrum needed to make assumptions regarding reasonable scenarios that may transpire in terms of the mix and location of expansions. The list of combinations and permutations of sites and quantity of locations was accepted by the New York State Gaming Commission as being reasonable and sufficient, given that there are countless other scenarios that could alternatively be considered, such that the potential matrix of outcomes could become limitless. Therefore, while the State may ultimately decide on even an alternative scheme on expansion (if at all), these scenarios are broad enough that they cover most of what the range in potential impacts may be.

We further note that Spectrum's assumption for new-build casinos in the New York City area will be for large-scale integrated resorts, but for no specific brand and no specific location (other than a part of a specific borough). This assumption is based on what the market can absorb, coupled with the understanding that the New York City market is one of the most desirable, underserved markets in the world, and there will only be one opportunity to develop gaming properties in that market that can fully advance public policy and serve the public interest.

Through our discussions with major, international casino operators that have shown interest in getting a license to develop and operate a casino in the New York City area, we recognize that the scale ultimately proposed for an integrated resort casino may be much larger than we are considering, and that there may be the ability to utilize a strong, national and international player database for which Spectrum's demographic and tourism data would not sufficiently account. As such, there is the possibility that the GGR for the market, as well as the overall development cost and related economic impacts (from construction and from operations) could well exceed what we demonstrate below.

The modeling scenarios considered as being potential Downstate commercial casino locations are as follows:

- **Scenario 1:** Three Downstate casinos
    - 1 new casino in Midtown Manhattan, and
    - Both Resorts World New York ("RWNYC") and Empire City VLT facilities transform into casinos
- **Scenario 2:** Three Downstate casinos
    - 1 new casino in western Brooklyn, and
    - Both RWNYC and Empire City VLT facilities transform into casinos
- **Scenario 3:** Three Downstate casinos
    - 1 new casino in northeast Queens, and
    - Both RWNYC and Empire City VLT facilities transform into casinos
- **Scenario 4:** Three Downstate casinos and two VLT facilities

- 3 new casinos – Midtown Manhattan, western Brooklyn and northeast Queens, and
- Both RWNYC and Empire City remain VLT facilities

- **Scenario 5:** One Downstate casino and two VLT facilities
  - 1 new casino in Midtown Manhattan, and
  - Both RWNYC and Empire City remain VLT facilities
- **Scenario 6:** Status quo
  - No new casinos, and
  - RWNYC and Empire City remain as VLT facilities

It was also necessary to assume that the gaming tax rate would support development of integrated resorts at a scale sufficient to meet the latent market demand and that the licensed operators would be sufficiently effective at marketing to meet that demand. In the Tax Analysis chapter of this report, we provide in greater detail issues pertaining to the inverse relationship between effective gaming tax rates and the levels of initial capital investment and ongoing marketing capabilities. To that end, Spectrum's initial assumption reflects a tax rate on slots of 40 percent and a tax rate on table games of 10 percent. (We assume these are flat rates rather than results of blended marginal rates.) We then consider an alternative tax rate of 45 percent on slots and 12 percent on tables to demonstrate the potential implications of the different rates and the related benefits and risks of going with each.

Additionally, or alternatively, a tiered marginal tax rate structure could be considered, such that the effective tax rate may go up as GGR increases or as the scale of operations increase, whereby the incremental operating cost for each incremental dollar of GGR may be relatively low, allowing for the feasibility of applying a higher marginal tax rate. As noted, optimal tax structure (or alternatives worthy of serious consideration) will be discussed in more detail in the Tax Analysis section of this report. This section provides more of a quantitative analysis of the forecasts than a qualitative discussion on the results' implications.

Further discussed in the Tax Analysis section of this report will be the notion of an up-front license fee for a new casino license. For the purpose of this analysis, we are assuming a $500 million fee per license in each scenario, independent of whether it is a new-build or a conversion of an existing VLT facility into a casino. (This could be adjusted for the scenario where there are three new-builds and no VLT facility conversions, as we will demonstrate that in that scenario the market will be considerably diluted, resulting in lower GGR for each casino than in any of the other scenarios, despite offering the greatest aggregate GGR.) The rationale for the scale of the up-front fee, as well as the pros and cons of having one (at a fixed fee or something to be effectively part of the bid or auction of licenses) are also included in Section D.7.b. of this report.

The first models assumed no gaming facilities in Orange County or northern New Jersey and no notable other new properties regionally competing against existing or potential Downstate properties. GGR potential for each of these scenarios will be a function of demand coming from both the regional market and the tourist market, with some incremental market potential coming from induced visitation through casino operator player databases. As noted above, the induced market segment cannot be fully

calibrated into Spectrum's models because we cannot identify who those operators may be (aside from MGM and Genting, as the operators of the existing VLT facilities – we do not skew our analysis by giving them extra consideration for that market segment merely due to the fact that we know their identity).

It is also necessary to consider a subject year for our demand analysis, which should be reflective of a reasonable full year of operation for each facility, taking into account the current legislative and political calendar.

While we recognize that the VLT facility conversions may be able to be completed quickly, development of a new integrated resort would take at least three years to complete, in addition to however long it takes to award a license. For the purpose of modeling a wide range of scenarios in this analysis that might require at least some modifications of the legislative timetable, we assume 2025 as the subject year for all facilities to be operational. If that date is delayed until 2026 to comport with the present legislative calendar, it would not have a material impact on our projections. Later in this chapter we will consider what the GGR may be for converted VLT facilities if they are operational as casinos in the interim while a new integrated resort is being developed. We assume mid-2023 as being the earliest that RWNYC and Empire City could be licensed and operational as casinos, if they are chosen to be awarded as such under a revised statutory timetable.

3. Expanding Gaming in the Downstate Market

a. Regional Market Projection

Spectrum projected demand for new and existing Downstate regional properties based on gravity models (the regional population, which includes New York and extends into Connecticut, Pennsylvania and New Jersey), as well as from tourism projections. Based on the results of the gravity models, we project the gross gaming revenue capture from the regional population for Downstate properties in 2025 to be as follows (not including Jake's 58, which we are not assuming as being a resort casino candidate for any scenario, or Resorts World Catskills – we provide Downstate expansion implications on these two properties in the body of this report):[54]

[54] It should be noted that new gaming facilities typically cannot reach their market potential of revenues in the first year or two of operations, as it takes time to tailor marketing efforts and for player databases to be developed. Similarly, some facilities open prior to all amenities being completed, limiting attractiveness and accessibility to customers. Typically, a new facility only attains 85% to 90% of its market potential in the first year of operations, and 92% to 95% of its potential in Year 2, before reaching a level of stability around Year 3. The projections as provided in this report are for the stabilized potential, i.e. they do not reflect a discount for 2025, and as such it may take two to three years for the market to reach the projected aggregate GGR levels.

Figure 43: GGR projected for New York City-area facilities from regional population base, by scenario, 2025

Casino locations	Manhattan	Brooklyn	Queens	Empire City	RWNYC	Total
Scenario 1: M, RW, MGM	$1,517,347,058	$0	$0	$949,693,096	$1,224,637,111	$3,681,234,903
Scenario 2: B, RW, MGM	$0	$1,857,454,960	$0	$896,235,261	$1,053,014,151	$3,789,846,976
Scenario 3: Q, RW, MGM	$0	$0	$1,878,352,374	$824,112,150	$1,005,919,472	$3,697,004,882
Scenario 4: M, B, Q	$986,001,662	$1,329,255,799	$1,428,939,101	$322,168,465	$401,690,285	$4,452,403,676
Scenario 5: M	$1,783,366,088	$0	$0	$509,293,646	$747,652,661	$3,031,427,709
Scenario 6: Status Quo	$0	$0	$0	$631,840,356	$913,825,322	$1,541,646,794

Source: Spectrum Gaming Group. **Note:** Highlighted cells denote remaining as a VLT facility. **Scenario Legend:** M: Manhattan; B: Brooklyn, Q: Queens, RW: Resorts World NYC, MGM: MGM Empire City

b. Tourism Gaming-Revenue Projection

An integrated resort casino in the greater New York City area likely would benefit from the visitation of more than 80 million tourist visitors per year to the city. (The total was 65 million in 2018, but would likely exceed 80 million by the time these casinos are operational,[55] assuming tourism growth is sustained at the historical growth rate of over 3 percent per year, as experienced from 2014-2018.)[56] The tourists are a mix of day-trippers and overnight visitors, domestic and international. As could be expected, the majority of day-trip visitors to the New York City area are from what we consider as the regional market as outlined above, such that their visitation to a New York gaming facility may be considered as double-counting and is therefore not included. Similarly, but to a smaller degree, some overnight visitation is from regional residents.

In 2018, day-trip visitors accounted for 47 percent (24.4 million) of the 51.5 million domestic visitors.[57] Based on the data provided in NYC & Company's *2019 Travel and Tourism Trend Report*, we estimate that approximately 90 percent of the domestic day-trippers are from within the regional market (i.e., from the Philadelphia area, New Haven, New York City metro).[58] Projecting forward to 2025 (assuming 3.5 percent annual growth, just below the 3.7 percent average growth rate from 2014-2018 to account for a larger denominator), we estimate 3.1 million day-trippers can be used as a base for potential gaming patrons who have not been addressed in the local market patronage projections above.

Overnight visitation in 2018 included 27.1 million domestic visitors and 13.6 million international visitors, for a total of approximately 40.7 million overnight visitors.[59] Based on the data provided in NYC & Company's *2019 Travel and Tourism Trend Report*, we estimate that approximately 25 percent of the

[55] Without consideration of any potential lasting impacts of the COVID-19 pandemic.

[56] NYC & Company, *2019 New York City Travel and Tourism Trend Report*. https://indd.adobe.com/view/e91e777a-c68b-4db1-a609-58664a52cffd, p. 6.

[57] Ibid.

[58] Ibid, p. 7.

[59] Ibid, p. 6.

domestic overnight visitors are from within the regional market.[60] Assuming an annual tourism growth rate of 3.5 percent for domestic overnight visitors and 3 percent for international overnight visitors through 2025 (again, a slight discount to recent growth rates, by segment), we estimate 42.8 million overnight visitors can be used as a base for gaming patrons who have not been addressed in the local market patronage projections above (the base then being adjusted for potential growth through the casino opening year). Together with the 3.1 million non-local day-trippers, the tourist market is sized at 45.9 million non-local visitors by 2025.

Figure 44: Estimated New York City-area tourism, 2025

(In Millions of Visitors)	Domestic	International	Total
2018 tourists	51.5	13.6	65.1
2018 day trip	24.4	0	24.4
2025 day trip projection	30.8	0	30.8
2025 non-local day trip	3.1	0	3.1
2018 overnight	27.1	13.6	40.7
2025 overnight	34.7	16.7	51.5
2025 non-local overnight	26.0	16.7	42.8
2025 total non-local tourists	29.1	16.7	45.9

Source: Calculations by Spectrum Gaming Group, based on 2018 tourism data from NYC & Company, *2019 New York City Travel and Tourism Trend Report*.

New York City obviously has myriad entertainment alternatives for tourists, and the availability and accessibility of potential casinos outside of Manhattan may not be easily recognized, though they likely will be of sufficient size and marketing power to induce some visitation. As inputs for scenarios 1 through 3, we estimate the capture rate by location of these 45.9 million non-local tourists could be as follows:[61]

- Manhattan: 3.5 percent
- Queens: 2.5 percent
- Brooklyn: 2.0 percent
- RWNYC: 0.6 percent
- Empire City: 0.5 percent

For Scenario 4 (three new casinos), visits would be diluted, to 80 percent of potential above:

- Manhattan: 2.8 percent
- Queens: 2.0 percent

[60] Ibid, p. 7.

[61] The capture rates assumed for each scenario take into account the demographic makeup and geographical distribution of visitors across New York City, as well as the relative accessibility of alternative entertainment options. (While fewer visitors stay overnight in Brooklyn or Queens than Manhattan, and thus those boroughs earn a lower capture rate, those who stay in Brooklyn or Queens would be more likely to visit a nearby gaming facility than would those staying in Manhattan, which has a greater number of entertainment options nearby.)

- Brooklyn: 1.6 percent
- New York City VLT facilities would be even further diluted, as they would not become casinos

We estimate an average win per visit of $350 could be generated from this market segment. This yields the GGR estimates shown in Figure 45, by property, assuming each is operating a casino. (It should not be assumed that each location will have a casino – this is merely the tourist market potential that each site could have, assuming it has a casino.)

For scenarios in which RWNYC and Empire City do not get casino licenses, we will revert to our baseline models (the estimates as shown below for VLT facilities for Scenario 4), which assume that RWNYC and Empire City each attain approximately half the GGR as projected in the table below for their respective expanded properties.

Figure 45: GGR projected for New York City-area gaming facilities from non-local tourist population base, by property, 2025

	Manhattan	Queens	Brooklyn	Empire City	RWNYC
Capture rates	3.5%	2.5%	2.0%	0.5%	0.6%
Tourist patrons	1.60M	1.15M	0.92M	0.23M	0.28M
Win/visit	$350	$350	$350	$350	$350
GGR (Scenarios 1-3)	$561.7M	$401.2M	$321.0M	$80.2M	$96.3M
Scenario 4 GGR	$449.3M	$321.0M	$256.8M	$35.2M	$48.9M

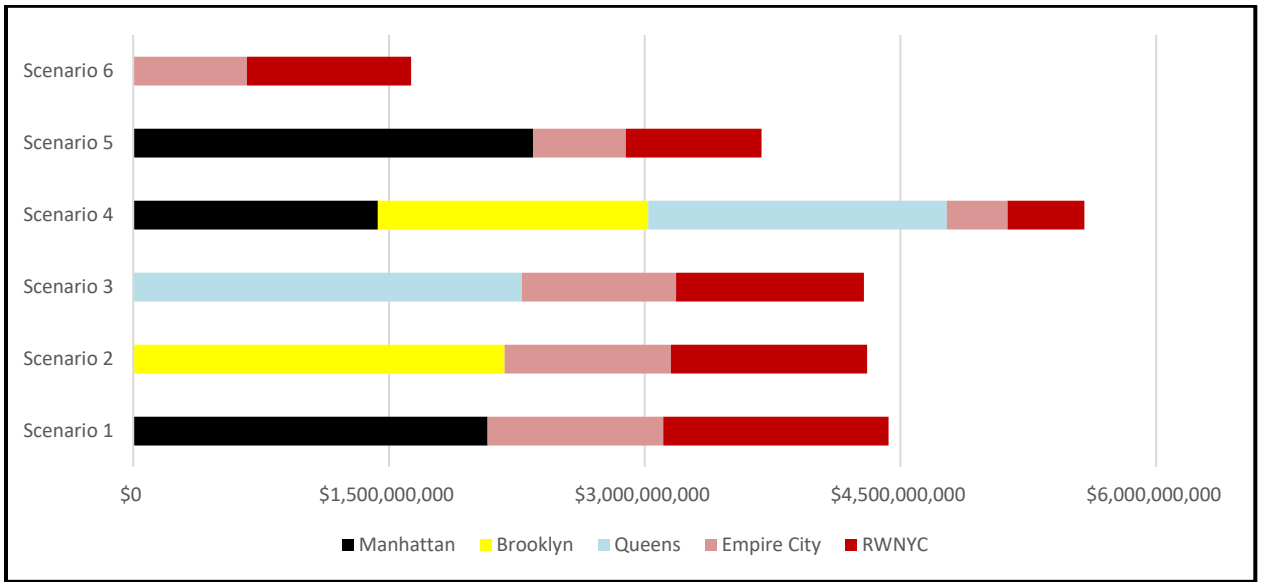
Source: Spectrum Gaming Group. **Note:** As noted in the text, it is not appropriate to add a "total" column to this table, as each scenario only considers at most three of the above having a casino. The Scenario 4 projected tourism GGR for RWNYC and Empire City are applicable for scenarios 5 and 6 as well.

c. GGR Summary for Downstate Gaming Market, 2025

Figure 46 and Figure 47 provide the GGR estimates for each of the potential New York City-area casino and VLT locations, by scenario, taking into consideration both the local and baseline tourist populations. Notably not included in these projections is potential incremental demand that could result from induced tourist visitation, generated through marketing efforts of the casino operators from outside of the regional market. Major gaming operators all have player databases to draw from that could generate incremental visits and GGR from this segment, and in many cases the magnitude of this incremental GGR could be significant. Given that no assumption is made as to who the operators would be of new properties, this incremental GGR potential was conservatively omitted.

We therefore note the potential conservative nature of these projections, but the necessity given that we were not assessing the feasibility of a specific operator's proposed development, building program and marketing program.

Figure 46: GGR projected for New York City-area gaming facilities, by scenario, 2025



Source: Spectrum Gaming Group

Figure 47: GGR projected regional demand for New York City-area facilities, by scenario, 2025

	Manhattan	Brooklyn	Queens	Empire City	RWNYC	Total
Scenario 1: M, RW, MGM	$2,079,021,604	$0	$0	$1,029,932,317	$1,320,924,176	$4,429,878,097
Scenario 2: B, RW, MGM	$0	$2,178,411,844	$0	$976,474,482	$1,149,301,216	$4,304,187,542
Scenario 3: Q, RW, MGM	$0	$0	$2,279,548,479	$904,351,371	$1,102,206,537	$4,286,106,387
Scenario 4: M, B, Q	$1,435,341,299	$1,586,021,306	$1,749,895,985	$357,334,504	$450,579,657	$5,579,172,751
Scenario 5: M	$2,345,040,634	$0	$0	$544,459,686	$796,542,033	$3,686,042,353
Scenario 6: Status Quo	$0		$0	$667,006,395	$962,714,694	$1,629,721,089

Source: Spectrum Gaming Group. **Note:** Highlighted cells denote remaining as a VLT facility.

A notable result here is Scenario 4, which provides for the greatest possible regional GGR, but comes with significant implications as well – the two New York City VLT facilities (RWNYC and Empire City) and Jake's 58 would experience substantial cannibalization of their demand (and Resorts World Catskills would experience significant cannibalization, relative to the other scenarios considered), potentially impacting facility employment and related economic impacts, as well as ongoing operational feasibility (as discussed and quantified in detail in Section D.3.d.) It is also possible that for Scenario 4 a license fee lower than $500 million could be supported, given that the GGR potential for each casino is only 70 percent to 80 percent of that which each could generate in Scenarios 1 through 3 (with just converted VLT facilities as proximate casino competition). As such, while Scenario 4 offers the greatest GGR, it is far from a clear-cut, best-case scenario for the State from a net tax revenue standpoint, as well as the potential scale and ongoing capital investment of new gaming properties (immediate over-saturation may not be a good long-run strategy).

We estimate the mix of slot GGR and table GGR at any new resort casino will be 55 percent slot and 45 percent tables. This is consistent with the performance at Resorts World Catskills, as well as being based on what we envision as the sources of demand for the casino (and the presence of VLT facilities in the regional market to attract play on electronic gaming devices). Notably, that ratio is precisely consistent

with major Las Vegas properties as well.[62] For converted VLT facilities (RWNYC and Empire City), we project the GGR mix will be 75 percent slot (including electronic table games) and 25 percent live tables, based on current supply and discussions with the facilities' management regarding their intentions with respect to facility expansion if given a license. This results in the following aggregate GGR mix, by scenario.

Figure 48: Projected GGR slot/table split for New York City-area facilities, by scenario, 2025

Gaming Facility Locations	Slots	Live Tables	Unconverted VLT Facilities
Scenario 1: M, RW, MGM	$2,906,604,252	$1,523,273,845	
Scenario 2: B, RW, MGM	$2,792,458,288	$1,511,729,254	
Scenario 3: Q, RW, MGM	$2,758,670,094	$1,527,436,292	
Scenario 4: M, B, Q	$2,624,192,225	$2,147,066,366	$807,914,161
Scenario 5: M	$1,289,772,349	$1,055,268,285	$1,341,001,719
Scenario 6: Status Quo			$1,629,721,089

Source: Spectrum Gaming Group

d. New Downstate Casino Impact on Incumbent Operators

The addition of resort casinos in the Downstate market will naturally have an impact on the performance of existing facilities. For Jake's 58 and Resorts World Catskills collectively, the decline in GGR could be in the range of $60 million to $168 million, depending on the scale and location of Downstate development. Rivers Casino may also see a small decline (less than 5 percent), due to cannibalization of the Hudson River Valley market. If New York City VLT facilities are excluded from getting casino licenses (and remain as VLT facilities), the decline in GGR at those properties from the regional population could range from $289 million to $822 million, and be the source of approximately 83 percent of the GGR cannibalized by new casinos (i.e., of all the dollars cannibalized by new facilities, 83 percent will be cannibalized from Empire City and RWNYC). These larger figures ($822 million and 83 percent) clearly reflect a massive dilution of the VLT facilities' GGR potential, as it then reflects an over-saturated market in which they are comparatively inferior properties to their most proximate competitors.

Figure 49 below shows the GGR projected from the regional population (not including the small percentage from tourism) for Resorts World Catskills and Jake's 58 in each of the development scenarios, as well as the total decline for those two properties over the no-build Scenario 6. Figure 49 also illustrates the potential losses at the New York City VLT facilities in the two scenarios in which they remain VLT facilities and new casinos open in New York City. Figure 50 demonstrates the relative magnitude of the impacts of GGR declines at VLT facilities in the cases where they are not awarded casino licenses.

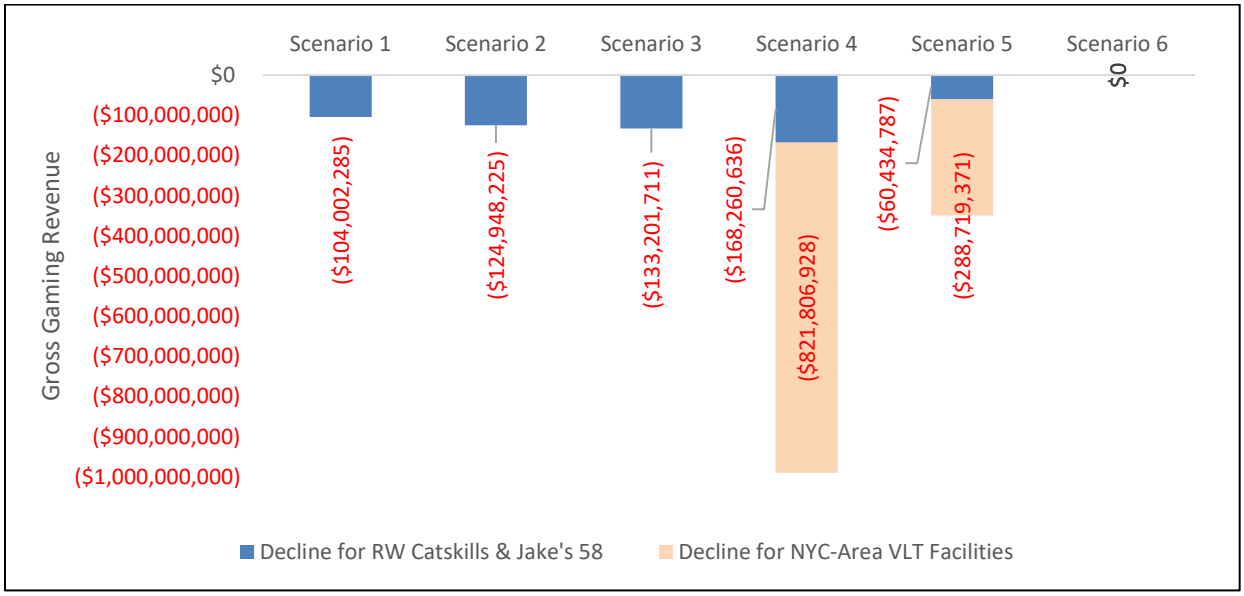
[62] "Nevada Gaming Statistics: The Last Six Months, March to August 2020" University of Nevada Las Vegas Center for Gaming Research https://gaming.unlv.edu/reports/6_month_NV_20_08.pdf (accessed October 28, 2020

Figure 49: Projected GGR from regional population base for existing Downstate facilities, by scenario, 2025

	RW Catskills (Non-Tourist GGR)	Jake's 58 (Non-Tourist GGR)	Net Decline* Relative to Scenario 6	Decline for Empire City VLT Facility	Decline for RWNYC VLT Facility
Scenario 1: M, RW, MGM	$162,765,654	$188,251,896	($104,002,285)		
Scenario 2: B, RW, MGM	$151,849,877	$178,221,734	($124,948,225)		
Scenario 3: Q, RW, MGM	$150,737,799	$171,080,326	($133,201,711)		
Scenario 4: M, B, Q	$135,620,428	$151,138,772	($168,260,636)	($309,671,891)	($512,135,037)
Scenario 5: M	$185,887,762	$208,697,287	($60,434,787)	($122,546,709)	($166,172,661)
Scenario 6: Status Quo	$216,050,026	$238,969,810	$0	$0	$0

Source: Spectrum Gaming Group. *Net Decline sums the change in GGR for RW Catskills and Jake's 58 relative to Scenario 6 (Baseline).

Figure 50: Projected GGR declines for existing Downstate facilities, by scenario, 2025



Source: Spectrum Gaming Group. **Note:** New York City-area VLT facilities are defined as Empire City and RWNYC.

e. Downstate Casino Gaming Tax Fiscal Impact

Figure 51 provides the implications of the different scenarios from a tax distribution standpoint. The assumptions behind these tables are that any new casinos will be taxed at a rate of 40 percent on slots and 10 percent on tables. It is further assumed that the tax rate will remain 39 percent on slots and 10 percent on tables at Resorts World Catskills. For VLT operations, we assume the rates going toward education will remain consistent with the current rates: 50.5 percent at Empire City, 40 percent at RWNYC, and 45 percent at Jake's 58. In total, incremental tax revenues to the State from adding one or more casinos to the New York City market could be in the range of $471 million to $842 million.

Figure 51: Projected State gaming tax revenue from Downstate facilities based on estimated GGR, 2025

	Casino Slots	Casino Tables	Empire	RWNYC	Jake's 58s	RW Catskills	Total	Increment from Baseline (Scenario 6)
Scenario 1: M, RW, MGM	$1,162.6M	$152.3M			$84.7M	$45.5M	$1,445.2M	$556.4M
Scenario 2: B, RW, MGM	$1,117.0M	$151.2M			$80.2M	$42.5M	$1,390.9M	$502.2M
Scenario 3: Q, RW, MGM	$1,103.5M	$152.7M			$77.0M	$42.2M	$1,375.4M	$486.7M
Scenario 4: M, B, Q	$1,049.7M	$214.7M	$180.1M	$180.2M	$68.0M	$38.1M	$1,730.8M	$842.1M
Scenario 5: M	$515.9M	$105.5M	$274.4M	$318.6M	$93.9M	$51.7M	$1,360.1M	$471.4M
Scenario 6: Status Quo	$0.0M	$0.0M	$336.2M	$385.1M	$107.5M	$59.9M	$888.7M	

Source: Spectrum Gaming Group. **Note:** Casino Slots and Casino Tables reflect taxes emanating from any newly-opened casinos opened in the New York City area.

f. New Downstate Casino Impact on GGR Repatriation

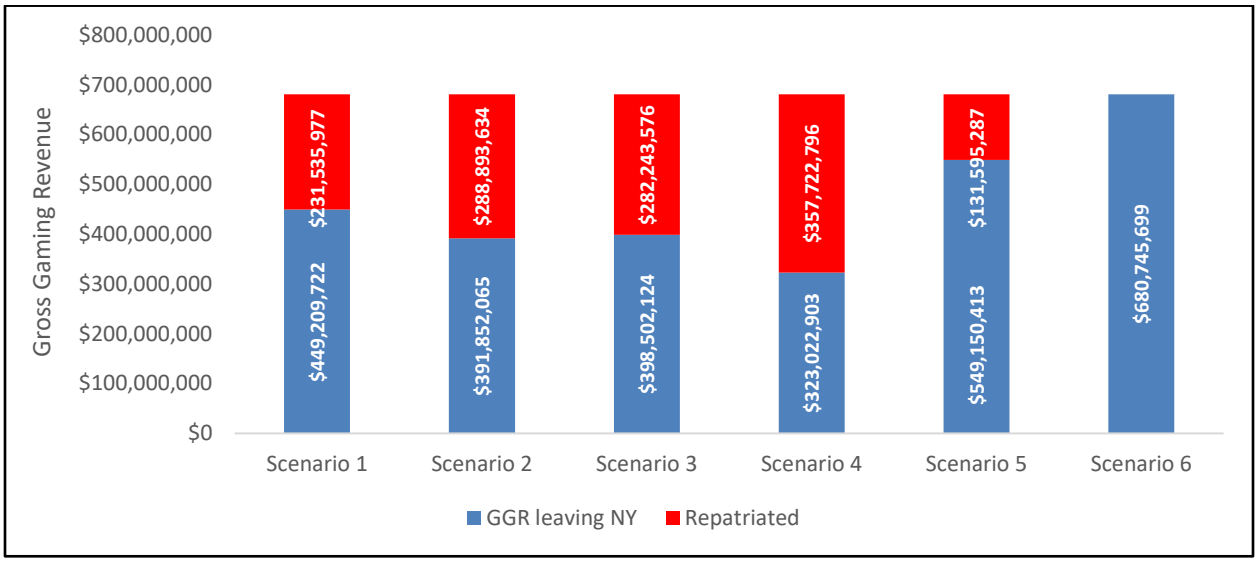
In Spectrum's models – calibrated to 2019 performance of the gaming facilities in the region and informed through interviews with gaming operators – we estimate approximately $681 million from New York residents will be leaving the Downstate market in 2025 for gaming out of state (to Connecticut, New Jersey and Pennsylvania), assuming no changes to market supply. With the addition of these new Downstate casinos, we estimate the potential recapture of 34 percent to 53 percent of these expenditures. Figure 52 and Figure 53 show the extent to which each of these scenarios recaptures (repatriates) a share of the $681 million (**red** bar segments in Figure 53 reflect repatriation). In the three-casino models, the combination with Manhattan appears to repatriate the least revenues, as a more significant portion of revenues for that location would be from non-New Yorkers (and alternatives in New Jersey and Pennsylvania are more proximate to Manhattan than to Brooklyn or Queens).

Figure 52: GGR potentially repatriated by new Downstate facilities, by scenario, 2025

	GGR Leaving Downstate NY	Repatriated (Δ from Scenario 6)
Scenario 1 (M, RW, MGM)	$449,209,722	$231,535,977
Scenario 2 (B, RW, MGM)	$391,852,065	$288,893,634
Scenario 3 (Q, RW, MGM)	$398,502,124	$282,243,576
Scenario 4 (M, B, Q)	$323,022,903	$357,722,796
Scenario 5 (M)	$549,150,413	$131,595,287
Scenario 6 (Status Quo)	$680,745,699	

Source: Spectrum Gaming Group

Figure 53: Potential repatriation of GGR from New York residents by new Downstate facilities, by scenario



Source: Spectrum Gaming Group

g. Gaming-Revenue Source for New York Gaming Facilities

As presented in the previous section, casinos in New York City would be able to capture some GGR that is presently leaving the state. We also present estimates of how much will be cannibalized from existing gaming facilities (though this was not considered in terms of what state their residence is). In Figure 54, we present the estimated breakdown of GGR by New Yorkers in three categories: recaptured from out-of-state, cannibalized from other New York facilities and new, latent demand. As a fourth segment, we consider GGR from out-of-state players, including all of the tourism GGR in our models, whether as new spending or cannibalized spending.

Based on the results of Spectrum's demand modeling, we already estimate that approximately $1.63 billion in VLT GGR could accrue to RWNYC and Empire City without any new casino licenses in 2025. This contributes heavily in Scenarios 1 through 3 in terms of the source of GGR, as conversion takes the GGR away from the VLT pool.

Gaming patrons diverted from other New York facilities (specifically RW Catskills and Jake's 58) would account for less than 5 percent of New York City-area casino GGR if three New York City-area casino licenses are awarded. For most scenarios, the recapture of gaming expenditure by New Yorkers who would otherwise play out-of-state accounts for approximately 5 percent to 7 percent of potential new casino GGR. Latent demand by New Yorkers is estimated to be significant, ranging from 27 percent to 35 percent of potential casino GGR. Finally, tourism and new spending by out-of-state gaming patrons is projected to account for 21 percent to 41 percent of potential new casino GGR. Figure 54 demonstrates these calculations. Note there is no Scenario 6, as it is a scenario where no gaming behavior changes (i.e., it is the status quo case).

Figure 54: Estimated sources of GGR for new New York City-area casinos, by scenario, 2025

	Diverted from RW Catskills	Diverted from New York VLTs*	Recaptured from Out of State	Latent New York	Tourist/New Out-of-State
Scenario 1 (M, RW, MGM)	$53,284,372	$1,680,439,003	$231,535,977	$1,192,315,030	$1,272,303,715
Scenario 2 (B, RW, MGM)	$64,200,149	$1,690,469,165	$288,893,634	$1,365,727,314	$894,897,280
Scenario 3 (Q, RW, MGM)	$65,312,227	$1,697,610,573	$282,243,576	$1,280,965,885	$959,974,126
Scenario 4 (M, B, Q)	$80,429,598	$909,637,966	$357,722,796	$1,689,681,089	$1,733,787,142
Scenario 5 (M)	$30,162,264	$318,991,894	$131,595,287	$892,014,340	$972,276,850
As a Percentage of New Casino GGR					
Scenario 1 (M, RW, MGM)	1.2%	37.9%	5.2%	26.9%	28.7%
Scenario 2 (B, RW, MGM)	1.5%	39.3%	6.7%	31.7%	20.8%
Scenario 3 (Q, RW, MGM)	1.5%	39.6%	6.6%	29.9%	22.4%
Scenario 4 (M, B, Q)	1.7%	19.1%	7.5%	35.4%	36.3%
Scenario 5 (M)	1.3%	13.6%	5.6%	38.0%	41.5%

Source: Spectrum Gaming Group. *For scenarios 1-3, note that the diversion includes the loss of GGR due to conversion of Empire City and RWNYC to casinos. For all scenarios, diversion also reflects revenue declines at Jake's 58.

h. Speed to Market: Aggregate GGR with Only Converted VLT Facilities

A key difference between licensing new properties for integrated resort development Downstate and offering casino licenses to existing VLT facilities is the potential speed to market. We assume that it will take approximately nine months for a VLT facility to convert to a casino, as it is Spectrum's understanding that space has already been identified in existing structures where more than 200 table games could be placed. We presume video lottery terminals will be replaced by traditional slot machines, but that many of the electronic table gaming positions may remain (though there may be some additional titles, game types or manufacturers of the electronic tables, providing a better experience). Based on discussions with VLT facility operators, Spectrum understands that while the electronic table games are successful relative to the slot-like VLTs, they have limitations in terms of accommodating players who want to play for relatively high stakes, from a currency-in standpoint as well as a tax-reporting requirement on winning hands, resulting in latent demand from this segment of the betting public. If these higher-wagering table gaming patrons instead can play on live tables, none of these unpleasant issues would be experienced, and this latent demand may be captured.

For the purpose of this section of the analysis, we consider the three scenarios where the two VLT facilities are converted (presumably with expansion/conversion to casino complete by 2022).[63] The ramp-up of demand for these converted facilities should not be as steep as for a new casino, as there is already an existing player database, marketing team and management structure, such that each is already relatively efficient, and the facilities would likely be fully functional (unlike a new casino resort, which may or may not open with all amenities complete and operational).

[63] It is possible that the converted VLT facilities could be operational by mid-to-late 2021, but for the purpose of these calculations Spectrum assumes 2022 as a full year. (To the extent facilities could be converted and reopened sooner, it would add to the incremental income of having these facilities casino-licensed.)

In this scenario, Spectrum projects GGR from the local market would total $1.36 billion for RWNYC and $1.04 billion for Empire City in 2022. The non-local tourist volume is forecast at 41.6 million visitors to the region (using inputs and assumptions consistent with our tourism analysis above for 2025), for which we estimate RWNYC could potentially capture 0.75 percent and Empire City 0.6 percent (both being slightly greater than was assumed with another new casino). At an average win per visit of $350, this would yield an incremental $109.3 million for RWNYC and $87.4 million for Empire City.

In total, the potential GGR for RWNYC in 2022 with a full-scale casino is $1.47 billion, and for Empire City (including hotel) $1.13 billion, for a total of $2.61 billion. Population and income growth are projected to increase potential GGR by 1.6 percent GGR growth up to 2025 (when a third casino is assumed to open). Actual GGR may grow at a faster pace due to a small ramp-up, though this would be manifest in a lower *actual* 2022 and 2023, relative to *projected*. However, as noted above, the initial revenues for a converted facility should be relatively close to the projected volume, i.e. actual being at least 95 percent of projected. A significant caveat to this may be the pace of recovery due to the COVID-19 pandemic. In Spectrum's COVID-19 analysis, we presume the market will revert to normalcy by 2023. The RWNYC and Empire City 2022 projections assume relative normalcy by 2022 as well.

Figure 55: Projected GGR for converted VLT facilities, 2022-2024

	RWNYC	Empire City	Total
2022	$1,474,254,524	$1,131,189,232	**$2,605,443,756**
2023	$1,497,519,517	$1,149,104,952	**$2,646,624,469**
2024	$1,521,150,674	$1,167,304,363	**$2,688,455,036**

Source: Spectrum Gaming Group

The Upstate casinos each paid a licensing fee to the State upon licensing. Two casinos – Rivers, and del Lago each paid $50 million while Montreign (currently Resorts World Catskills) paid $51 million in an initial license fee. These three licenses were deemed to have an effective date of March 1, 2016. The fourth, Tioga Downs, paid an initial license fee of $20 million, and was awarded a license effective November 23, 2016. [64] Genting paid $380 million in an up-front payment to the State to open RWNYC.

The Gaming Act includes a provision in Section 1311 that states in essence, that if additional casinos are licensed within seven years of the issuance of the Upstate licenses, the licensees and RWNYC can apply for a refund of the license fee paid based on the pro-rated remaining time on the initial seven-year period.[65] For the first three licensees, the expiration of this clause is March 1, 2023. For Tioga Downs, the expiration is November 23, 2023.

Were additional licenses issued prior to these dates, the licensees, along with RWNYC, could petition for the refund as stated in the Act, but the amount they have the right to recover would be based

[64] New York State Gaming Commission website. https://www.gaming.ny.gov/gaming/casinos.php (accessed August 15, 2020)

[65] New York State Gaming Act s 1311. https://www.nysenate.gov/legislation/laws/PML/1311 (accessed August 15, 2020)

on when an additional casino opens. If it is assumed that the first additional casino will open after November 2023, the refund amount would be zero. If the first additional casino opens in June 2022, then the refund amount would be approximately $20.1 million. Rivers, del Lago and Resorts World Catskills at that point would have enjoyed 75 months of the 84-month exclusivity period, and thus RWNYC, Rivers and del Lago would be entitled to approximately $5.4 million each while Tioga would receive $4 million, having enjoyed 67 months of exclusivity. Each month of exclusivity for Rivers and del Lago is valued at 1/84th of the $50 million license fee, or roughly $600,000 per early licensee. In the case of Tioga Downs, each month of exclusivity is valued at approximately $240,000.

i. Projected Impact to Downstate Development of Expansion Elsewhere

Spectrum examined two alternative possibilities for regional competition from out-of-state in terms of the gaming revenue in Downstate New York – a casino at the Meadowlands (northern New Jersey) and a casino in East Windsor, CT (north of Hartford, near the Massachusetts state line). Spectrum's immediate conclusion was that East Windsor would have no measurable impact on Downstate New York market, whereas a casino at the Meadowlands (assumed to have 5,000 gaming positions) would have a significant impact on the revenues in the Downstate New York market, especially in the more saturated market scenarios.

From an individual property percentage decline standpoint, relative to scenarios 1, 2 and 3 without a Meadowlands casino, the result of our revised demand models showed the impacts of Meadowlands to be as follows on property GGR:

- -12.5 percent for Manhattan
- -8.1 percent for Brooklyn
- -7 percent for Queens
- -9.8 percent to -11 percent for Empire City (depending on third license casino location)
- -5.4 percent to -6.2 percent for RWNYC (depending on third license casino location)
- -7.7 percent to -8.0 percent for RW Catskills (depending on third license casino location)
- -2.8 percent to -3.2 percent for Jake's 58

For Scenario 4, the impact of Meadowlands competition would mute all of these percentages (for each of the New York City-area casinos and VLT facilities) slightly (i.e., the relative GGR decline attributable to the Meadowlands on Scenario 4 for Manhattan would be 11.5 percent instead of 12.5 percent).

Figure 56: GGR projected for Downstate gaming facilities, by scenario and with Meadowlands casino, 2025

	Manhattan	Brooklyn	Queens	Empire City	RWNYC	RW Catskills	Jake's 58	Total
Scenario 1 (M, RW, MGM)	$1,819.5M	$0.0M	$0.0M	$929.0M	$1,248.0M	$155.3M	$182.3M	$4,334.1M
Scenario 2 (B, RW, MGM)	$0.0M	$2,001.9M	$0.0M	$874.4M	$1,087.7M	$145.1M	$173.1M	$4,282.2M
Scenario 3 (Q, RW, MGM)	$0.0M	$0.0M	$2,119.2M	$805.3M	$1,034.0M	$143.7M	$166.2M	$4,268.4M
Scenario 4 (M, B, Q)	$1,270.9M	$1,480.0M	$1,657.2M	$328.0M	$432.6M	$131.5M	$147.6M	$5,448.0M
Scenario 5 (M)	$2,039.4M	$0.0M	$0.0M	$489.6M	$748.6M	$175.1M	$200.1M	$3,652.7M
Scenario 6 (Status Quo)	$0.0M	$0.0M	$0.0M	$575.7M	$876.1M	$197.0M	$225.1M	$1,873.8M

Source: Spectrum Gaming Group. **Notes:** Highlighted cell denotes remaining as a VLT facility. Scenario numbers assume the same New York City-area casino combinations as outlined above, but with the inclusion of Meadowlands as a market competitor.

From a fiscal impact perspective, the addition of a Meadowlands casino to the market results in a tax revenue decline in the range of $93 million to $131 million, depending on the quantity and location of Downstate casinos.

Figure 57: Projected fiscal impacts from Downstate gaming facilities, 2025, with and without Meadowlands

	State Fiscal Impact without Meadowlands	State Fiscal Impact with Meadowlands
Scenario 1 (M, RW, MGM)	$1,445.2M	$1,313.8M
Scenario 2 (B, RW, MGM)	$1,390.9M	$1,285.4M
Scenario 3 (Q, RW, MGM)	$1,375.4M	$1,273.1M
Scenario 4 (M, B, Q)	$1,730.8M	$1,608.6M
Scenario 5 (M)	$1,360.1M	$1,224.1M
Scenario 6 (Status Quo)	$888.7M	$795.3M

Source: Spectrum Gaming Group. **Note:** Tax revenues include those generated by RW Catskills, RWNYC, Empire City, Jake's 58 and any new casino licensed in New York City.

Spectrum also evaluated the potential implications of a Shinnecock Tribe casino in Suffolk County on the Downstate market. There are many barriers to entry for that facility, and if developed it would likely be on the eastern side of the county, and small relative to the existing and potential gaming venues in the New York City area, based on Spectrum's understanding of the Tribe's previous proposed casino efforts. Should it come to fruition, the gaming facility that would be most at risk is Jake's 58, as our gravity model suggests that between 42 percent and 56 percent of that property's business originates in Suffolk County. Nevertheless, our models suggest that less than 5 percent of Jake's 58's market would be at risk from a Shinnecock competitor, due to the location and scale presumption. Additionally, we estimate that the GGR at risk for any other venue in the market would be less than 2 percent, and more probably less than 1 percent. The discussion above regarding a Meadowlands casino's impact on NYC casino revenues (ranging from 3 percent to 13 percent, depending on property) demonstrates a comparable dynamic in terms of the impact of saturating supply from a direction in the market.

j. Facility Sizing Assumptions

We considered patron-count estimates (an output of the gravity model) and what we view as realistically attainable figures for average daily wins on slots and tables to arrive at estimates of slot and table counts for each of the new casinos. Additionally, based on the source of gaming patrons (by location), projected tourist attraction, and the need to provide hotel rooms to higher-valued patrons in the respective casinos' databases, we made assumptions regarding appropriate hotel scales, by location. The results of Spectrum's demand forecasts were the following sizing assumptions, by property and scenario:

Figure 58: Facility sizing assumptions, by scenario

	Slots	Tables	Hotel Rooms
Manhattan			
With VLT facilities getting casino license (Scenario 1)	4,350	450	1,000
With casino resorts in Queens and Brooklyn (Scenario 4)	3,500	325	900
With VLT facilities getting casino license and Meadowlands (Meadowlands Scenario 1)	3,600	400	900
With casino resort in Queens and Brooklyn and Meadowlands (Meadowlands Scenario 4)	2,700	300	800
As the only New York City casino (Scenario 5)	5,000	500	1,000
As the only New York City casino with Meadowlands (Meadowlands Scenario 5)	4,250	430	1,000
Brooklyn			
With VLT facilities getting casino license (Scenario 2)	4,750	490	2,000
With casino resorts in Queens and Manhattan (Scenario 4)	3,600	370	1,750
With VLT facilities getting casino license and Meadowlands (Meadowlands Scenario 2)	4,100	460	1,850
With casino resort in Queens and Manhattan and Meadowlands (Meadowlands Scenario 4)	3,250	350	1,600
Queens			
With VLT facilities getting casino license (Scenario 3)	5,150	530	2,000
With casino resorts in Brooklyn and Manhattan (Scenario 4)	4,250	430	1,750
With VLT facilities getting casino license and Meadowlands (Meadowlands Scenario 3)	4,600	505	1,850
With casino resort in Brooklyn and Manhattan and Meadowlands (Meadowlands Scenario 4)	3,900	420	1,600

Source: Spectrum Gaming Group

For the scenarios with New York City-area VLT facility conversions, we assumed that each would add 225 live table games, with no elimination of any electronic gaming options (however the VLTs would notably be replaced with slot machines). In the scenarios where the Meadowlands is competition, this addition is cut to 200 tables apiece. For each converted VLT facility, it is also assumed that 500 hotel rooms would be added to accommodate the incremental demand (in addition to anything existing or currently under development at either property).

4. Orange County VLT Facility

A new VLT facility in Orange County would increase the gaming supply in the Downstate area. A preliminary site that had been announced for the facility was at a former industrial plant south of the Woodbury Common Premium Outlets, though Genting Americas – which has rights to own and operate the Orange County VLT facility – is considering potential alternatives within close proximity to that site as well. A VLT facility at that location/in that vicinity may have an impact on Resorts World Catskills, and it

would also further dilute the market potential that could be generated by New York City gaming facilities. However, it may also capture some gross gaming revenue that otherwise would go to gaming facilities in other states. Genting is already a well-established gaming company in the New York market, such that it would be capable of quickly and efficiently utilizing and expanding its player database.

Relative to the Downstate market analysis as presented earlier in this report, Spectrum revised its gravity model to reflect likely changes to gaming participation rates for the different market areas that could be feeder markets for an Orange County VLT facility. A notable impact to the model is that while we anticipate the average win per visit at a new gaming resort in the New York City area could be in the range of $175 (+/- $20) for regional players, we assume it would be lower at the Orange County VLT facility; i.e., closer to $125. This is due to the positive correlation between amenity scope and scale (particularly hotels) and time spent gaming, and ultimately the amount spent gaming. ($125/visit is still relatively high for a VLT facility with modest amenities, but income levels in Orange and neighboring counties should equate to relatively high gaming budgets per visit.)

As a result, while gaming participation rates would likely increase, the aggregate GGR for the region would increase at a lower rate than it would if it were instead a gaming resort. For some market areas or individuals, the gaming expenditures may even go down, as the cost of gaming entertainment would be declining. As an example, a patron who might play 10 times a year at $175 a night in Manhattan ($1,750/year) might instead patronize the VLT facility 12 times a year at $125/night ($1,500/year).

For this assessment, we add an Orange County VLT facility to all six gaming facility development scenarios for the New York City area for model year 2025, operating at a gaming tax rate of 39 percent. Based on Spectrum's discussions with representatives of Genting Americas (the planned developer of the VLT facility), a 1,200-gaming-position facility with modest F&B amenities is expected to be operational by mid-2023.[66] This would mean it has a head start on potential new gaming resorts in the New York City market (though if VLT conversions are part of the expansion plan – i.e., Scenarios 1-3 above – the VLT conversions may precede the Orange County facility). As such, we are not fully evaluating a 2023 or 2024 pre-New York City casino market potential, but we estimate the implications at the end of this section.

a. Regional Market Projection

Based on our gravity modeling for each scenario, Spectrum projects that an Orange County VLT facility could generate between $147 million and $201 million in GGR in 2025 from the regional population, depending on the level of casino development in the New York City area. With the exception of the status quo (Scenario 6), the Orange County VLT facility is projected to generate $14 million to $18 million more annual GGR, depending on scenario, than what we estimate Resorts World Catskills would generate from the regional market with an Orange County VLT facility as a competitor. (Under the status quo, the projected GGR difference between Resorts World Catskills and the VLT facility is comparably negligible). This is attributable to Orange County's easy accessibility to the New York City metropolitan area and cities and towns along the New York State Thruway in the Hudson Valley Region. The Orange

[66] Spectrum team discussion with Genting Americas' Robert DeSalvio (President of Gaming New York State) and Kevin Jones (Chief Strategy Officer), April 20, 2020.

County VLT facility would dilute the collective demand for other existing and potential gaming facilities as follows:

- GGR for potential New York City-area casinos in most scenarios would decline by $43 million to $68 million (1.2 percent to 2.4 percent of projected casino GGR),
- New York City and Long Island-area VLT facilities (Jake's 58, as well as Empire City and RWNYC if they are not awarded casino licenses) GGR would decline by $2.4 million to $51 million (1.3 percent to 2.9 percent, with the nominal range being wide due to the inclusion or exclusion of Empire City and RWNYC), and
- A GGR decline of $7 million to $16 million for Resorts World Catskills (4.9 percent to 7.5 percent of Resorts World Catskills' GGR).

The impact would be greatest on Resorts World Catskills for the status quo Scenario 6, but only because the demand would not be otherwise cannibalized by the new casinos in the New York City-area. More specifically, the only thing intercepting New York City-area gaming patrons from driving north to Resorts World Catskills is Empire City in Yonkers. In Spectrum's models for this chapter, we are layering on the Orange County VLT facility to scenarios where new casinos are operational in New York City, with the exception of Scenario 6. Nevertheless, it is evident that if an Orange County VLT facility is to be located proximate to the Thruway and Route 17, it would be a major interceptor of potential day-trip gaming patrons headed to Resort World Catskills from the New York City area. As shown in Figure 59, between 53 percent and 67 percent of the regional resident GGR for the Orange County VLT facility would be incremental to the market.

Figure 59: Orange County GGR projections and impacts from regional population base, by scenario, 2025

	Orange County	New York City Casino Δ	New York City-Area VLT Facility Δ	Resorts World Catskills Δ	Orange County Facility GGR % Incremental to NY Market
Scenario 1 (M, RW, MGM)	$170,255,863	($68,046,124)	($3,024,064)	($9,342,934)	52.8%
Scenario 2 (B, RW, MGM)	$161,330,317	($61,303,547)	($2,639,868)	($8,651,490)	55.0%
Scenario 3 (Q, RW, MGM)	$160,619,750	($59,157,738)	($2,393,176)	($8,421,955)	56.4%
Scenario 4 (M, B, Q)	$146,898,486	($45,457,867)	($11,052,465)	($6,649,062)	57.0%
Scenario 5 (M)	$187,388,534	($42,843,777)	($33,028,083)	($12,745,169)	52.7%
Scenario 6 (Status Quo)	$200,864,523	$0	($51,009,979)	($16,184,984)	66.5%
Percentage Impact to Facilities' GGR Relative to No-Orange-County VLT Case					
Scenario 1 (M, RW, MGM)		-1.8%	-1.6%	-5.7%	
Scenario 2 (B, RW, MGM)		-1.6%	-1.5%	-5.7%	
Scenario 3 (Q, RW, MGM)		-1.6%	-1.4%	-5.6%	
Scenario 4 (M, B, Q)		-1.2%	-1.3%	-4.9%	
Scenario 5 (M)		-2.4%	-2.3%	-6.9%	
Scenario 6 (Status Quo)			-2.9%	-7.5%	

Source: Spectrum Gaming Group**. Notes:** New York City Casino Δ includes potential casinos in Manhattan, Brooklyn, and/or Queens, as well as Empire City and RWNYC if granted a casino license. New York City-Area VLT facility Δ includes Jake's 58 for all scenarios, as well as Empire City and RWNYC for Scenarios 4, 5, and 6 (those for which they are assumed not to be transformed to casinos). The Δs are relative to the GGR potential as calculated for each scenario without an Orange County casino.

b. Tourist Market Projection

Woodbury Common reports that it attracts 13 million visitors per year.[67] It is likely that the majority reside within the market area carved out in our gravity model, but it is a massive complex and does attract international tourism. The proximity of the casino should be such that some visitors will make visits to both attractions during their trip. Orange County also reportedly attracts 5 million annual tourists for other purposes.[68]

Based on Spectrum's experience evaluating similar situations in other markets, we anticipate that an attractive VLT facility should be capable of capturing between 0.5 percent and 1 percent of the shoppers as gaming patrons; taking the mean of 0.75 percent, this translates to 97,500 gaming patrons per year. In contrast to those who will patronize resort casinos in New York City, for which an average win per visit may be $300 or more (largely attributable to capture as being hotel guests as well), or regional market gaming patrons for whom we estimate the Orange County VLT facility win per visit will be close to $125, we envision a typical shopper's gaming budget will be closer to $60, as VLT facility visits may be comparatively brief (gaming will be a secondary purpose of visiting the area, meaning that the VLT facility visit may be only a fraction of the length of someone who has the facility as its sole destination). As a result, the incremental GGR from shoppers is estimated at $5.85 million.

Additionally, the Orange County VLT facility should be capable of capturing a small share of the 5 million regional tourists not affiliated with the outlet mall. Assuming a capture rate of 1 percent[69] and a win per visit of $100 (slightly less than the average from comparatively affluent local residents), an additional $5 million in tourist GGR could be possible. In total, we therefore project a potential for $10.85 million coming from the tourist and non-regional market for an Orange County VLT facility, for which there would be no diversion from other New York gaming facilities.

c. Total Market Projection

In total, we project the GGR for an Orange County VLT facility could be in the range of $158 million to $212 million in 2025, as demonstrated in Figure 60, depending on the level of New York City casino development.

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[67] Orange County Chamber of Commerce, "Woodbury Common Presents Expansion Plans," May 9, 2019. https://orangeny.com/woodbury-common-presents-expansion-plans/

[68] Daniel Axelrod, "Orange County a hotbed for tourists," *recordonline.com,* September 19, 2019. https://www.recordonline.com/news/20190919/orange-county-hotbed-for-tourists

[69] Based on Spectrum's experience, 1 percent should be a reasonable expectation, but it could have a somewhat broader range depending on marketing efforts to attract tourists as gaming patrons, as well as any ancillary amenities that may be appealing to tourists, like an entertainment venue.

Figure 60: Downstate GGR projections, by scenario and facility with Orange County VLT facility, 2025

	Orange	Manhattan	Brooklyn	Queens	Empire City	Resorts World NYC	Jake's 58	RW Catskills	Total
Scenario 1	$181.1M	$2,050.2M			$1,010.4M	$1,301.3M	$185.2M	$158.4M	$4,886.6M
Scenario 2	$172.2M		$2,151.0M		$958.0M	$1,133.8M	$175.6M	$148.2M	$4,738.8M
Scenario 3	$171.5M			$2,251.3M	$888.3M	$1,087.3M	$168.7M	$147.3M	$4,714.4M
Scenario 4	$157.7M	$1,421.5M	$1,571.2M	$1,733.1M	$352.8M	$446.0M	$149.3M	$134.M	$5,965.5M
Scenario 5	$198.2M	$2,302.2M			$530.9M	$781.4M	$204.4M	$178.1M	$4,195.2M
Scenario 6	$211.7M				$645.3M	$939.2M	$233.2M	$204.9M	$2,234.3M

Source: Spectrum Gaming Group. **Note:** Highlighted cells denote remaining as a VLT facility. Based on our baseline gravity models, Spectrum assumes $5 million accrues to Resorts World Catskills from the non-local tourist market, for each scenario.

As noted in the introduction to this section, the VLT facility should be operational by mid-2023, whereas new New York City-area casinos may not be operational until 2025. We note, however, that if Empire City and RWNYC are awarded licenses (two of the potential three to be awarded), a significant amount of the impacts demonstrated in scenarios 1 through 3 in the preceding table will still manifest. As such, the $212 million forecast in Scenario 6 demonstrates the market potential if the VLT facility is the only new operator in the market, and would be roughly equal to its market potential for 2024 as well (though as a new facility, some ramp-up of demand should be anticipated). If Empire City and RWNYC transform into casinos, the VLT GGR at Orange County in 2024 would exceed the projections in scenarios 1, 2 and 3 but fall short of the Scenario 6 projection; i.e., 2024 VLT GGR would be in the range of $185 million to $190 million.

d. GGR Split by Slots and Tables

From a dilution standpoint, the addition of an Orange County VLT facility would impact Spectrum's estimates of the slot/table game GGR split for the New York City casinos, as well as for Resorts World Catskills, as most of the gaming demand diverted would be from slot machines or VLT devices, though some electronic table gaming may be diverted as well. A small amount of live table demand may also be diverted, as some gaming patrons play slots and live tables when visiting casinos, and some couples may be diverted that may otherwise split their game options when visiting a casino (i.e., one may play slots and the other table games at a casino, but both would play VLTs and/or electronic table games if they went to Orange County).

As noted earlier, Spectrum estimates a GGR split of 55 percent slots and 45 percent tables for New York City resort casinos and a 75 percent slot (including ETG)/25 percent live tables split for converted VLT facilities. Resorts World Catskills currently operates with a GGR split of approximately 59 percent slots/41 percent tables.[70] Based on the results as presented in Figure 59 (showing a less than 3 percent decline in GGR), we estimate the New York City resort casinos' GGR split will trend closer to 54 percent slots/46 percent tables. Converted VLT facilities will likely increase their live table share to 26 percent or

[70] New York State Gaming Commission Commercial Gaming Reports, March 22, 2020. https://www.gaming.ny.gov/pdf/finance/Resorts World Catskills Casino Weekly Website Report.pdf

27 percent, with small declines for both the VLTs and ETGs. Finally, we expect Resorts World Catskills will trend closer to 56 percent slots/44 percent tables.

Gaming Tax Implications

Figure 61 provides the implications of the different scenarios from a tax-distribution standpoint. The assumptions in the table maintain the same tax-rate assumptions as the non-Orange County models presented in the preceding section. The tax rate for the Orange County VLT facility is 39 percent.

Figure 61: Projected State gaming tax revenues for Downstate facilities, 2025

	Casino Slots	Casino Tables	Empire	RWNYC	Jake's 58	Orange	RW Catskills	Total
	No Additional Regional Gaming Facilities							
Scenario 1 (M, RW, MGM)	$1,162.6M	$152.3M			$84.7M		$45.5M	$1,445.2M
Scenario 2 (B, RW, MGM)	$1,117.0M	$151.2M			$80.2M		$42.5M	$1,390.9M
Scenario 3 (Q, RW, MGM)	$1,103.5M	$152.7M			$77.0M		$42.2M	$1,375.4M
Scenario 4 (M, B, Q)	$1,049.7M	$214.7M	$180.1M	$180.2M	$68.0M		$38.1M	$1,730.8M
Scenario 5 (M)	$515.9M	$105.5M	$274.4M	$318.6M	$93.9M		$51.7M	$1,360.1M
Scenario 6 (Status Quo)			$336.2M	$385.1M	$107.5M		$59.9M	$888.7M
	With an Orange County VLT Facility							
Scenario 1	$1,137.9M	$151.7M			$83.4M	$70.6M	$42.3M	$1,485.8M
Scenario 2	$1,094.4M	$150.7M			$79.0M	$67.2M	$39.5M	$1,430.8M
Scenario 3	$1,081.8M	$152.3M			$75.9M	$66.9M	$39.3M	$1,416.1M
Scenario 4	$1,035.0M	$213.8M	$178.1M	$178.4M	$67.2M	$61.5M	$35.7M	$1,769.8M
Scenario 5	$504.2M	$104.2M	$268.1M	$312.6M	$92.0M	$77.3M	$47.5M	$1,405.8M
Scenario 6			$325.9M	$375.7M	$105.0M	$82.6M	$54.6M	$943.7M

Source: Spectrum Gaming Group. **Note:** Casino Slots and Casino Tables reflect taxes emanating from any casinos opened in the New York City area.

e. Impact of Additional Competition

As discussed in Spectrum's analysis of the New York City-area potential and existing gaming facilities, the notable potential addition to the market would be a new casino development in northern New Jersey. For the purpose of these analyses, we assumed one large casino, to be located at the Meadowlands. We also noted that there is the potential for a casino development in East Windsor, CT. While Orange County is comparatively closer to East Windsor than some of the New York City gaming facilities may be, Spectrum's models suggested that the impact of an East Windsor casino on an Orange County facility would be negligible, and therefore that was not pursued as an additional competitive scenario to consider.

A Meadowlands casino would have a significant impact on the GGR that could be generated by an Orange County VLT facility because it would be far more proximate than Orange County for patrons residing in northern New Jersey (with New Jersey otherwise accounting for potentially 33 percent to 36 percent of the Orange County GGR). The following table demonstrates the comparative GGR for an Orange County VLT facility, by New York City gaming development scenario, if the Meadowlands adds a casino

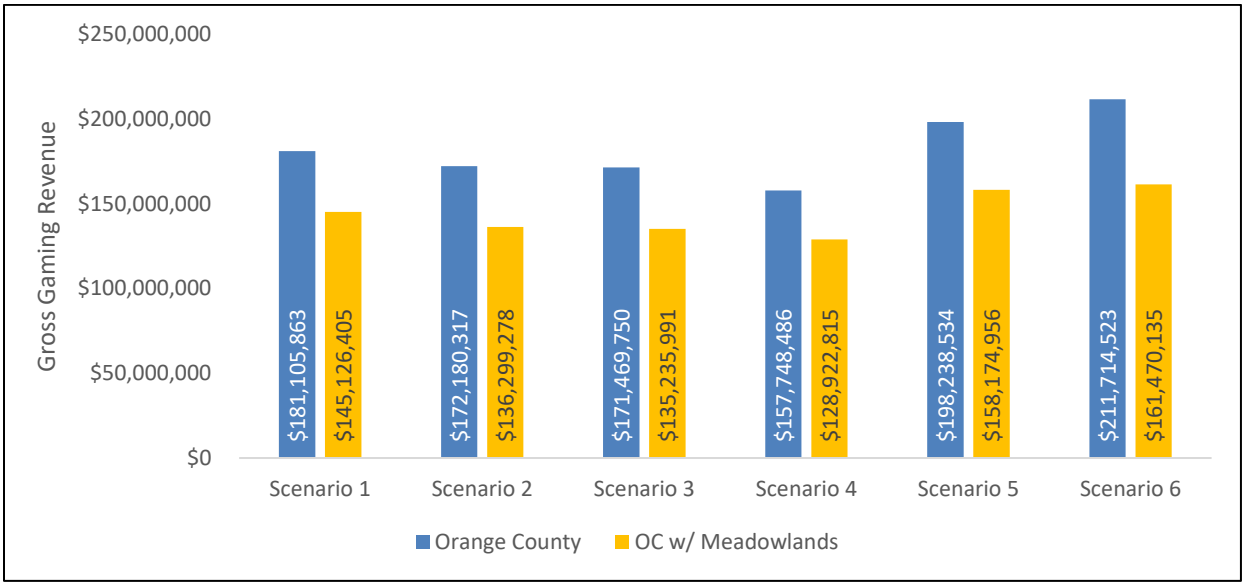
with 5,000 gaming positions (i.e., slots plus table game seats). In general, we estimate the Meadowlands would have approximately a 20 percent impact on Orange County GGR potential, +/- 3 percent.

Figure 62: Projected Meadowlands impact on Orange County GGR, by scenario, 2025

	Orange County without Meadowlands	Orange County with Meadowlands	% Change
Scenario 1 (M, RW, MGM)	$181,105,863	$145,126,405	-19.9%
Scenario 2 (B, RW, MGM)	$172,180,317	$136,299,278	-20.8%
Scenario 3 (Q, RW, MGM)	$171,469,750	$135,235,991	-21.1%
Scenario 4 (M, B, Q)	$157,748,486	$128,922,815	-18.3%
Scenario 5 (M)	$198,238,534	$158,174,956	-20.2%
Scenario 6 (Status Quo)	$211,714,523	$161,470,135	-23.7%

Source: Spectrum Gaming Group

Figure 63: Orange County VLT facility GGR projections, by scenario



Source: Spectrum Gaming Group

Figure 64: Downstate GGR projections, by scenario and facility with Orange County VLT facility and Meadowlands casino, 2025

	Orange	Manhattan	Brooklyn	Queens	Empire City	Resorts World NYC	Jake's 58	RW Catskills	Total
Scenario 1	$145.1M	$1,796.8M			$912.8M	$1,231.0M	$179.5M	$147.3M	$4,412.6M
Scenario 2	$136.3M	-	$1,979.4M		$859.7M	$1,074.7M	$170.7M	$137.7M	$4,358.5M
Scenario 3	$135.2M	-		$2,096.7M	$792.6M	$1,021.7M	$164.0M	$136.5M	$4,346.8M
Scenario 4	$128.9M	$1,371.2M	$1,466.5M	$1,642.3M	$323.8M	$428.5M	$145.9M	$125.8M	$5,632.8M
Scenario 5	$158.2M	$1,894.4M	-	-	$478.5M	$735.7M	$196.2M	$164.4M	$3,627.4M
Scenario 6	$161.5M	-	-	-	$559.6M	$857.7M	$220.1M	$183.9M	$1,982.9M

Source: Spectrum Gaming Group. **Note:** Highlighted cells denote remaining as a VLT facility. Based on our baseline gravity models, Spectrum assumes $5 million accrues to Resorts World Catskills from the non-local tourist market, for each scenario.

The above GGR projections for the Orange County VLT facility account for a fully developed market in 2025, though as noted at the beginning of this section, an Orange County VLT facility may be operational by mid-2023, providing for perhaps 18 months of operation prior to new New York City-area casino development (but notably opening after VLT facility conversions may be completed). We have not made an assumption as to what year the Meadowlands would be able to have an operational casino (other than that it would be operational by 2025). As such, the annualized revenue potential pre-2025 for Orange County could be as high as $211 million (i.e., in the case where the VLT facilities in the New York City area do not get casino licenses, and before Meadowlands opens), or approximately $193 million with VLT facility conversions. If the Meadowlands opens concurrently with the Orange County VLT facility, initial annualized Orange County revenues (prior to 2025) may be in the range of $154 million to $161 million.

f. Gaming Tax Implications of Meadowlands Casino on Downstate Market Inclusive of Orange County VLT Facility

From a fiscal impact perspective (contrasting with the bottom half of Figure 61), adding a Meadowlands casino to the greater New York City market (inclusive of an Orange County VLT facility) could reduce State gaming tax revenues by $105 million to $177 million.

Figure 65: State gaming tax projections for Downstate facilities, by scenario and facility with Meadowlands casino, 2025

	Casino Slots	Casino Tables	Empire	RWNYC	Jake's 58	Orange	RW Catskills	Total
Scenario 1	$1,026.3M	$137.5M			$80.8M	$56.6M	$39.1M	$1,340.2M
Scenario 2	$1,004.1M	$140.4M			$76.8M	$53.2M	$36.5M	$1,310.9M
Scenario 3	$994.1M	$142.6M			$73.8M	$52.7M	$36.2M	$1,299.5M
Scenario 4	$976.6M	$203.8M	$163.5M	$171.4M	$65.6M	$50.3M	$33.4M	$1,664.7M
Scenario 5	$413.0M	$86.2M	$241.6M	$294.3M	$88.3M	$61.7M	$43.6M	$1,228.7M
Scenario 6	$0.0M	$0.0M	$282.6M	$343.1M	$99.1M	$63.0M	$48.8M	$836.5M

Source: Spectrum Gaming Group

g. Orange County VLT Facility Sizing

Spectrum has been told by Genting Americas that the intended VLT facility is to have 1,200 gaming positions. Depending on the location and quantity of new competition, this would reflect an average daily win per position in the broad range of $294 (Scenario 4 plus Meadowlands) to $483 (Scenario 6 without Meadowlands), with the average across all scenarios being approximately $372. Given an average win per visit expected to be $100 to $125, this reflects utilization by approximately three to four unique patrons per day, which reflects a busy, but not capacity-constrained, gaming facility.

5. Implications of a Potential Shinnecock Casino

The Shinnecock Indian Nation, with a reservation in Southampton in southeastern Suffolk County, has attempted for more than a decade to venture into casino gaming, either on the reservation or elsewhere in Suffolk County. Thus far, their efforts have been unsuccessful. However, the tribe has continued to make efforts to get a gaming facility of some size, scale, location, class, etc., developed.

Without knowing any of those parameters, it would be impossible for Spectrum to project the gaming market potential of what it could develop, but it is possible to examine what market potential for each of the existing facilities (or potential New York City-area casino facilities, as projected earlier in this chapter) could be at risk if a casino in Suffolk County opened. In doing so, we also consider the projected latent demand for gaming in Suffolk County, as discussed earlier in this report as it relates to potential spending per capita, by county.

For the purpose of these estimates, we primarily assume that any development would occur sufficiently east in Suffolk County so that it would have a relatively negligible impact on gaming participation and destination choice by residents of Nassau County and the New York City boroughs (no demand growth and less than 1% diversion from these counties/boroughs). This is a necessary assumption, as the alternative would be to say that facilities such as Empire City and RWNYC (or potential casinos in Brooklyn or Queens) may have more than $1 billion at risk (perhaps slightly less for a potential Manhattan casino), but we would have nothing from which to scale the potential impacts. If such a development occurred, it would likely be more proximate to the Shinnecock reservation, which is at least a 45-minute additional drive east of Jake's 58. We have examined impacts in an expanded gravity model, and based on the different scenarios considered, Jake's 58 is the only facility that may see a more than 1% impact on GGR, and even in Jake's 58's case the potential impact appears to be less than 4%.

Additionally, based on our demand model results, we projected demand for regional gaming facilities coming out of Suffolk County to be as shown in Figure 66, along with the share of GGR, by scenario, that were projected to come from Suffolk County (in 2025). Among our results:

- For integrated resorts in Manhattan, Brooklyn or Queens, between 1.1 percent and 2.6 percent of GGR is forecast to come from Suffolk County residents.
- For RWNYC, between 2.3 percent and 3.8 percent of GGR is forecast to come from Suffolk County.
- Empire City's share from Suffolk County is roughly at the median of that of the integrated resorts.
- The existing operator most significantly affected is Jake's 58, for which we project between 42 percent and 56 percent of GGR will be coming from Suffolk County (without a new Suffolk County competitor); Nassau County accounts for the largest share of the balance, with the shares attributable to other counties varying widely depending on the new development scenarios.
- All other gaming facilities in the state combined were estimated to have $4 million to $5 million coming from Suffolk County, but not accounting for a noticeable share of any individual facility's market.
- In total, we estimate between $144 million and $219 million as the market potential in 2025 coming out of Suffolk County and going to New York gaming facilities.

Figure 66: Projected GGR for Downstate gaming facilities originating from Suffolk County, 2025

	Manhattan	Brooklyn	Queens	Empire	RWNYC	RW Catskills	Jake's 58	Other	Total
Scenario 1	$26.3M			$21.2M	$42.6M	$4.3M	$95.8M	$4.8M	$194.9M
Scenario 2		$44.3M		$20.5M	$41.2M	$4.2M	$94.1M	$4.6M	$208.8M
Scenario 3			$56.7M	$20.1M	$40.3M	$4.1M	$93.1M	$4.6M	$218.9M
Scenario 4	$20.8M	$35.2M	$46.0M	$7.6M	$17.2M	$3.7M	$84.6M	$4.1M	$219.2M
Scenario 5	$26.4M			$9.0M	$20.4M	$4.3M	$93.6M	$4.8M	$158.5M
Scenario 6				$9.9M	$22.5M	$4.7M	$101.3M	$5.3M	$143.8M
As a Percentage of Total GGR for Each Property									
Scenario 1	1.3%			2.1%	3.2%	2.6%	50.9%		
Scenario 2		2.0%		2.1%	3.6%	2.6%	52.8%		
Scenario 3			2.5%	2.2%	3.7%	2.6%	54.4%		
Scenario 4	1.4%	2.2%	2.6%	2.1%	3.8%	2.6%	56.0%		
Scenario 5	1.1%			1.7%	2.6%	2.3%	44.8%		
Scenario 6				1.5%	2.3%	2.1%	42.4%		

Source: Spectrum Gaming Group

Conclusion: As previously addressed, should a Shinnecock casino come to fruition, the gaming facility most at risk is Jake's 58, as we estimate that approximately 42 percent of that property's business currently originates in Suffolk County, potentially to increase to up to 56 percent if there are new casinos added to the New York City market. We envision in a worst-case scenario that 20 percent of Jake's 58's market would be at risk from a Shinnecock casino, but in more likelihood, less than 5 percent, unless Jake's 58 expands (in which case there would be less latent demand in the market – the table above assumes Jake's stays the same size). Additionally, we estimate that the GGR at risk for any other venue in the market would be less than 2 percent, and probably less than 1 percent.

Our model assumes that if developed, the Shinnecock would develop a modest casino with limited amenities; i.e., a gaming floor in the range of 1,000 to 1,500 gaming positions and no hotel. We do note, however, that the Shinnecock gained casino development momentum with a September 2020 announcement that it would partner with Seminole Hard Rock to advance its gaming interests on Long Island – which could limit the value of expanding Jake's 58. Nevertheless, we do not envision that there is a sufficiently sizable resident population near the reservation to suggest potential significant revenue declines at Jake's 58 even with a more substantial Shinnecock facility – it would likely need to be geared more towards a tourist population to be feasible and sizable. As such, the percent impact on Jake's 58's GGR (if Jake's does not expand) would still likely be close to 5 percent.

6. Downstate Market Projection Conclusion

Spectrum analyzed multiple combinations and permutations for potential Downstate casino development, providing for a range of aggregate GGR between $3.9 billion and $4.4 billion for three full-scale casinos (inclusive of converted VLT facilities if they get the casino licenses, but not inclusive

otherwise). If only one casino license is to be awarded (modeled as being in Manhattan), the projected GGR for that casino ranges from $1.9 billion to $2.3 billion.

Awarding casino licenses to the existing VLT facilities at Empire City and at RWNYC has its initial advantages in that GGR may be generated faster than new-build properties, but we do not anticipate that the long-run GGR potential for those facilities would necessarily be as substantial as a new-build resort casino. That said, the present value of gaming taxes generated from 2022 through 2024 must be weighed against the present value of gaming taxes (see Figure 51) that may not materialize until the latter half of the decade. We also note that there could be additional implications of conversion of VLT facilities into casinos, in that the gaming taxes could be earmarked in a different direction.

The model results make it clear which scenario results in the greatest casino GGR – three new integrated resorts (one each in Manhattan, Queens and Brooklyn). Spectrum did not consider alternatives to this scenario in terms of combinations and permutations of three new integrated resorts collectively in a borough, in other locations, or any other types of clustering. The significant downside to this is that the existing VLT facilities, which would not be awarded casino licenses in this scenario, would experience a crushing blow to their market potential and the related taxes they generate. In this scenario, we would also suggest that the $500 million license fee is too much for the casino operators, as the market would be far more diluted than in any of the other scenarios, and the development plans may need to be less substantial. As such, while the scenario that is projected to initially bring in the most incremental, annual tax revenue is clearly Scenario 4, there are obvious downsides fiscally in terms of it likely resulting in the lowest upfront fees (assuming 3 new casinos). Moreover, as Scenario 4 would likely result in lower capital expenditures per property and a lower likelihood or scale of ongoing facility expansions, from a long run perspective, the difference in annual tax revenues will likely narrow.

The alternative assumptions were for conversions of Empire City and RWNYC into full-scale casinos, with a third license being in Manhattan, Brooklyn or Queens. The results of the models with respect to the generation of new tax dollars suggest Manhattan as the optimal location for the third license, but not by a substantial margin. Queens and Brooklyn yielded nearly identical benefits, but a Manhattan casino may potentially generate significantly more tourism, reflecting a more significant contribution to GGR (and thus tax revenues) by non-New Yorkers.

Figure 67: Projected State gaming tax revenue from Downstate gaming facilities, 2025

	Casino Slots	Casino Tables	Empire	RWNYC	Jake's 58	Orange	RW Catskills	Total	Incremental
	No Additional Gaming Facilities								
Scenario 1	$1,162.6M	$152.3M			$84.7M		$45.5M	$1,445.2M	$556.4M
Scenario 2	$1,117.0M	$151.2M			$80.2M		$42.5M	$1,390.9M	$502.2M
Scenario 3	$1,103.5M	$152.7M			$77.0M		$42.2M	$1,375.4M	$486.7M
Scenario 4	$1,049.7M	$214.7M	$180.1M	$180.2M	$68.0M		$38.1M	$1,730.8M	$842.1M
Scenario 5	$515.9M	$105.5M	$274.4M	$318.6M	$93.9M		$51.7M	$1,360.1M	$471.4M
Scenario 6	$0.0M	$0.0M	$336.2M	$385.1M	$107.5M		$59.9M	$888.7M	
	With a Meadowlands Casino								
Scenario 1	$1,053.4M	$136.3M			$82.0M		$42.1M	$1,313.8M	$518.6M
Scenario 2	$1,029.0M	$139.1M			$77.9M		$39.3M	$1,285.4M	$490.2M
Scenario 3	$1,018.0M	$141.3M			$74.8M		$38.9M	$1,273.1M	$477.9M
Scenario 4	$969.8M	$198.4M	$165.3M	$173.1M	$66.4M		$35.7M	$1,608.6M	$813.4M
Scenario 5	$448.7M	$91.8M	$246.8M	$299.4M	$90.0M		$47.5M	$1,224.1M	$428.9M
Scenario 6	$0.0M	$0.0M	$290.1M	$350.4M	$101.3M		$53.4M	$795.3M	
	With an Orange County VLT Facility								
Scenario 1	$1,137.9M	$151.7M			$83.4M	$70.6M	$42.3M	$1,485.8M	$542.1M
Scenario 2	$1,094.4M	$150.7M			$79.0M	$67.2M	$39.5M	$1,430.8M	$487.1M
Scenario 3	$1,081.8M	$152.3M			$75.9M	$66.9M	$39.3M	$1,416.1M	$472.4M
Scenario 4	$1,035.0M	$213.8M	$178.1M	$178.4M	$67.2M	$61.5M	$35.7M	$1,769.8M	$826.0M
Scenario 5	$504.2M	$104.2M	$268.1M	$312.6M	$92.0M	$77.3M	$47.5M	$1,405.8M	$462.1M
Scenario 6	$0.0M	$0.0M	$325.9M	$375.7M	$105.0M	$82.6M	$54.6M	$943.7M	
	With an Orange VLT Facility and a Meadowlands Casino								
Scenario 1	$1,026.3M	$137.5M			$80.8M	$56.6M	$39.1M	$1,340.2M	$503.7M
Scenario 2	$1,004.1M	$140.4M			$76.8M	$53.2M	$36.5M	$1,310.9M	$474.4M
Scenario 3	$994.1M	$142.6M			$73.8M	$52.7M	$36.2M	$1,299.5M	$462.9M
Scenario 4	$976.6M	$203.8M	$163.5M	$171.4M	$65.6M	$50.3M	$33.4M	$1,664.7M	$828.1M
Scenario 5	$413.0M	$86.2M	$241.6M	$294.3M	$88.3M	$61.7M	$43.6M	$1,228.7M	$392.2M
Scenario 6	$0.0M	$0.0M	$282.6M	$343.1M	$99.1M	$63.0M	$48.8M	$836.5M	

Source: Spectrum Gaming Group. **Notes:** Casino Slots and Casino Tables reflect taxes emanating from any new casinos opened in the New York City area. Incremental column reflects gaming taxes relative to the respective Scenario 6 (status quo) models.

It is critical to note that this analysis did not consider any potential developer's proposed business and development plan, nor has Spectrum identified specific sites for the potential developments. As such, it is possible that a potential developer will present the State with a far more robust, effective plan in one of these three areas than we are presuming, or find no opportunity for a good plan in one of these three areas. As such, there are too many unknown variables to make a determination right now as to where a third license should go (or whether the VLT facilities should be converted).

7. Initial License Fees and Gaming-Tax Rates

Spectrum's review and recommendations regarding gaming taxes are considered in Chapter I. Spectrum built the above demand models based on our suggested tax on slot GGR of 40 percent for new casinos and a tax on table games for new casinos of 10 percent.

Those suggested rates were determined – as shown below – by balancing the optimal tax revenue to the State with the requirement for operators to realize an acceptable, attractive return on investment. This further assumed an up-front license fee of no more than $500 million per license. As an alternative, higher (or lower) gaming tax rates for casinos may be considered, which would result in a different level of potential GGR per facility. While a lower gaming tax rate may yield more attractive casino resorts and higher GGR, the issue may arise as to the casinos having lower gaming tax rates than the casinos licensed in the first round (Upstate), which may be difficult for the State to reconcile. There is rationale behind doing so, in that the lower tax rates would be the driver behind a broad variety of economic impacts, from higher construction budgets to more jobs, higher sales tax revenues, etc. However, at a 40 percent slot, 10 percent table tax rate, we do not envision that potential developers would lessen their desired building programs.

On the other hand, gaming tax rates higher than 40/10 may have an impact on return on investment to the extent of projects needing modification to a smaller scale, i.e. possibly not including some non-gaming amenities that contribute negligibly to operational cash flow (but still generate sales tax revenues, jobs and construction expense).

a. Implications of Alternative Casino Tax Rates

As an alternative scenario, we considered a gaming tax rate of 45 percent slots/12 percent table games. For each of the above scenarios (except Scenario 6, for which there are no new casinos), the negative impact on new casino GGR was in the range of 6 percent to 7 percent. This reflected a mix of new, latent and tourism revenues not being materialized and demand not being cannibalized away from other properties. From a gaming tax revenue standpoint, this higher tax rate would theoretically produce higher tax revenues than the suggested 40/10 tax rate mix, but a higher tax rate would also produce added risk, such as the risk of less capital investment would in turn result in lower employment and facilities that would be less competitive facilities in the face of incremental market competition.

However, this potential for incremental gaming tax revenues should not be ignored, which initiates the possible discussion of a two-phased tax plan:

- Initial phase: Charge a license fee, with slots taxed at 40 percent and tables taxed at 10 percent.
- Later phase (i.e., starting at Year 5): Increase the tax rate on slots to 45 percent, and on tables to 12 percent, possibly to be postponed if the operator initiates and completes capital improvements above and beyond a certain monetary threshold.

b. License Fee Analysis, Recommendations

License fees are effectively taxes paid in one lump sum to the sponsoring government. The concept of such fees is neither unique to gaming nor to New York. Indeed, approximately 120 years ago, New York Governor Theodore Roosevelt dealt with a similar issue, known at the time as "franchise taxes," which were imposed on utilities and others that were granted some level of monopoly status. "A corporation which derives its powers from the State, should pay to the State a just percentage of its earnings as a return for the privilege it enjoys," Roosevelt said at the time.[71] In a basic sense, that remains relevant for gaming, because gaming licensure is considered a privilege that is accompanied by some level of exclusivity.

From the standpoint of a gaming operator, however, the concept is entirely different, because license fees are a hybrid of taxes and capital investment. From the standpoint of an existing or potential operator, the license fees are an essential element when calculating returns on investment ("ROI"), internal rates of return ("IRR"), and other financial modeling scenarios. ROI is a calculation in which the total capital investment is the denominator while the returns (typically calculated as earnings before interest, taxes,[72] depreciation and amortization, or "EBITDA") represent the numerator.

Because a license fee is part of a project's capital investment, it is built into the denominator. But unlike many other elements of capital investment, license fees cannot expand or improve the size, quality, amenities or business model of a proposed project; i.e., they have no conceivable positive impact on EBITDA, but would have a decidedly negative impact on returns. As such, if a developer has a desired, or minimum, return on an investment, by definition the license fee would lower that return, such that it may potentially lead to a smaller capital investment on the scale of the project, or it may lead to a decision not to build at all.

Clearly, license fees are – and will remain – a consideration when deciding whether or not to invest capital, and in determining the amount of invested capital. But license fees – along with tax rates, location and competitive factors – have to be viewed in a broad context. New York would be well advised to heed lessons from other markets, noting the following:

- Making the level of license fees a factor in determining which entities are granted the privilege of developing properties in the New York City market carries risks that the most effective potential developers might not secure the license.
- A fixed license fee for all bidders could reduce that risk, while helping to ensure that the successful bidder(s) are judged by the total economic impact of their plans on the region and state.
- The state could consider a hybrid approach that would allow bidders to exceed the minimum license fee, but that approach should make clear to bidders that such projects would still be

[71] Journal of the Assembly of the State of New York, 1899, p. 1886.

[72] In the context of EBITDA, taxes do not include gaming taxes, but rather refer to all other forms of taxation paid by any business, such as income taxes. Gaming taxes are deducted from gross revenue and thus are factored into the top line, rather than the bottom line.

required to offer significant economic and fiscal benefits to the region and state. In other words, under this approach, bidders should not be encouraged to trade long-term benefits in exchange for an initial short-term increase in the license fee.

While a license fee can provide immediate, substantial fiscal benefits to the State, making it an element of a bidding war offers significant potential drawbacks. An extreme example of the drawbacks occurred in the 1990s when the government of New South Wales, Australia, awarded a license to build a casino in Sydney (now the Star City in Darling Harbor) to a partnership led by Showboat Inc. Showboat's license fee bid of $275 million exceeded the other – by Australian billionaire Kerry Packer and another former U.S. operator, Circus Circus Enterprises – by more than $80 million.[73] Showboat, which has since been acquired by Caesars Entertainment and no longer exists as an independent operator, was at the time a relatively small casino company that operated three small-sized to modest-sized casinos in the United States.

Ultimately, the Sydney project as envisioned by the Government of New South Wales was never built. In Spectrum's view, that failure resulted in large measure from an over-reliance on the size of the proposed fee as a differentiating factor, coupled with Showboat's limited access to capital markets. More importantly, Showboat as an operator was not familiar with the Australian market and had no experience in marketing to Asian patrons, a critical market segment. Therefore, the casino operation underperformed and did not meet its own financial projections that had been shared with the Government of New South Wales.

The concept of license fees can also extend beyond the basic concept of a one-time payment to the government. For example, applicants could be required to contribute to infrastructure or other projects in defined amounts that would be set forth in the RFP documents.

This concept has been on display in Japan, which has long been contemplating the introduction of integrated resorts. An example can be found in Osaka Prefecture, in which MGM Resorts International – owner of Empire City in Yonkers – leads a consortium that is bidding to obtain one of the nation's gaming licenses (a process that is ongoing and unlikely to transpire for any operator until 2027 at the earliest, but MGM is the sole remaining bidder for development in Osaka, a market of over 20 million residents). In Osaka, casino applicants were expected to contribute ¥20 billion (about $185 million) to help offset construction costs for a new subway line that will stop at the casino site, and operators will be expected to contribute to a World Expo that will be held in Osaka in 2025. These expenses are quantifiable and are a cost of securing the IR license in this gaming jurisdiction. When such costs are likely the same for each applicant, they would not be a determining factor in the bidding competition, but would rather be categorized as a minimum requirement.

The RFP process[74] in Osaka detailed various requirements to be scored on a numerical basis for a total potential of 1,000 points. The "Concept and Master Plan (management philosophy and project

[73] Andrea Adelson, "Showboat Bid Wins Sydney Casino," *New York Times*, May 7, 1994. https://www.nytimes.com/1994/05/07/business/company-news-showboat-bid-wins-sydney-casino.html

[74] Osaka Prefecture RFP, February 14, 2020. http://www.pref.osaka.lg.jp.e.agb.hp.transer.com/hodo/index.php?site=fumin&pageId=37361

implementation policy)"[75] was allotted a maximum of 100 points, while no other specific category was allocated more than 80 points. The key criteria included "Formation of a world-class all-in-one MICE hub" (80 points) and "Creation of an overwhelming resort space that attracts tourists from both within and outside Japan" (80 points), among many others.

In Greece, the process of determining the developer of a planned IR in Athens on the site of the former Hellinikon airport was developed as a two-pronged test to weigh competitive bids.[76]

The first prong were the technical requirements that set such minimums as:

- At least 2,000 beds in a hotel rated at 5 stars or greater (40 percent of the technical requirements)
- At least 12,000 square meters of conference and exhibition space (25 percent of the technical requirements)
- Development of "a public sports or cultural events meeting place with a total number of seats equal to or more than three thousand" (15 percent of the technical requirements)
- Planned casino space of at least 12,000 square meters (20 percent of the technical requirements)

The second prong for consideration was the "financial offer," which required:

- A license fee defined as an "upfront consideration" of at least €30 million ($32.5 million)
- "Total Annual Consideration, which is calculated as the net present value of the amounts that will be submitted … for each calendar year, from the third (3rd) to the twenty fifth (25th) year, of the total 30-year concession period"

Those two sums would be added together to determine the full "financial offer." Most significant, the score would then be determined by "the ratio of the Tenderer's Financial Offer to the maximum Financial Offer submitted by all Tenderers multiplied by a coefficient equal to 100."

Greek regulators valued the Technical Offer at 40 percent of the total consideration, while the Financial Offer would be weighted at 60 percent. Mohegan Sun was officially recognized in October 2020 as the winning bidder.[77]

While we note that regulators in Greece and other markets have encouraged competition involving license fees, questions remain as to the long-term efficacy of such a process. The concept of developing an IR in New York's most important market – and arguably the most attractive global market

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[75] The language as translated from the original Japanese was provided directly by the Osaka prefecture on its website.

[76] Hellenic Gaming Commission, "International Tender for the Concession of a wide-range activities casino Operating License in the Hellinikon - Ag. Kosmas Metropolitan Pole," February 2019. http://www.portugalglobal.pt/PT/PortugalNews/EdicaoAicepPortugalGlobal/Documents/CallForTendersHellinikonIRCEN.pdf

[77] "Mohegan Gaming Officially Wins Greek Casino License, Athens Resort Moving Forward," by Devin O'Connor, *casino.org*, October 15, 2020 https://www.casino.org/news/mohegan-gaming-officially-wins-greek-casino-license-athens-resort-moving-forward/

– demands that the criteria for development be based on what will best advance gaming policy and fully leverage the region's economic potential.

License fees also have been relied on by some regulators in the United States as components of competitive bids. An example occurred in 2008, when Illinois regulators sought to issue what would be the 10th casino license in that state.[78]

The bidders at the time were:

- Calumet Gaming: initial bid $150 million
- Midwest Gaming and Entertainment: initial bid $100 million
- Trilliant Gaming Illinois: initial bid $435 million
- Hawthorne Gaming: initial bid $150 million
- CCH Gaming Partners: initial bid $60 million
- Waukegan Gaming: Initial bid $225 million
- SouthSide Casino: initial bid $175 million

The Illinois Gaming Board settled on three finalists: Trilliant (the highest bidder), Waukegan Gaming (second-highest bidder) and Midwest Gaming (second-lowest bidder). The Illinois Gaming Board selected Midwest Gaming after that organization agreed to "increase its initial bid amount to $125 million. Additionally, it agreed to pay the state an additional $300 million over the course of the next 30 years." This effectively means that the board elected to negotiate a significantly higher license fee in determining the winner. At the same time, the board also noted some unrelated concerns regarding Trilliant.[79]

As noted, the Illinois process required competitive bids. Among states that did not ask applicants to compete on the basis of license fees, Pennsylvania established a license fee of $50 million for its standalone and racetrack casinos, while Massachusetts required an $85 million license fee plus minimum capital investment requirements of $500 million.[80]

Spectrum's recommended $500 million license fee in New York would be far higher than required by any other U.S. gaming jurisdiction, as shown in Figure 68, but, again, that is reflective of the inherent market value of the New York City region. This table simply illustrates the level of license fees established. States have differing criteria for licensure, and these numbers have to be viewed in their respective state contexts.

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[78] Illinois Gaming Board, "2008 Annual Report," p. 8. https://www.igb.illinois.gov/FilesAnnualReport/2008IGBAnnualReport.pdf

[79] Ibid.

[80] American Gaming Association, "State of the States 2019." https://www.americangaming.org/wp-content/uploads/2019/06/AGA-2019-State-of-the-States_FINAL.pdf

Figure 68: Initial casino license fees, selected states

State	Initial License Fee
Iowa	$5,000,000 to $20,000,000
Kansas	$5,500,000 to $25,000,000
Maryland	$3,000,000
Massachusetts	$25,000,000 to $85,000,000
Nevada	$500,000
New Jersey	at least $200,000
New York	$20,000,000 to $51,000,000
Ohio	$50,000,000
Pennsylvania	$50,000,000

Source: American Gaming Association

1) Three-Pronged Test for License Fee

Spectrum has examined the experience in other markets and determined that license fees need to be considered carefully in any decision. We used the below multi-prong test to determine a reasonable license fee for New York. Additionally, New York could consider setting a floor, and allow potential operators to propose license fees that exceed that floor. However, in weighing all bids the decisive factor should remain the long-term economic impact of the worthiest tender offer.

Spectrum's multi-pronged test relied on the following criteria to determine the most effective license fee:

1. The fee must recognize the relative size, strength and long-term potential of the New York City metropolitan area and, in turn, must be significantly greater than license fees charged in other, less desirable markets.
2. The fee should be realistic so that world-class operators with the necessary experience and the strongest balance sheets would still be willing to invest.
3. While the fee needs to reflect the full value of the market, it should not constrain potential operators from pursuing and developing iconic visions that will capture the potential of the market.

Based on this analysis, Spectrum recommends that the State of New York require a license fee of at least $500 million, an amount that meets all the above criteria. That suggested fee reflects the value of this license but allows developers sufficient flexibility to invest more in their facilities, thus generating the greatest overall return to the region and state. While a license fee of $500 million would be significantly higher than any such fee assessed anywhere else in the United States, this fee is representative of the potential untapped value of a full-service integrated casino resort in the New York City region. Based on our research, the losing bid of $425 million for a license in Illinois appears to hold the domestic license fee record.

The following hypothetical analysis shows how a $500 million license fee would be considered by a potential operator. If an operator were to invest a total capital expenditure of $3 billion, reflecting all costs (but with no license fee), and if the property would generate EBITDA of $750 million, the return on

investment would be 25 percent. An additional $500 million license fee increases the all-in capital expense to $3.5 billion and would in turn lower the return on investment to 21.43 percent.

A license fee of $500 million would have a clear, discernible impact on an operator's returns. However, it would still allow all potential operators to develop world-class integrated resorts that would advance various public policies. As the following analysis endeavors to illustrate, raising the license fee by a material amount beyond that level could require operators to lower their overall capital investment, which could, in turn, lower their potential revenues and require a less ambitious business model.

The determination of a precise license fee – in this case, $500 million – is to a certain extent a balancing act between an arbitrary determination and a reliable financial analysis. In applying a three-pronged test to determine a fair fee, fair questions must be asked: Why not $600 million? Why not $700 million or $400 million?

There is indeed a tipping point at which a lower license fee would mean the State is leaving too much on the table and not securing sufficient value for a license, and at which a higher fee would make a potential project untenable, or at the least would lower capital investment to a point that results in a lesser project that does not maximize the public benefit of an integrated resort.

Applying our three-pronged test requires viewing a prospective license from the perspective of the developer/operator. The developer/operator is concerned with the return on equity ("ROE"). If returns are not attractive, the project will not be built. The tables below present a development scenario for an integrated resort Downstate. In each case, the project cost is pegged at $1.8 billion.

In the scenarios in Figure 69 below, we have varied the license fee from $500 million to $600 million and finally $700 million, and we have held the GGR tax rate flat at 40 percent. To hold the entire project cost at $1.8 billion, the development cost of the project varies by $100 million, the amount of the increase in the license fee.

Note the risk that an increase in the license fee could reduce the overall available capital investment in other aspects of the project in order to ensure an adequate return. The potential for that risk dependent on such factors as the bidder's financial strength and its required returns. By definition, reduced investment in the physical plant of the property makes the project less appealing to visitors, so we have reduced GGR by $100 million for each $100 million reduction in development cost.

As we are evaluating the potential impact of the mix of fees and taxes on the returns, many other assumptions that go into constructing this quick look at the issues facing a developer were held constant across the scenarios. We have assumed the project is funded with 30 percent equity and 70 percent debt. For simplicity, we further assume that operating expenses amount to 40 percent of GGR, and that the debt is a simple amortizing 15-year mortgage at a 5 percent rate. We then subtract debt service to arrive at a measure of free cash flow. We have ignored income taxes, property taxes, and interest deductibility.

Figure 69: Hypothetical casino project returns at varying license fees and a fixed GGR tax rate

Casino Development Example: $500M License Fee and 40% GGR Tax		Casino Development Example: $600M License Fee and 40% GGR Tax		Casino Development Example: $700M License Fee and 40% GGR Tax	
Equity 30%	$540,000,000	Equity 30%	$540,000,000	Equity 30%	$540,000,000
Debt 70%	$1,260,000,000	Debt 70%	$1,260,000,000	Debt 70%	$1,260,000,000
Development Cost	$1,300,000,000	Development Cost	$1,200,000,000	Development Cost	$1,100,000,000
License fee	$500,000,000	License fee	$600,000,000	License fee	$700,000,000
Project Cost	**$1,800,000,000**	**Project Cost**	**$1,800,000,000**	**Project Cost**	**$1,800,000,000**
Gross GGR	$1,100,000,000	Gross GGR	$1,000,000,000	Gross GGR	$900,000,000
State Gaming Tax 40%	($440,000,000)	State Gaming Tax 40%	($400,000,000)	State Gaming Tax 40%	($360,000,000)
Net GGR after Tax	**$660,000,000**	**Net GGR after Tax**	**$600,000,000**	**Net GGR after Tax**	**$540,000,000**
Operating Exp. 40%	$(440,000,000)	Operating Exp. 40%	$(400,000,000)	Operating Exp. 40%	$(360,000,000)
Debt Svc. 15 yr. 5%	(121,400,000)	Debt Svc. 15 yr. 5%	$(121,400,000)	Debt Svc. 15 yr. 5%	$(121,400,000)
Free Cash Flow	$98,600,000	Free Cash Flow	$78,600,000	Free Cash Flow	$58,600,000
Return on Equity	**18.3%**	**Return on Equity**	**14.6%**	**Return on Equity**	**10.9%**

Source: Spectrum Gaming Group

As seen in the table, the free cash flow, which we are using to approximate the return, varies across the fixed GGR tax scenarios as the license fee increases and GGR decreases. A developer would have to weigh the return from this potential project against other uses of capital. Different operators may indeed find any of these scenarios offers an attractive return, while the returns to the State would differ under each scenario.

The implications for the State over the longer term as significant. By grabbing a larger upfront fee, the State earns less money from gaming taxes. Over the course of a decade the difference is significant, as shown below.

Figure 70: 10-year State revenue under three license-fee scenarios

10-Year State Revenue (M)		
License Fee	Gaming Tax	State Total
$500	$4,400	$4,900
$600	$4,000	$4,600
$700	$3,600	$4,300

Source: Spectrum Gaming Group

2) Leveraging the Benefits of an RFP Process

Hypothetical examples, as shown above, are illustrative but limited in their usefulness. They assume that all potential operators have the same cost of capital, the same required returns on investment and, just as important, offer the same levels of creativity, with similar brands and other intangible as well as tangible assets. With that in mind, hypothetical examples do not reflect the real world.

As cited earlier, other jurisdictions have relied on a competitive process in which respondents are encouraged to put forth their most ambitious proposals for consideration to receive a license, which in the case of the New York City metropolitan region would be highly coveted.

The RFP process is a reflection of the State's policy goals and would be developed to identify those goals and score the responses appropriately to reflect the hierarchy of such goals. Should the State place a premium on an upfront license fee, the RFP process could set a floor and encourage respondents to propose higher fees. As the Australia example illustrates, that could be fraught with unnecessary risk by placing the value of an upfront fee ahead of more long-term benefits, such as creative designs, employment levels, tourism development and other policy goals.

New York policymakers have the responsibility of establishing those goals, and of developing the scoring that determines the hierarchy of such goals.

A core caveat, however, is that policymakers should recognize the possibility that none of the proposals for licensure meet the State's standards. Indeed, dissatisfaction with all proposals is a realistic possibility.

Spectrum strongly recommends that the State makes clear that it retains the right to reject all proposals and restart the bidding process should it not be satisfied. That approach would not be particularly palatable in the current scenario in which the State faces significant budgetary pressures and in which operators are eager to begin offering full-service gaming in the New York City metropolitan area.

Spectrum notes, however, that the very existence of such a warning would send a clear message to potential bidders to get it right the first time, and to put forth their most creative, capital-intensive bids.

3) Understanding Capital Investment Requirements

Rules that would potentially govern requirements such as minimum capital investments could help serve the interests of the State by striking a balance between being clear and being sufficiently flexible to address particular circumstances. An example of this can be found in Massachusetts, which established a minimum $500 million of capital investment for its full-service casino licenses. This statute includes the following key policy goals and provisions:

- The statute grants the gaming commission broad latitude to determine whether such costs as land acquisition or outside infrastructure improvements should be included in the calculation as to whether the $500 million threshold has been met.
- Regulators are authorized to make such determinations, based on factors that consider the particular circumstances surrounding a region or a site.

The Massachusetts Gaming Commission adopted regulations that adhered to the spirit and letter of the statute; however, some of those restrictions were waived when establishing licensing requirements in southeastern Massachusetts. The rationale was that the costs and risks associated with that particular region demanded greater flexibility.

Massachusetts' experience offers lessons for New York. Effective public policy would suggest that acquisition costs not be considered in calculating whether applicants for a Downstate commercial casino

license meet the requirements for the recommended $1 billion capital investment, as land costs and infrastructure improvements would vary from borough to borough and from location to location. At the same time, the capital requirements should be designed to encourage investing capital in the quality and breadth of the gaming offering, not in costs such as acquisition.

Regulators – who would have a firm grasp of the vagaries and differences between applications and sites – should be granted full authority to set the requirements for and to calculate the value of capital investment, considering for example whether to include the value of furniture, fixtures and equipment (including gaming equipment).

Granting regulators the flexibility to weigh considerations such as the value of existing amenities and acreage would also help level the playing field if existing VLT facility operators compete for licenses against applicants that do not presently operate in New York.

c. Potential Impacts of COVID-19 on License Fees

With respect to how the economic downturn caused by the pandemic could impact the ability of prospective Downstate casino developers to afford Spectrum's recommended $500 million license fee, we conclude that if gaming operators are faced with a choice of coming up with $500 million quickly as a license fee or losing out forever on the prospect of operating a full-service integrated resort in or near New York City, they are more likely to find a means to secure the funding. It is not realistic, however, that a casino would make such a payment this calendar year in the absence of an RFP and selection process to determine which entities would receive licenses and thus be entitled to build an integrated resort in the Downstate market. (Spectrum's analysis of the potential license fee for Downstate commercial properties is addressed in detail above.)

1) Access to Capital Markets

Gaming companies have been successfully accessing the capital markets, primarily for debt, throughout the COVID-19 pandemic. Since March 2020, Wynn Resorts, Golden Nugget Casinos, Twin River Worldwide Holdings, MGM Resorts International, Penn National Gaming, Boyd Gaming, and others have raised debt capital, all at higher cost than prior to the pandemic.

Due to the large decline in the stock market in March, interest rates on corporate bonds, including those for gaming companies, rose rapidly. However, the quick recovery in the stock market brought on by government intervention had a positive impact on the debt markets, enabling gaming companies to raise cash, at interest rates that improved through the ongoing crisis period. This has left many gaming companies with significant liquidity, earmarked primarily to get those companies thorough the crisis in which patronage has been very much diminished. Some companies like Twin River have pursued opportunistic acquisitions.[81]

[81] On April 24, 2020, Twin River reached an agreement to acquire Bally's Atlantic City, Eldorado Shreveport Resort (Shreveport, LA), and Montbleu Resort Casino (Lake Tahoe, NV) for total consideration of $180 million.

Going forward, companies are likely to allocate capital more carefully, seeking relatively higher returns for the capital invested. Nearby population, household income and license exclusivity will still be the most important drivers to property success, but certainty of returns will become more important to the developers.

Gaming companies have consolidated, becoming very large, suggesting that for several of them, a $500 million check (i.e., to fund Spectrum's recommended license fee for a Downstate casino license) plus a $1 billion development cost is not that big an investment (as compared to, say, the current situation in Japan, where companies were promising to invest $10 billion or more in the overall project.)

The enterprise values (stock market value plus debt) of the four largest U.S. global gaming companies ranged from $7 billion to $33 billion, as of June 26; for the five largest U.S. regional gaming companies, the enterprise values ranged from $2 billion to $8 billion.

The willingness and ability of gaming companies to deploy capital now is very much a function of how quickly they can profitably reposition their existing businesses for the new operating environment. Currently, there is substantial uncertainty about the duration of the COVID-19 pandemic and its associated impacts to the economy at large. During times of uncertainty, the appetite to invest in ground-up development projects, due to greater relative risk, will be lower.

Gaming companies' abilities to embark on new ventures will be impacted by their debt loads and principal maturities. For the four largest U.S. gaming companies, debt as a share of enterprise value ranges from 20 percent to 70 percent, with an average of roughly 50 percent; for the five largest U.S. regional casino companies, the range is 25 percent to 75 percent, with an average of roughly 50 percent.

2) Ability to Dedicate License Fees

The development of a comprehensive RFP process is, by definition, complex. With that in mind, it would not be realistic for the State of New York to expect receipt of a Downstate casino license fee of $500 million (or a similarly large amount) in 2020. However, if it could come together that quickly, such a payment could realistically be financed, as institutional cash is clearly available for investment.

Investor sentiment to finance a license payment for a casino development near New York City is likely to be positive. This is mainly due to the positive demographics; the local population is massive and also relatively wealthy – the two most important factors for a successful regional casino project.

3) Costs of Borrowing

Currently – and even prior to the COVID-19 pandemic – government rates have been at historic lows. In fact, the 10-year Treasury rate is at its lowest level going back to 1960, as Figure 71 below shows.

Figure 71: U.S. 10-year Treasury rates, 1960-2020

Source: Board of Governors of the Federal Reserve System. Shaded areas indicate U.S. recessions.

While government rates are at historic lows, the cost of borrowing for the gaming community has become higher due to the perceived risk. Existing bonds for the largest companies still generally trade close to par; the degree of leverage of the company and the specifics of the bond's relative position in the capital structure and impact to collateral will impact the cost of future borrowing. Figure 72 illustrates the difference in borrowing costs pre-COVID-19 and post-COVID-19 for gaming industry financings.

Figure 72: Gaming industry borrowing costs, pre-COVID-19 and post-COVID-19

Date	Issuer	Issue	Amount (M)	Rate	Maturity
Pre-COVID-19 Financing					
Feb-20	Red Rock Resorts	Sr. Secured	$1,522	2.5%	Feb-27
Feb-20	Landry's	Sr. Secured	$2,593	3.25%	Oct-23
Dec-19	Everi	Sr. Secured	$736	3.75%	May-24
Dec-19	Century Casinos	Sr. Secured	$170	5.68%	Dec-26
Dec-19	Boyd Gaming	Sr. Secured	$1,000	4.75%	Dec-27
			Average Interest Rate	4.0%	
Post-COVID-19 Financing					
May-20	Boyd Gaming	Sr. Unsecured	$600	8.6%	May-25
May-20	Penn National Gaming	Sr. Unsecured	$330	2.8%	May-26
May-20	MGM Resorts International	Sr. Unsecured	$750	6.8%	May-25
Apr-20	Twin River Worldwide Holdings	Sr. Secured	$275	9.0%	May-26
Apr-20	Landry's	Sr. Secured	$300	13.0%	Oct-23
			Average Interest Rate	8.0%	

Source: Bloomberg

4) Size of Development

Spectrum suggests that an operator that proposes to develop a Downstate casino should be required to invest at least $1 billion of capital. The potential to exceed that required threshold will be driven by the prospective return on investment associated with the project. Elements such as market potential, gaming tax rate, and proximity to competition will all significantly influence the return profile of the project. Additionally, returns could be positively impacted by the digital gaming potential (iGaming or sports wagering license) connected with the opportunity, due to digital's lower capital cost attributes.

The most recent gaming development project in the Northeast, Wynn Resorts' Encore Boston Harbor, underperformed in its first year of operation. Regional gamblers have proven to be loyal to existing New England casinos such as Foxwoods, Mohegan Sun and Twin River. The total investment by Wynn Resorts was substantial at $2.6 billion. The property generated $150 million in gross gaming revenue during its first three months of opening (Encore opened on June 23, 2019), putting it on pace for $600 million in revenue after its first full year. This would be 25 percent short of projected revenue of $800 million.[82]

Gaming companies and investors in a potential New York City development may cite this project and other comparable developments when considering size of development in the metro area and expected return profile. The economics of a potential Downstate New York facility will be heavily influenced by the location of the project and the tax rate.

The long-term impact of COVID-19 on individuals' behaviors is unknown at this point, and that too will influence gaming companies' willingness and plans to invest in facilities to accommodate high volumes of guests.

5) Implications of Delaying a Downstate Decision

In light of the unprecedented COVID-19 situation and the resulting economic fallout, the State of New York could opt to delay, for an undetermined period, the decision to authorize three commercial casinos in the Downstate region. Such a decision would have both positive and negative implications and results that include the following:

Positive

- The State would have more time to see how the COVID-19 situation ultimately impacts the economy and the gaming industry.
- A delay could allow the State to move cautiously to develop an RFP process for the commercial casinos. An RFP process is time-consuming but helps ensure that any development best serves the interest of the State.
- Gaming companies would have more time to adjust to the conditions, allowing them to react to the New York opportunity in a more certain environment, perhaps resulting in a healthier bidding competition, from which the State would benefit.
- A delay would allow the State to observe, and adapt to, whatever decisions are made by other states/regions.
- Adherence to the seven-year moratorium would not require the State to reimburse Upstate casinos for their pro-rated recoverable license fees, as pursuant to the 2013 legislation authorizing commercial casinos.[83]

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[82] Adrian Ma, "Encore Casino's Revenue Tops $175 Million For First Full Quarter," WBUR, November 7, 2019. https://www.wbur.org/bostonomix/2019/11/07/wynn-resorts-earnings-encore-boston-harbor

[83] "Trends in New York State Lottery Revenues and Gaming Expansion," May 2014, p. 24 https://www.osc.state.ny.us/sites/default/files/reports/documents/pdf/2018-12/economic-lottery-2014.pdf

Negative

- New Jersey could be first to market with a metro-area casino. Although voters soundly rejected the idea of expanding casino gambling outside Atlantic City in 2016, it is widely believed that at some point the state will expand casino gaming beyond the confines of that municipality. Owners/operators/developers associated with both the Meadowlands complex and Liberty National Golf Club in Jersey City are ongoing proponents of casinos at those locations. Being first to market would allow a casino on the New Jersey side to develop player loyalty.
- The State of New York would delay receiving gaming-tax receipts from the operation of commercial casinos, as well as a prospective license fee (which Spectrum suggests be $500 million), until a much later date than it would otherwise.
- The potential evolution of VLT facilities to seek commercial casino licenses in a competitive bidding process would, if successful, open employment opportunities in table games at an early date, during a period of relatively severe unemployment, and delaying that decision precludes that possibility.
- If MGM and Genting, the operators of Empire City and Resorts World New York City, respectively, do not receive licensure as competitive casinos, any delay would offer additional time for them to further develop their facilities and build player loyalty, perhaps making a prospective casino in the city less valuable to a developer.

Spectrum's analysis makes clear that there are advantages to advancing the decision to award Downstate licenses. Those perceived advantages, however, do not overcome the clear need for New York to proceed carefully with a fully developed RFP process that encourages competition and creativity to ensure that decisions are made in the best long-term interests of the region and state. The pressures wrought by the COVID-19 pandemic are material, but they are, by definition, short-term in nature. The State should not run the risk of advancing the decision-making process at the risk of potentially selecting a bid that is less than optimal.

d. Opinions of Finance and Investment Professionals of COVID-19 Impact on Potential New York Gaming Expansion

The investment professionals interviewed for this analysis uniformly believe that a new Downstate New York casino – built to the standards of an integrated resort – would likely be able to attract the necessary capital, due largely to a location within the massive, affluent New York City metropolitan area. Notably, almost every gaming company that recently wanted to raise capital was able to do so due to support from the Federal Reserve and enormous pools of institutional investor capital currently on the sidelines.

Although certainty around the "financeability" of a Downstate casino exists, it is difficult to predict which gaming companies will be positioned to pursue the license one to three years from now. The COVID-19 issue could last another one to two years, but the resulting economic downturn could potentially last longer. The question is which gaming companies will emerge from the pandemic with sufficient financial strength to pursue a large development in the New York City region in the longer term.

Conversations with a gaming banker from SunTrust who has been involved in gaming for more than 15 years as well as with a large institutional private lender suggested it will be difficult for banks to support gaming companies to do project development in the absence of sufficient transparency on the COVID-19 economic impact. Much will depend on the fundamental considerations in forecasting success of the project – proximity to population and low tax rate. Casinos that recently reopened, so far, have demonstrated a significant pent-up demand from a population of dedicated gamblers eager to visit casinos, but this level of profitability is not sustainable. The banker pointed to the abundance of private equity investors eager to support casino development deals, but at very high capital cost to the operator, thereby lowering the potential return on investment to the gaming company developers.

1) Opinions of Ratings Agencies

Spectrum interviewed rating agency analysts covering the gaming industry at Moody's Investors Service and Fitch Ratings. The overwhelming sentiment during these interviews was that this is a period of high uncertainty. The chief financial officers of gaming companies, who are in dialogue with the rating agencies, are operating in uncharted territory as they begin reopening. There are capacity constraints at the casinos and limits on the overall food-and-beverage offerings, both in an attempt to minimize health risks.

The result is that, with fewer servers, less restaurant capacity, and limited hotel capacity, operating expenses are much lower. While revenues are also lower, the associated profit margins, so far, are much higher. According to the rating agencies and CFOs with whom they spoke, it is unclear if this dynamic exists due to pent-up demand or as a short-term anomaly that will revert to normal business conditions as entire properties open up, absent capacity constraints. The current situation is an uncertain one.

Due to the uncertainty around business conditions, lenders are universally waiving covenant compliance requirements through the end of 2020, at which time they will reassess the business environment. Moody's has a negative ratings outlook for all its issuers in the gaming industry; the firm will revisit the ratings outlook in December. The two factors on which Moody's will be focused are the status of the COVID-19 pandemic and the overall state of the economy. In terms of potentially investing in a development in New York City, the uncertainty in the industry makes it difficult for companies to invest in a new development in the near-term. As it pertains to a license fee, they believe it too difficult to negotiate now, given the volatile business conditions currently.

Specifically related to New York, Moody's point of view suggests that it is unlikely investors (and not necessarily gaming companies) are going to "get excited" about investing in a new gaming project. Because New York City has so many non-gaming attractions – including shows, restaurants, entertainment and retail – there is little attraction to the typical amenities that are developed to help drive a casino. Therefore, the project must be situated in a location that offers convenient access to fully take advantage of the massive nearby population.

Fitch Ratings analysts expressed similar reservations in terms of the non-gaming amenities of a new casino project. However, they expressed a high degree of certainty that the large gaming companies

could fund the necessary up-front licensing costs and other associated investments by using their corporate balance sheets.

Fitch expects it will take approximately three years for cash flow to recover to pre-COVID-19 levels. Currently there are few large capital projects being undertaken by the large gaming companies. Therefore, in two to three years, they believe strongly that companies will want to aggressively pursue a New York City license.

e. Other State Estimates, Adjustments

All gaming states and the gaming operations they host expected, and are experiencing, significant reductions in gross gaming revenues and the accompanying fiscal receipts as a result of pandemic-caused closure of gaming facilities. In one state's report that Spectrum believes could speak for many gaming states, the Illinois' Commission on Government Forecasting and Accountability noted the loss of receipts from gaming – casinos, video gaming, lottery, horse racing, and recently enacted sports wagering – and the uncertain recovery period:

> Looking at State-related tax revenues generated from these sources, gaming revenues fell 13.4% in FY 2020 from $1.4 billion to $1.2 billion. This decline is in large part due to the suspension of video gaming and casino operations between March 16th and June 30th, which thereby prevented any revenues from being generated from these sources during this time period. Although this suspension has been since lifted, gaming has only returned on a limited basis and it remains unclear how long these limitations will last. Even with the resumption of wagering, it is expected that the ramifications of the pandemic on public confidence will persist for some time.[84]

At this time, Spectrum is not aware of budget revisions in other states to compensate for the decline in gaming receipts. However, several states are proceeding with gaming expansion that would help generate new receipts. Examples include:

- Sports wagering and iGaming in Virginia (approved)
- Sports wagering in Tennessee (approved)
- IGaming and/or ilottery in Indiana (prospective)
- Sports wagering in Massachusetts, North Carolina (prospective)

Additionally, several states are considering regulated skill-based games, which currently have little to no regulation and operate in "gray areas" of state law.

At the same time, gaming facilities in some states are seeking, or are expected to seek, financial relief for losses incurred during the pandemic. In New Jersey, two bills have advanced through legislative committees as of October 26, 2020: One would allow casinos and racetracks to deduct promotional gaming credit from gross revenue on sports wagering, and the other would authorize both temporary and permanent tax breaks to casinos.

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[84] Eric Noggle, Senior Analyst, State of Illinois, Commission on government Forecasting and Accountability, "The Impact of the Pandemic on FY 2020 Gaming Statistics," September 2020. https://cgfa.ilga.gov/Upload/0920revenue.pdf

Even when consumer confidence has restored, the Illinois Commission on Government Forecasting and Accountability is uncertain about a fully recovery of gaming revenues:

> FY 2020 will forever be footnoted as the fiscal year that revenues were first impacted by the effects of the COVID-19 pandemic. Assuming that the lingering effects of the virus will soon subside, there could be noticeable improvements in revenues generated from gaming in the years to come as restrictions are lifted and new gaming locations across the state are opened. However, questions remain on the extent that gaming revenues will increase given the plethora of gaming opportunities that already exist and the potential ramifications of the virus on the economy and discretionary spending.[85]

1) Present and Proposed Casino Development

The economic impacts of COVID-19 pandemic occurred in the middle of several prominent gaming development projects across the country. The following list provides the impacts to, or status of, five such projects:

- Live Casino Hotel Philadelphia: This $700 million project received a waiver exemption allowing construction to continue while other construction projects were stalled.[86] The property began installing slot machines and table games in October 2020 and is expected to open in 2021.[87]
- Resorts World Las Vegas: Although there were several pauses during construction, they were planned by the developer due to design and theme changes. It was recently reported that several construction workers tested positive for COVID-19. Although the pandemic did not cause a total work stoppage, there was a reduction in construction of the tower to comply with social distancing measures. The project, being built at a cost of $4.3 billion, is scheduled to open in summer 2021.[88, 89]
- The Drew Las Vegas: In May, the developer of the $3 billion The Drew suspended principal and interest payments on a $2 billion loan secured to finish the construction of the project. It is unclear whether the default was a direct result of COVID-19, but the project is now stalled and mired in several lawsuits.[90]

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[85] Noggle.

[86] Layla A. Jones, Michaela Winberg, et al., "What's allowed during Philly's 'yellow' phase? Here's everything we know," WHYY, May 29, 2020. https://billypenn.com/2020/05/29/whats-allowed-during-phillys-yellow-phase-heres-everything-we-know/

[87] Kevin Shelly, "Gearing Up, Live! Casino Philadelphia Begins Rolling in Slots and Table Games," PAOnlineCasino.com, October 22, 2020. https://www.paonlinecasino.com/10065/live-casino-philadelphia-instals-slots-table-games/

[88] Jeff Gillan, "Resorts World Las Vegas Update: On track for summer opening, says president," KSNV, October 23, 2020. https://news3lv.com/news/local/resorts-world-las-vegas-update-on-track-for-summer-opening-says-president

[89] Brian Horwath, "New COVID19 Cases Confirmed at Resorts World Construction Site," *Las Vegas Sun*, April 23, 2020. https://lasvegassun.com/news/2020/apr/23/new-covid-19-cases-confirmed-at-resorts-world-cons/

[90] Erik Gibbs, "Developer of The Drew in Vegas Defaults on $2-Billion Loan" CalvinAyre.com, June 3, 2020. https://calvinayre.com/2020/06/03/casino/developer-of-the-drew-in-vegas-defaults-on-2-billion-loan/

- UMUSIC Broadwater casino hotel: Construction of the proposed $1.2 project in Biloxi, MS, is set to begin in 2021 and be completed in 2023.[91]
- Rivers Casino Des Plaines: A proposed $150 expansion plan to add slots and tables to the casino floor and a hotel development for this suburban Chicago property were put on hold because of COVID-19. The expansion of the parking garage, which was 90 percent complete, was also paused at the onset of COVID-19.[92] The company has yet to disclose whether it will resume or modify this project.

8. Conclusions

Our review of the current pandemic's implications, supported by our research and experience in similar crises, leads to the following conclusions:

- The short-terms impacts on the gaming industry in New York will remain severe, even with reopenings being phased in. The recent spate of crowded reopenings at casinos across the country should not be taken as an indicator that pent-up demand will result in a rapid return to pre-pandemic levels. The economic and health-related factors noted earlier in this report will be present to some degree until both the pandemic and the accompanying recession are in the past.
- In the long term, we expect that gaming operators in New York, like their counterparts in other markets, will seek tax and other forms of relief from the State to assist in their respective recoveries from financial pressures that began at the start of COVID-19 and, as noted throughout this report, will continue into 2020. (Such requests for relief have not been factored into Spectrum's estimates.)

With respect to tax relief, legislation was recently approved by the state Senate in neighboring New Jersey that affords Atlantic City casino operators various forms of temporary and permanent tax relief. Including the elimination of a tax on promotional spending, such as match-play coupons for table games, according to the state Office of Legislative Services.[93]

Operators can be expected to seek relief irrespective of whether the impacts fall under our most severe or mild scenarios. As noted in great detail in our tax analysis, we recommend that the State develop clear regulatory guidelines and checklists for weighing all such petitions for relief in a fair, impartial and apolitical atmosphere.

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[91] Mary Perez, "New details released on $1.2B casino resort coming to Biloxi, including 2,500 jobs," *SunHerald*, October 15, 2020. https://www.sunherald.com/news/business/casino-gambling/article246472335.html

[92] Christopher Placek, "Rivers Delays Des Plaines Casino Expansion Project Due to COVID-19," *Daily Herald*, April 30, 2020. https://www.dailyherald.com/news/20200430/rivers-delays-des-plaines-casino-expansion-project-due-to-covid-19

[93] David Danzis, "Casino tax relief bill could stabilize industry at expense of Atlantic City, state programs," *The Press of Atlantic City*, June 13, 2020. https://www.pressofatlanticcity.com/news/casinos_tourism/casino-tax-relief-bill-could-stabilize-industry-at-expense-of-atlantic-city-state-programs/article_f270db4b-8aee-5a41-899c-4131417bc916.html

E. Forecasts for Upstate Gaming Facilities

Having forecast the gross gaming revenue for gaming facilities Downstate and for Orange County gaming markets, we now forecast GGR for the Upstate gaming facilities – both at status quo and under the scenarios described above in Section D.2.

Spectrum constructed a series of large-scale drive-time gravity models calibrated to the visitation and GGR patterns of gaming-age adults in the region.[94] These models were then utilized to develop a series of projection models that consider future population and income growth as projected by ESRI,[95] as well as the impacts of future competition. It should be noted that these projections do not consider any expansions, significant additions or improvements to existing Upstate gaming properties, nor do they consider changes that an individual operator could potentially make to marketing strategies. Figure 73 details Spectrum's projection of GGR for each gaming property in the following scenarios:

- 2019 actual GGR
- 2023 Status Quo – without any new competition
- 2025 Status Quo – without any new competition
- 2025 with new competition from a casino in Manhattan, a VLT facility in Orange County, and the two existing New York City metro VLT facilities adding table games (becoming full-scale casinos) – effectively the Downstate Expansion Scenario 1 inclusive of Orange County VLT facility
- 2025 Downstate Expansion Scenario 1, including Orange County VLT and a casino in East Windsor, Connecticut
- 2025 Downstate Expansion Scenario 4 – casinos in Manhattan, Queens and Brooklyn, a VLT facility in Orange County, and a new casino in East Windsor, Connecticut

On an aggregate basis, we expect GGR across Upstate New York to grow only organically, at a rate of just less than 1 percent per year before the introduction of new competition. New competition from Downstate gaming facilities is forecast to have varied impacts on existing gaming facilities, but overall could impact Upstate GGR by approximately -5.9 percent. The greatest property-level impacts are expected to accrue to Rivers Schenectady (-12.6 percent in Scenario 4), as competition from a VLT facility in Orange County, a casino in Manhattan, and a casino in East Windsor all involve overlaps with Rivers' regional market area (but not its primary market area of the Capital Region).

Tioga Downs could be expected to lose some market share to a VLT facility in Orange County and to a lesser degree a casino in Manhattan, with the potential to see GGR declines of 9.2 percent. Note that the potential impacts on Resorts World Catskills were already discussed in greater detail in the New York

[94] Spectrum's gravity models were calibrated to existing revenue patterns at casinos both in New York and the surrounding region, and in consideration of insights from many gaming property operators across New York.

[95] ESRI is the global market leader in geographic information systems, with its ArcGIS product as the standard platform for government agencies across the United States, most national governments worldwide, as well as the private sector.

City-area and Orange County VLT expansion sections of this Part 1 report, as there is considerably greater overlap in its markets than for the other Upstate facilities.

Figure 73: Upstate gaming facility GGR projections ($M)

Facility	2019 Actual	2023 Status Quo Projection	2025 Status Quo Projection	2025 Projected Scenario 1 with Orange County VLT	2025 Projected Scenario 1 with Orange County VLT and East Windsor	2025 Projected Scenario 4 with Orange County VLT and East Windsor
Batavia	$62.1	$63.1	$63.2	$61.8	$61.7	$60.4
Del Lago	$158.0	$173.8	$174.2	$168.1	$167.7	$165.4
Finger Lakes	$105.3	$107.0	$107.5	$104.7	$104.5	$103.7
Hamburg	$71.8	$75.5	$76.8	$76.0	$75.9	$75.4
Rivers	$168.9	$173.8	$175.0	$162.2	$160.1	$153.0
Saratoga	$126.4	$131.3	$132.8	$125.0	$123.2	$121.7
Tioga	$83.1	$84.8	$85.1	$78.9	$78.6	$77.3
Vernon	$29.3	$29.8	$29.8	$28.6	$28.5	$28.0
Akwesasne	$100.5	$106.6	$108.8	$108.5	$108.2	$107.7
All Seneca	$610.0	$610.0	$645.6	$631.5	$630.7	$616.7
All Oneida	$383.4	$383.4	$393.3	$375.3	$374.0	$364.3
Cayuga	$1.6	$1.6	$1.6	$1.6	$1.6	$1.5
Total*	**$1,900.4**	**$1,940.7**	**$1,993.7**	**$1,922.1**	**$1,914.8**	**$1,875.2**

Source: Spectrum Gaming Group. *2019 actual total includes $6.1 million in GGR from Monticello VLT facility, which permanently closed in April 2019.

It must be noted that the preceding gaming revenue projections differ from Spectrum's analysis of gaming revenue potential for the Upstate region. The analysis of gaming revenue potential, presented in Part 2, addresses the question of market saturation and whether there is room for growth in the region.

As shown in Figure 74, the stability of overall GGR translates into stable revenues to the State. There is some modest shifting of tax, but generally the overall revenue to the State remains fairly constant.

Figure 74: Upstate gaming facility estimated gaming-tax projections ($M)

Facility	2019 Actual	2023 Status Quo Projection	2025 Status Quo Projection	2025 Projected Scenario 1 with Orange County VLT	2025 Projected Scenario 1 with Orange County VLT and East Windsor	2025 Projected Scenario 4 with Orange County VLT and East Windsor
Batavia	$24.63	$24.61	$24.65	$24.10	$24.06	$23.56
Del Lago	$46.56	$51.62	$51.74	$49.93	$49.81	$49.12
Finger Lakes	$48.39	$39.06	$39.24	$38.22	$38.14	$37.85
Hamburg	$20.83	$25.67	$26.11	$25.84	$25.81	$25.64
Rivers	$53.33	$60.13	$60.55	$56.12	$55.39	$52.94
Saratoga	$59.61	$47.92	$48.47	$45.63	$44.97	$44.42
Tioga	$26.35	$27.98	$28.08	$26.04	$25.94	$25.51
Vernon	$9.99	$5.99	$5.99	$5.75	$5.73	$5.63
Akwesasne	$25.13	$26.65	$27.20	$27.13	$27.05	$26.93
All Seneca	$152.65	$159.23	$161.40	$157.88	$157.68	$154.18
All Oneida	$96.08	$98.15	$98.33	$93.83	$93.50	$91.08
Cayuga	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$563.54**	**$567.01**	**$571.75**	**$550.44**	**$548.07**	**$536.84**

Sources: New York State Gaming Commission, Spectrum Gaming Group

F. Social Impacts of Expanded Gaming

Spectrum professionals who have studied the economic and social impacts of gaming for more than four decades have gleaned certain universal truths that must be considered when studying the social costs and benefits of legal gaming:

- Host communities – and even host states – do not necessarily share proportionally in garnering either the benefits or costs of gaming.
- The costs that might accrue to one individual, one business or one community are often counter-balanced by benefits to other individuals, businesses or communities without either side being aware of this cross-play.
- Any study of either the social or economic impacts of gaming must separate the impacts that would be generated by the addition of any consumer-facing business from the impacts that are specific to the nature of a gaming facility.

It is important to maintain realistic expectations. By way of example, gaming does not turn a community that was previously unattractive as a place to live and raise families into an attractive locale. Suburban or outlying communities that were attractive prior to gaming remain attractive, and they may become even more attractive. This is true in markets ranging from Atlantic City, NJ, to Chester, PA, to Gary, IN, and arguably in communities within New York. At the same time, while there are opportunities to match new employment opportunities to areas with a concentration of unemployed or underemployed adults, such opportunities must be identified and exploited months or years in advance. And when underemployed individuals in poorer communities can climb economic rungs, they often move to more desirable communities.

On a state level, the disparities between costs and benefits can be similarly stark. For example, Connecticut offered legal gaming for approximately a decade before New York authorized VLT facilities, and later commercial casinos.

During that decade, many New Yorkers gambled in Connecticut, which gained the revenues and the employment. With respect to problem gambling, Connecticut was given resources to help address this issue for its own adult population. New Yorkers with gambling problems, however, returned home to their home state and communities, which were asked to address these issues but were not provided with additional resources from GGR to help do so.

That issue still exists today, most notably in the highly populous New York City market. New Yorkers who cross the Hudson River to bet on sports or internet gaming in New Jersey, or who drive to Bethlehem, PA, Atlantic City, NJ, or other host communities confront the same mismatch. Resources to address problem gambling or other issues remain with the state that hosts the gaming, while New York – which exports its dollars – does not gain the additional resources.

With respect to issues such as bankruptcy and crime – both of which span both economic and social concerns – the answers and the accompanying analyses are anything but black and white.

Spectrum studied the issues of bankruptcy in great detail in Atlantic City, and we looked at the human stories behind the statistics. We found that, while a number of bankruptcies were tied to gambling

debts incurred by owners or employees, many were simply tied to an increase in economic activity and competition.

Businesses that ranged from pharmacies to restaurants to hardware stores went out of business in the Atlantic City area following the opening of casinos in 1978. Quite often, the culprit was the encroachment of new competitors – often better financed, with better products or with services that were delivered in a more efficient fashion. Yet, because business closures followed the introduction of gaming to the local economy, this correlation was often misidentified as causation.

Crime data can be similarly misunderstood. Increased visitation to host communities is often accompanied by an increase in crime, but the data is often viewed as the ratio of crimes to permanent residents. Similarly, certain crimes – such as past-posting bets or stealing tickets from slot machines – are directly tied to the nature of gaming. For example, an examination of crime data in Schenectady – home to Rivers Casino & Resort – can lead to conclusions that are incomplete or simply wrong. For example, look at the 2017 crime data for the adjacent Schenectady and Saratoga counties:

Figure 75: 2017 Index of crimes per 100,000 population

	Index	Violent	Property
Saratoga County	1,219.2	119.3	1,099.9
Schenectady County	2,961.0	430.1	2,530.9
New York State	1,817.2	354.7	1,462.5

Source: New York State Division of Criminal Justice Services

Crime rates, like other social phenomena and measures, bleed across county and municipal lines, and can be linked to a dizzying mix of potential causes and catalysts. A simple review of such numbers would not, in any sense, support conclusions that Rivers is a factor in increasing crime or is having no effect in lowering crime. It is simply one piece of a large mosaic that must be examined in context in virtually all such cases.

Notably, Rivers sits on a site once occupied by a General Electric manufacturing facility. GE's diminished presence in Schenectady has had a profound impact on the quality of life in that community, as noted in this 2016 account in a British newspaper:

> The loss of jobs at GE – which, at its height, employed about 30,000 workers in a vertically integrated manufacturing facility with back office functions for the rest of the corporation – transformed Schenectady (like the loss of so many other manufacturers would transform so many other manufacturing communities) into a very different and not altogether better place for the people who had located their lives here. …
>
> The downsizings didn't just affect people who worked at GE. There were businesses – like Sears Roebuck, the uniform company Rudnicks and little lunch places – that stood just outside GE's gates on Erie Boulevard to cater to white- and blue-collar workers on their lunch breaks. …
>
> Little businesses closed, empty storefronts abounded, nothing seemed to be able to stay in business.[96]

[96] Megan Carpentier, "When General Electric jobs left Schenectady so did a way of life," *The Guardian*, November 6, 2016. https://www.theguardian.com/us-news/2016/nov/06/general-electric-factory-schenectady-new-york-manufacturing-jobs

Absent that historic context, observers could erroneously conclude that Rivers caused – or contributed to – the social and economic problems in Schenectady, including the aforementioned crime rates.

The late Brendan Byrne, who was governor of New Jersey in the 1970s and was the first governor in the United States to adopt legal casinos as a tool of social policy, provided the most insightful comments as to this phenomenon. Prior to casinos, Atlantic City was one of the poorest communities in the United States. After gaming in Atlantic City commenced in 1978, Byrne was asked by reporters if crime had increased in Atlantic City since casinos opened. Byrne responded: "A year ago, there was nothing worth stealing in Atlantic City."[97]

In this section, we examine the scientific/academic literature on social impacts of gambling to better understand the types of social impacts that may accompany the expansion of legal gambling in New York. As casinos began to expand in the United States outside of Nevada and Atlantic City in the late 1980s and early 1990s, researchers' interest in the potential negative impacts of legal gambling increased dramatically.

This interest was fueled, to a degree, by policymakers' demands for information on the potential social costs of gambling. In the early 1990s, a number of states legalized casinos without a clear understanding of the potential negative impacts of casino gambling. One of the earliest publications in this area was a 1994 report by Robert Goodman called "Legalized Gambling as a Strategy for Economic Development."[98] Although this resource attempted to cover the wide variety of gambling impacts, it did so with little data or scientific evidence. The same can be said of much of the "social cost of gambling" research that was published through the late 1990s.[99] Since then, more data-driven analyses have been published.

Importantly, these social effects may occur with either legal or illegal gambling, and most of the research does not differentiate effects based on the type of gambling available. Therefore, Spectrum's review focuses on the social impacts of gambling, in general.

Looking at New York, Anthony Gellineau – the President of South Ozone Park Civic Association West ("SOPCAW"), the direct host community of Resorts World New York City – provides a key vantage on the impact of gaming developments. Gellineau has not observed an overwhelming negative impact to the community; he views Resorts World's impact as a net gain. SOPCAW has remained a huge supporter of the facility from development to the present.[100]

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[97] Jim McQueeny, "Brendan T. Byrne: A Life You'd Buy If You Could," *NJ Spotlight*, January 5, 2018. https://www.njspotlight.com/2018/01/18-01-04-brendan-t-byrne-a-life-you-d-buy-if-you-could/

[98] Robert Goodman, *Legalized Gambling as a Strategy for Economic Development*. Northampton, MA: United States Gambling Study, 1994.

[99] For a discussion of the problems with the research, see Douglas M. Walker and A. H. Barnett, "The Social Costs of Gambling: An Economic Perspective," *Journal of Gambling Studies*, Volume 15 (1999), pp. 181-212.

[100] Anthony Gellineau, President of South Ozone Park Civic Association, in interview with Spectrum, April 7, 2020.

Gellineau says “the biggest complaint is the casino no longer has a buffet; the buffet was the only family activity the casino offered.” Gellineau’s grievance highlights the need for appropriate family-orientated entertainment to capture maximum community participation. Per Gellineau, it is acknowledged that a contributing factor for the closure of the buffet was the large number of unsupervised children left at the buffet by adults while they gambled. When considering these outcomes, any future gaming expansion should consider family dining options but more specifically a destination choice for families with proper safeguards.

“Economically, Downstate gaming makes sense, but every opportunity has pros and cons,” said Yvette Greene-Dennis, Vice President of Program Management for Crescent Consulting. Job readiness and training are essential components for any gaming expansion. Post-development job gaps frustrate impacted communities as the promises for quality jobs have fallen short. Permanent, full-time job opportunities and upward mobility remain largely out of reach for many members of the impacted communities. Experts suggest a training program for managerial and supervisory roles should be a requisite for any future gaming developments. Gellineau, who commends Resorts World for its hiring outreach, says, “many job readiness soft skills were underdeveloped; many prospective new hires failed at their interview, lacking proper attire, and for the lucky ones that made it to job offers failed to maintain basic work ethics such as showing up on time.” Denny says, “Resorts World did not do enough to support small business/entrepreneurial skills.” Denny agrees that construction job opportunities were created, and job readiness training offered, but she says there was a lack of support after construction was completed. Denny said she believes more should have been done to educate workers about how to build and grow their own construction and supply companies. Even now, she said, more could be done to support funding for service industry curriculums at local schools and higher education institutions.

Spectrum also considered the likely impacts of an additional three commercial casino licenses, as well as a new VLT facility in Orange County. Most of the academic research has examined regional or state-level changes in social variables such as crime. However, the results from other jurisdictions are often tied to the particular characteristics of those jurisdictions and may not be directly applicable to New York; those particular characteristics must be considered.

With that in mind, we start with a general review of the academic evidence on the social impacts of gambling, which can provide information on the likely impacts on New York of expanded gaming availability.

1. Crime

The potential for increased crime is typically the most common concern with proposals to expand (or introduce) legal gambling. This is because individuals with a gambling disorder often experience financial problems, and they may be left with few options other than turning to illegal actions to finance their gambling and resulting debts. This is also the social impact that has received the most attention from researchers, thanks to the wide availability of government crime data.

There are three prevalent theories of crime related to gaming facilities: *economic*, *hot spot*, and *routine activities*. The *economic* theory treats criminals as rational people making cost-benefit calculations, such that crime is a rational decision in which the expected benefit outweighs the expected

costs, including the probability of being caught.[101] If a region's crime is concentrated in one specific area, that area is called a *hot spot*.[102] Some have theorized that gaming facilities may act as hot spots for crime. Finally, the routine activities theory suggests that crime occurs when there are suitable offenders, targets, and a lack of enforcement in the same area.[103] Casino crime may follow the *routine activities* theory because there are many casino patrons who carry a lot of cash, which may attract potential offenders.

Similarly, the advent of ticket-in/ticket-out technology means that bar-coded tickets are a form of currency that can easily be converted to cash. Spectrum's experience has shown that teams of thieves have targeted slot patrons in recent years, using ploys such as having one confederate plant and then retrieve a low-value ticket from the floor, handing it to a patron, asking if it was dropped. During the course of this diversion, another confederate prints a more valuable ticket from the accumulated credits on the machine.

Such activities comport with a national trend that shows pickpocketing in general is a growing crime, often deployed by experienced teams. A 2019 article in *The Atlantic* noted:

> In Manhattan, where transit larcenies rose 15 percent last year, police blame much of the bump on traveling pickpocket teams from Latin America. The profession used to be dominated by middle-aged men with light fingers and long rap sheets, but these newer players, who describe themselves as "whiz mobs," tend to be made up of younger men, and depend more on collaboration than on manual dexterity. To this end, they rely on classic ploys like the "sandwich," wherein they surround a victim on an escalator, with a "stall" positioned in front. When the stall abruptly stops, the pick bumps into the victim from behind, lifts his wallet, and passes it to a partner.[104]

Prior to the 1990s, most of the studies to examine casino-related crime focused on Atlantic City, which represented a new casino market outside of Nevada. Since the 1990s, more studies have been published that examine other U.S. jurisdictions. In a 2010 book chapter, Spectrum researcher Douglas Walker reviewed 16 papers that studied gaming facilities and crime between 1985 and 2009.[105] Based on his review of the literature, Walker concluded that there was no strong evidence of a link between gaming facilities (or gaming expansion) and crime rates. This is because those studies that did find a link did not include the number of tourists in the denominator of the crime rate. So, for example, if a city of 100 residents (*r*) has 10 reported crimes (*c*) per year, the crime rate (*c/r*) would be 10/100, or 10 percent. This is interpreted to mean that the average person has a 10 percent chance of being victimized by crime in a given year.

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[101] Gary S. Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy*, Volume 76 (1968), pp. 169-217. https://link.springer.com/chapter/10.1007/978-1-349-62853-7_2

[102] Lawrence W. Sherman, Patrick R. Gartin, and Michael E. Buerger, "Hot Spots of Predatory Crime: Routine Activities and the Criminology of Place," *Criminology*, Volume 27 (1989), pp. 27-55.

[103] Lawrence E. Cohen and Marcus Felson, "Social Change and Crime Rate Trends: A Routine Activity Approach," *American Sociological Review*, Volume 44 (1979), pp. 588-608.

[104] Renee Chin, "Watch Your Wallet," *The Atlantic*, May 2019. https://www.theatlantic.com/magazine/archive/2019/05/pickpocket-smartphones/585997/

[105] Douglas M. Walker, "Casinos and Crime in the USA," in Bruce L. Benson and P. R. Zimmerman, eds., *Handbook on the Economics of Crime*. Northampton, MA: Edward Elgar, 2010, pp. 488-517.

Now if a casino opens in the city, and there are 100 tourists on average per day, then the population measure should include residents *r*, but also tourists *t*, since they may also be victims of crime. The crime rate would be calculated as *c/(r+t)*. If we assume the number of crimes increases by 10 after the casino opens, then the crime rate would be calculated as 20/200, which is the same 10 percent as before.

Those studies that conclude that gaming facilities lead to higher crime rates typically ignore the tourists when calculating the crime rate. In the example above, they would calculate the crime rate as 20/100, or 20 percent. Clearly, this way of calculating the crime rate would overstate the actual risk of being victimized.

Spectrum's summary of crime studies is presented in Figure 76 below (over two pages), with studies listed in chronological order by publication year. Among the studies summarized in that table, the studies by Barthe and Stitt focus on the locations and timing of crimes committed in Reno, NV. Reno has several large gaming facilities located within a few blocks of each other. Analysis by Barthe and Stitt found that 22 percent of all Reno crimes were clustered around the gaming facilities. However, they note that this does not mean that gaming facilities "caused" crime. In fact, they found that after adjusting for the casino visitors, the crime rate is actually lower around the gaming facilities, compared to some other areas of Reno.[106]

Figure 76: Studies on the relationship between casinos and crime

Study Author(s)	State/Region	Data Years	Year Casinos Opened	Casinos Increase Crime Rate?	Population adjusted for Tourists?
Albanese[107]	Atlantic City	1978-82	1978	No	Yes
Friedman et al.[108]	Atlantic City	1974-84	1978	Yes	No
Hakim and Buck[109]	Atlantic City	1972-84	1978	Yes	No
Curran and Scarpitti[110]	Atlantic City	1985-89	1978	No	Yes
Giacopassi and Stitt[111]	Biloxi, MS	1991-93	1992	Yes	No
Chang[112]	Biloxi, MS	1986-94	1992	No	Yes

[106] Emmanuel Barthe and B. Grant Stitt, "Casinos as 'Hot Spots' and the Generation of Crime," *Journal of Crime & Justice*, Volume 30 (2007), pp. 115-140.

[107] Jay Albanese, "The Effect of Casino Gambling on Crime," *Federal Probation*, Volume 48 (1985), pp. 39-44.

[108] Joseph Friedman, Simon Hakim, and J. Weinblatt, "Casino Gambling as a 'Growth Pole' Strategy and its Effect on Crime," *Journal of Regional Science*, Volume 29 (1989), pp. 615-623.

[109] Simon Hakim and Andrew J. Buck, "Do Casinos Enhance Crime?" *Journal of Criminal Justice*, Volume 17 (1989), pp. 409-416.

[110] Daniel Curran and Frank Scarpitti, "Crime in Atlantic City: Do Casinos Make a Difference?" *Deviant Behavior*, Volume 12 (1989), pp. 431-449.

[111] David Giacopassi and B. Grant Stitt, "Assessing the Impact of Casino Gambling on Crime in Mississippi," *American Journal of Criminal Justice*, Volume 18 (1993), pp. 117-131.

[112] Semoon Chang, "The Impact of Casinos on Crime: The Case of Biloxi, Mississippi," *Journal of Criminal Justice*, Volume 24 (1996), pp. 431-436.

Study Author(s)	State/Region	Data Years	Year Casinos Opened	Casinos Increase Crime Rate?	Population adjusted for Tourists?
Stokowski[113]	Colorado	1989-94	1991	No	Yes
General Accounting Office[114]	Atlantic City	1977-97	1978	No	Yes
Gazel et al.[115]	Wisconsin	1981-94	Various	Yes	No
Wilson[116]	Indiana	1992-97	1995	No	No
Evans and Topoleski[117]	National (tribal only)	1985-89	Various	Yes	No
Stitt et al.[118]	Various	1980s-90s	Various	Mixed	Yes
Betsinger[119]	144 counties in 33 states	1977-2001	Various	Mixed	No
Grinols and Mustard[120]	National (counties)	1977-96	Various	Yes	No
Barthe and Stitt[121]	Reno, NV	2003	1937	No	Yes
Reece[122]	Indiana	1994-2004	1995	No	Yes

Source: "Casinonomics: The Socioeconomic Impacts of the Casino Industry"

Since that literature review in 2010, several other studies have examined gaming facilities and crime.[123] A study of Michigan county-level crime from 1994 through 2010 found that most types of property crime were not affected by gaming facilities. The exception was auto theft.[124]

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[113] Patricia Stokowski, "Crime Patterns and Gaming Development in Rural Colorado," *Journal of Travel Research*, Volume 34 (1996), pp. 63-69.

[114] General Accounting Office, "Impact of Gambling: Economic Effects More Measurable Thank Social Effects" April 27, 2000. http://www.gao.gov/products/GGD-00-78

[115] Ricardo C. Gazel, Dan Rickman, and William N. Thompson, "Casino Gambling and Crime: A Panel Study of Wisconsin Counties," *Managerial and Decision Economics*, Volume 22 (2001), pp. 65-75.

[116] Jerry M. Wilson, "Riverboat Gambling and Crime in Indiana: An Empirical Investigation," *Crime & Delinquency*, Volume 47 (2001), pp. 610-640.

[117] William N. Evans and Julie H. Topoleski, "The Social and Economic Impact of Native American Casinos," *NBER Working Paper Series.* Cambridge, MA: National Bureau of Economic Research, 2002.

[118] B. Grant Stitt, Mark W. Nichols, and David Giacopassi, "Does the Presence of Casinos Increase Crime? An Examination of Casino and Control Communities," *Crime & Delinquency*, Volume 49 (2003), pp. 253-284.

[119] Sara Betsinger, "The Relationship Between Gambling and County-Level Crime." College Park, MD: University of Maryland, 2005.

[120] Earl L. Grinols and David B. Mustard, "Casinos, Crime, and Community Costs," *Review of Economics and Statistics*, Volume 88 (2006), pp. 28-45.

[121] Emmanuel Barthe and B. Grant Stitt, "Casinos as 'Hot Spots' and the Generation of Crime," *Journal of Crime & Justice*, Volume 30 (2007), pp. 115-140. "Impact of Casinos on Criminogenic Patterns," *Police Practice and Research*, Volume 10 (2009), pp. 255-269. "Temporal Distributions of Crime and Disorder in Casino and Non-Casino Zones," *Journal of Gambling Studies*, Volume 25 (2009), pp. 139-152.

[122] William S. Reece, "Casinos, Hotels, and Crime," *Contemporary Economic Policy*, Volume 28 (2010), pp. 145-161.

[123] For a summary, see Douglas M. Walker and Russel S. Sobel, "Social and Economic Impacts of Gambling," *Current Addiction Reports*, Volume 3 (2016), pp. 293-298.

[124] Gregory A. Falls and Philip B. Thompson, "Do Casinos Contribute to Violent Crime? A Panel Data Analysis of Michigan Counties," *Journal of Gambling Business & Economics*, Volume 8 (2014), pp. 34-54.

A study of Philadelphia's SugarHouse Casino, which opened in September 2010, came to similar conclusions. While there was some evidence that vehicle crime was pushed further away from the casino, there appeared to be no significant effect of the casino on street felonies, vehicle crime, drug-related crime, or home burglaries in the areas surrounding the casino.[125] A recent county-level study of states except Alaska, Hawaii and Nevada used data from 1992 to 2012 and found that per capita crime rates in casino-hosting counties did not change, but that crime in neighboring counties did increase.[126]

This checkerboard of "yes" and "no" responses in the summary table represents a flashing warning sign that no academic study of the relationship between gaming facilities and crime can be accepted at face value, and must be reviewed in the larger context, as we have endeavored to do with the Schenectady example. Indeed, that table shows that individuals with some presumed level of expertise can review the same data in the same communities in the same time frame and reach diametrically opposite conclusions. Crime is a function of multiple economic and social factors that must consider labor trends, visitation rates and the clearly porous borders between municipalities, counties and states.

2. Effects in New York

New York is a particularly complicated state when isolating the effect of casino/VLT gaming on crime, as the state has a variety of gaming venues, including commercial and Indian casinos, VLT facilities, racetracks, and off-track betting venues. Several of the VLT facilities operated previously with just racing. Other gaming properties, such as Resorts World New York City, are located in extremely densely populated areas, all of which means that some context may help in the interpretation of the studies discussed in Figure 76.

In selecting which gaming facilities to analyze, we attempted to find the most isolated casino properties. In other words, we wanted gaming facilities that were the only major gaming facility in a county. We also wanted commercial casinos, rather than, for example, racetracks that added VLTs later.

Rivers Casino & Resort (Schenectady County) and del Lago Resort & Casino (Seneca County) are both located in moderate-sized counties. Schenectady County had an estimated 2018 population of 155,000, and in Seneca County, the estimated population was 34,250. The casinos in those counties opened in early 2017. These counties are good examples to consider because their casinos are isolated, and there are no other venues nearby. However, there are only two years of post-casino-opening data (2017 and 2018).

If we examine those counties' crime rates for 2017 and 2018 (the latest year for which data are available) and compare them to another county in New York without a casino, such as Tomkins County (estimated 2018 population of 102,400), there is no stark difference in crime trends. As Figure 77

[125] Lallen T. Johnson and Jerry H. Ratcliffe, "A Partial Test of the Impact of a Casino on Neighborhood Crime," *Security Journal*, Volume 30 (2017), pp. 437-453.

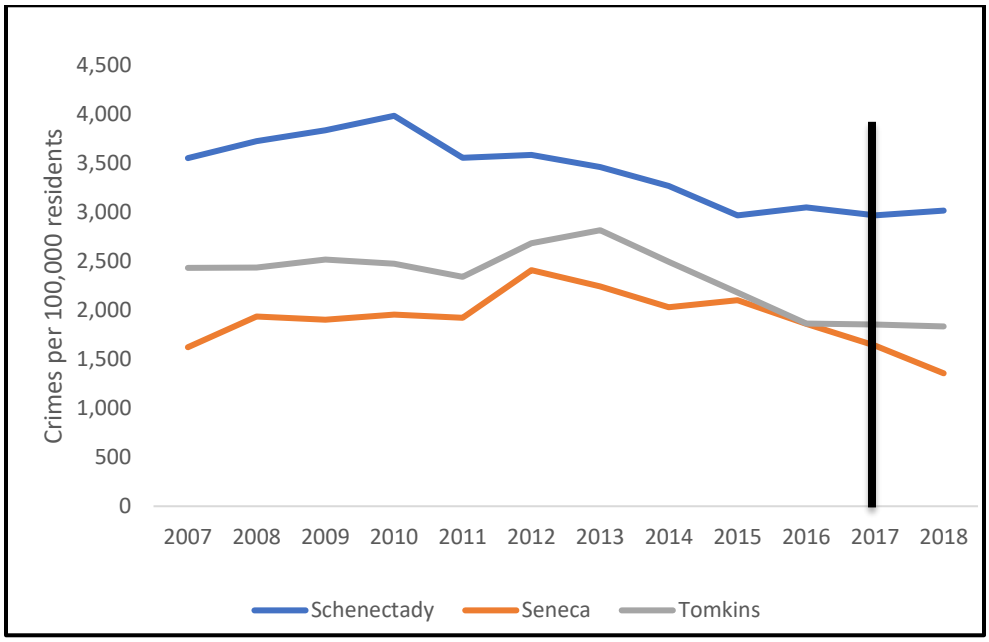
[126] Mark W. Nichols and Mehmet Tosun, "The Impact of Legal Casino Gambling on Crime," *Regional Science and Urban Economics*, Volume 66 (2017), pp. 1-15.

illustrates, all three counties show a general downward trend in crime rate since around 2013. The casino openings in Schenectady and Seneca counties are illustrated in the figure with a vertical black line. From the graph, it appears that the casino openings did not cause a spike in crime in either 2017 or 2018. Although the crime rate increased slightly in Schenectady County, it fell in Seneca. Tompkins County showed a slight decrease.

It is important to note that the crime rates shown in Figure 77 are calculated without visitors in the crime rate denominator. In the context of the academic studies discussed above, the population was not adjusted for tourists. As a result, we might have expected a large spike in crime in the casino counties, particularly since their populations are relatively small, but that did not happen. The fact that we do not see any increase in crime rates – even though we have only two years of post-casino data – raises doubt that the casinos have exacerbated crime.

Clearly, we cannot offer any strong conclusions about casinos and crime based on only two years of post-casino-opening observations. However, we note that there was not an apparent increase of crime after casinos opened in these two isolated and modestly populated counties.

Figure 77: Comparison of crime rates, Schenectady, Seneca and Tomkins counties



Source: Data.NY.gov, Index, Violent, Property, and Firearm Rates by County

Indeed, it is difficult to prove a negative; as, in this instance, it cannot be proven that casinos have nothing to do with crime. At the same time, the literature does not provide any firm conclusions on whether the expansion of casinos in New York would necessarily exacerbate crime. The effect likely depends on local circumstances, including police resources, as well as the security provided at the casinos. Overall, the academic literature simply does not indicate a clear link between casinos and higher crime rates in host communities.

More recently, a crime report on the MGM Springfield casino in Massachusetts was released. The report indicates that most of the crimes associated with the casino occur *at the casino*, and that in the

areas surrounding the casino, crime rates are relatively low.[127] This evidence supports the hot spot theory of casinos, but it also makes clear that casino security can be critical in alleviating casino-related crime.

That notion is supported by the Federal Bureau of Investigation, which notes the following in an article on its website:

> With the large numbers of customers, huge sums of money on gaming floors and in cashier's cages, and extensive physical property and assets, as well as the positive image the gaming industry wants to convey, there is major emphasis and expense dedicated to protecting those people and material goods and reducing casino liability. At the forefront of these efforts stand "the other police" – casino security and surveillance officers.[128]

3. Driving Under the Influence of Alcohol

a. Fatalities

Another common concern about the legalization or expansion of gaming facilities is driving under the influence of alcohol ("DUI"). Because many gaming facilities provide inexpensive or free alcohol to casino patrons, there is a concern that expanded casino gambling might lead to an increase in DUI and related fatalities. One academic study has examined this issue.[129] The study used U.S. county-level traffic accident data from 1990 through 2000, for fatal accidents in which alcohol was reported as relevant. Such fatalities are called "alcohol-related fatal accidents" ("ARFAs"). During the study period, gaming facilities opened in 131 U.S. counties.

The study examined ARFA rates in counties with gaming facilities and compared the rates to those in counties that did not have a casino, after controlling for other factors – including county population, zero-tolerance laws and alcohol taxes – through regression analysis. The results were that, in lower-population and more rural counties, gaming facilities are likely to be associated with an increase in drunken-driving fatalities. The explanation for this is that more isolated gaming facilities are likely to be associated with more miles driven by drunk drivers – to and from gaming facilities. As a result, the authors found a statistically significant increase in ARFAs in rural counties.

Conversely, the authors found a *negative impact* of gaming facilities on drunken-driving fatalities in more populous and urban casino-hosting counties. This might be the case, for example, if casino patrons drink less than they might have had they visited bars or nightclubs instead. Another factor may be that in larger cities, casino patrons have transportation options, including subway, bus, and ride-sharing services,

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[127] Christopher W. Bruce, "Assessing the Influence of Gambling on Public Safety in Massachusetts Cities and Towns: Analysis of Changes in Police Data Following Eight Months of Activity at MGM Springfield." Boston, MA: Massachusetts Gaming Commission, 2019. https://massgaming.com/wp-content/uploads/Public-Safety-Impact-Report-Springfield-and-the-Surrounding-Communities-%E2%80%93-2.27.20.pdf

[128] Kenneth J. Peak, "Policing in the Casino Environment," *FBI Law Enforcement Bulletin*, May 5, 2015. https://leb.fbi.gov/articles/featured-articles/policing-in-the-casino-gaming-environment-methods-risks-and-challenges

[129] Chad D. Cotti and Douglas M. Walker, "The Impact of Casinos on Fatal Alcohol-Related Traffic Accidents in the United States," *Journal of Health Economics*, Volume 29 (2010), pp. 788-796.

which are less likely to exist in rural communities. These factors ultimately lead to lower ARFA rates in urban casino-hosting counties compared to those that do not host gaming facilities.

It should be emphasized that the study analyzed alcohol-related fatal accidents, not simply DUI arrests. One problem with analyzing DUI arrests is that those are a function of enforcement, so that there will be more DUIs in areas that are more heavily policed, and vice versa, assuming all other conditions remain the same.

For New York casino expansion, an increase in drunken-driving fatalities would only be expected if new gaming facilities are located in rural environments, such that many patrons would be driving relatively long distances to patronize the casino. To the extent that new gaming facilities are in more urban locations, the evidence suggests ARFA rates might even decrease overall.

In Figure 78, we show the estimated casino impacts on county-level ARFA rates for selected casino-hosting counties. These calculations are based on Cotti and Walker's basic result, which varies with county population.

Figure 78: Estimated effects on county-level alcohol-related fatal accidents, selected casino counties

County	Estimated 2019 Population[1]	Gaming Facilities[2]	Gaming Facilities' Estimated Effect on Alcohol-Related Fatal Accidents (ARFAs)[3]
Cattaraugus	76,117	Seneca Allegany Casino & Hotel; Seneca Gaming and Entertainment, Salamanca	+8.4%
Madison	70,941	Point Place Casino, Bridgeport; Yellow Brick Road Casino, Chittenango	+8.8%
Niagara	209,281	Seneca Niagara Falls, Niagara County	+2.5%
Queens	2,253,858	Resorts World Casino, Jamaica	-11.3%
Schenectady	155,299	Rivers Casino & Resort, Schenectady	+4.2%
Seneca	34,016	Del Lago Resort & Casino, Waterloo	+13.0%
Sullivan	75,432	Resorts World Catskills, Monticello	+8.4%
Tioga	48,203	Tioga Downs Casino Resort, Nichols	+11.0%
Westchester	967,506	Empire City Casino, Yonkers	-6.4%

[1] County population estimate from https://data.ny.gov/Government-Finance/Annual-Population-Estimates-for-New-York-State-and/krt9-ym2k/data. [2] Casino locations from www.casinocity.com. [3] ARFA effects calculated by Walker, using estimated effects from Cotti and Walker (2010, Table 2, p. 793).

The last column of Figure 78 indicates the estimated effect gaming facilities have on county-level ARFAs. For example, the gaming facilities in Cattaraugus County are estimated to increase ARFAs by 8.4 percent. This is because it is a relatively small county, and the gaming facilities are estimated to lead to an increase in miles driven by drunk drivers. In contrast, the Resorts World Casino New York City is estimated to reduce ARFAs in that county by about 11.3 percent. This is because casino patrons there are more likely to use public transportation, taxis/ride sharing than patrons of more rural gaming facilities, and they are likely to drink less at the casino than they might at other nightlife venues.

b. Tickets and Crashes

After examining the ARFA rates, we next look at the incidence of impaired driving by examining the number of alcohol impairment tickets and alcohol-related crashes before and after the three new

Upstate commercial casinos opened,[130] and we did so in the host county and any adjacent counties. The three relevant casinos are:

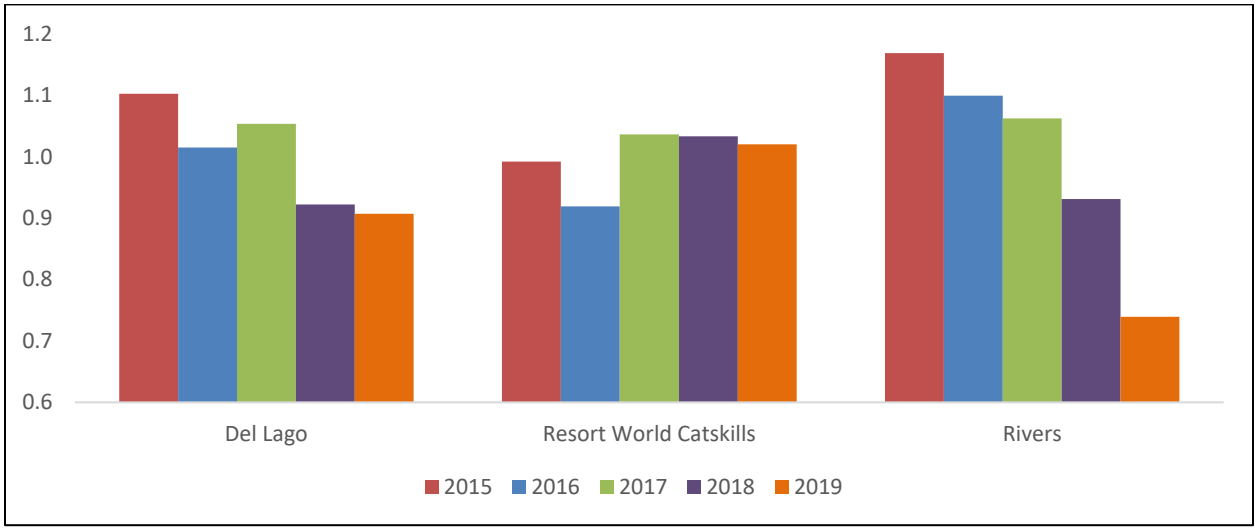
- Del Lago (opened 2017)
- Resort World Catskills (opened 2018)
- Rivers (opened 2017)

We were able to set a historical baseline dating back to 2015, before the casino openings, as well as any applicable years after their openings using the New York Traffic Safety Statistical Repository.[131] Overall, the data show no correlation between the opening of the casinos and changes in both alcohol impairment tickets and alcohol-related crashes in the host and adjacent counties.

In order to have fair comparisons across counties of different sizes as well as the size of the overall state, we have normalized the data presented in Figure 79 and Figure 81. Essentially, each casino-area value is scaled such that it can be compared to other properties and the state average on the same order of magnitude (e.g., del Lago and RWC can be compared equally despite RWC having double the infractions of del Lago.) The normalization is the ratio of that value divided by the averages of values for that property over time (i.e., the del Lago 1.168 value in 2014 is the number of infractions for 2014 divided by the average of all the del Lago infractions from 2014 to 2019).

First, we analyze the trend in alcohol impairment tickets.

Figure 79: Alcohol impairment tickets (normalized) in host, adjacent counties by casino, 2015 to 2019



Source: New York Traffic Safety Statistical Repository, Spectrum Gaming Group

Figure 80 shows the actual number of tickets by casino area.

[130] The fourth commercial casino, Tioga Downs, was excluded from our analysis because it had been a VLT facility since 2006.

[131] Via the Institute for Traffic Safety Management and Research. https://www.itsmr.org/sas-guest-portal/

Figure 80: Alcohol impairment tickets (actual) in host, adjacent counties by casino, 2015 to 2019

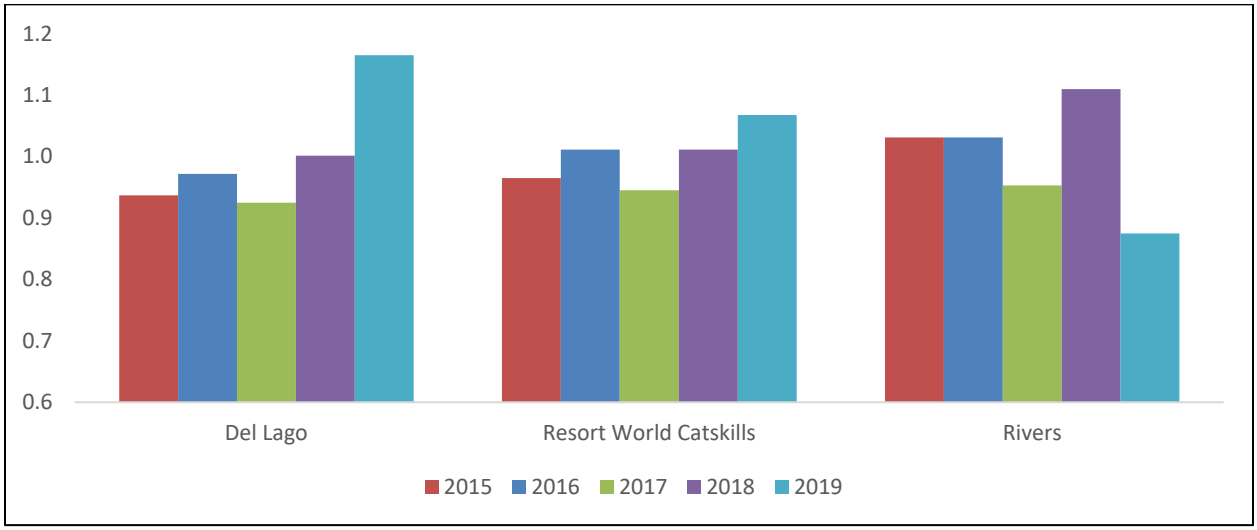
Casino	County	2015	2016	2017	2018	2019p
Del Lago	Cayuga*	415	393	435	361	304
	Ontario*	709	604	643	563	658
	Seneca	287	302	270	256	199
Resorts World Catskills	Orange*	2,538	2,350	2,587	2,720	2,652
	Sullivan	562	522	651	508	535
Rivers	Albany*	2,566	2,386	2,326	1,919	1,383
	Schenectady	589	583	543	595	613

Source: New York Traffic Safety Statistical Repository, Spectrum Gaming Group. * Denotes adjacent county.

The data show that alcohol impairment ticketing has been, and continues be, on a flat to downward trend in the areas where casinos were built. Figure 79 shows both del Lago and Rivers casino areas have been on a downward trend since 2015. The opening of these casinos in February 2017 has not affected the trend, which is highly correlated to statewide alcohol-related infraction figures. In slight contrast, during this period the number of tickets in the Resorts World Catskills area remained essentially flat.

Next, we analyze the number of alcohol-related crashes in the host and adjacent counties. Figure 81 shows the trend normalized.

Figure 81: Alcohol-related crashes (normalized) in host, adjacent counties by casino, 2015 to 2019



Source: New York Traffic Safety Statistical Repository, Spectrum Gaming Group

Figure 82 shows the actual number alcohol-related crashes by casino area.

Figure 82: Alcohol-related crashes (actual) in host, adjacent counties by casino, 2015 to 2019

Casino	County	2015	2016	2017	2018	2019p
Del Lago	Cayuga*	65	74	66	62	70
	Ontario*	66	66	65	77	92
	Seneca	29	26	27	32	37
Resorts World Catskills	Orange*	245	251	213	239	248
	Sullivan	46	54	72	66	74
Rivers	Albany*	231	238	198	210	168
	Schenectady	85	78	94	130	100
* denotes an adjacent county						

Source: New York Traffic Safety Statistical Repository, Spectrum Gaming Group. * Denotes adjacent county.

In contrast to the declining trend of alcohol impairment citations, alcohol-related crash data has had a noticeable upward trend break beginning in 2018. However, in analyzing this spike we found that alcohol-related crashes had increased by 17.5 percent across the entirety of New York State. Looking deeper, the number of all types of crashes statewide spiked in 2018 by 40 percent.

In conclusion, we found there is not enough data available to reasonably conclude that openings of the Upstate casinos impacted alcohol-related driving incidents.

4. Bankruptcy

A gambling disorder will commonly manifest itself in financial problems. As a result, we might expect gaming facilities to be associated with an increase in personal bankruptcy rates. In fact, one recent study indicated that about 20 percent of callers to a credit counseling agency reported that they gambled; these individuals had higher rates of financial problems compared to the general U.S. population.[132] Next to crime, bankruptcy is probably the social impact that has received the most attention from researchers. Even so, there is limited evidence.

A study published in 2008 found there were higher bankruptcy filings in states where a higher proportion of residents traveled out-of-state to gaming facilities.[133] The implication is that gaming facilities might "export" bankruptcy. A 2007 study found no link between gaming facilities and bankruptcy, but noted that bankruptcies did increase in counties within 25 miles of pari-mutuel racing facilities.[134] One of the most recent studies we found examined the relationship between bankruptcy and casino/lottery

[132] Paul Sacco, Jodi Jacobson Frey, Christine Callahan, Martin Hochheimer, Rachel Imboden, and Devon Hyde, "Feasibility of Brief Screening for at-Risk Gambling in Consumer Credit Counseling," *Journal of Gambling Studies*, Volume 35 (2019), pp. 1423-1439.

[133] Thomas A. Garrett and Mark W. Nichols, "Do Casinos Export Bankruptcy?" *The Journal of Socio-Economics*, Volume 37 (2008), pp. 1481-1494.

[134] Barry Boardman and John J. Perry, "Access to Gambling and Declaring Personal Bankruptcy," *Journal of Socio-Economics*, Volume 36 (2007), pp. 789-801.

introductions.[135] Published in 2014, the study found that states that adopted gaming facilities and lotteries before 1995 experienced significantly higher personal bankruptcy rates. However, the effect seemed to disappear among states that adopted after 1995. The data used in this study went through 2010. This suggests that perhaps states with greater "fiscal stress" were more likely to legalize lotteries and gaming facilities earlier; such a finding has been confirmed in other research.[136]

In addition to the studies discussed above, the literature provides a number of other, more dated, studies across U.S. jurisdictions and time. Some studies find a statistical link between gaming facilities and bankruptcy;[137] others do not.[138]

Given that gaming facilities and other forms of legal gambling are already available in New York, it seems unlikely that further expansion would have a measurable impact on bankruptcies in the state. This is because those people who are predisposed to gambling to an extent that would cause financial ruin are likely to already gamble illegally or at existing legal outlets.

As we noted with crime, some context from New York can help interpret the findings from the academic literature.

Figure 83 shows consumer bankruptcy rates for three counties in the U.S. Bankruptcy Court's Northern District of New York.[139] As shown, all three counties have generally downward trends in bankruptcy rates since 2010. Tompkins County does not have casinos, while Schenectady County and Saratoga County do. Saratoga County has had VLT gaming the entire sample period. The casino opened in Schenectady County in early 2017, as indicated by the vertical black line.

[135] Kent R. Grote and Victor A. Matheson, "The Impact of State Lotteries and Casinos on State Bankruptcy Filings," *Growth and Change*, Volume 45 (2014), pp. 121-135.

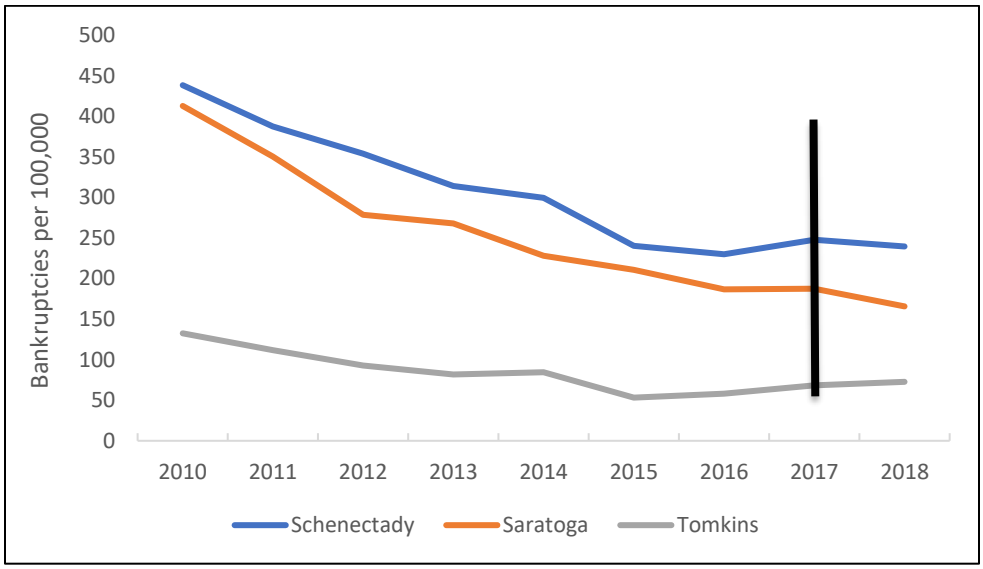
[136] Peter T. Calcagno, Douglas M. Walker, and John D. Jackson, "Determinants of the Probability and Timing of Commercial Casino Legalization in the United States, *Public Choice*, Volume 142 (2010), pp. 69-90.

[137] See March W. Nichols, B. Grant Stitt, and David Giacopassi, "Casino Gambling and Bankruptcy in New United States Casino Jurisdictions*, Journal of Socio-Economics*, Volume 29 (2000), pp. 247-261; John M. Barron, Michael E. Staten, and Stephanie M. Wilshusen, "The Impact of Casino Gambling on Personal Bankruptcy Filing Rates," *Contemporary Economic Policy*, Volume 20 (2002), pp. 440-455.

[138] See Lynda de la Vina and David Bernstein, "The Impact of Gambling on Personal Bankruptcy Rates," *Journal of Socio-Economics*, Volume 31 (2002), pp. 503-509; Richard Thalheimer and Mukhtar M. Ali, "The Relationship of Pari-Mutuel Wagering and Casino Gaming to Personal Bankruptcy," *Contemporary Economic Policy*, Volume 22 (2004), pp. 420-432.

[139] We would like to have presented Seneca County, as in the crime example from earlier. Unfortunately, Seneca County is in the Western District, which does not publish as detailed data on cases as the Northern District. So here we look at Saratoga County, which has had video gaming since 2004.

Figure 83: Comparison of bankruptcy rates, Schenectady, Saratoga and Tomkins counties



Source: United States Bankruptcy Court, Northern District of New York Bankruptcy; Data.NY.gov, "Index, Violent, Property, and Firearm Rates by County."

Again, we cannot prove a negative, but the data from Schenectady County does not indicate an obvious impact of the casino on the bankruptcy rate.

5. Other Social Impacts

The vast majority of published, data-driven research on the social impacts of gambling have focused on the categories addressed above (crime, drunken driving, and bankruptcy). However, there are likely other potential impacts of disordered gambling behavior. Studies addressing other impacts were mostly published in the 1990s, at a time when solid data were scarce. These other impacts include, but are not limited to:

- Decreased worker productivity
- Depression
- Suicide
- Divorce

One study rigorously examines suicide rates and divorce rates.[140] The study examines eight casino jurisdictions that introduced casinos between 1991 and 1994 and compares them to a set of counties that do not have casinos. The researchers concluded that suicide rates did not vary between casino and non-casino counties. The findings on divorce were mixed: rates were lower in three casino counties, higher in one, and statistically no different in four other counties. Overall, this study raises doubt that there is a

[140] Mark W. Nichols, B. Grant Stitt, and David Giacopassi, "Changes in Suicide and Divorce in New Casino Jurisdictions," *Journal of Gambling Studies*, Volume 20 (2004), pp. 391-404.

statistical relationship between casinos and divorce and suicide. Nevertheless, it is clear that a gambling disorder might contribute to such problems.

A key problem with the research that addresses impacts such as divorce and decreased work productivity is that such research often relies on survey data in which people with a gambling disorder are asked about the degree to which gambling contributed to their problems.[141] Some studies simply assume that the problems they address are being caused by gambling. For example, one early study, praised for its thorough analysis and transparency, is based on surveys of Gamblers Anonymous members. One problem with an analysis such as that is that the researcher cannot be sure that gambling was the sole contributor to a divorce, for example. This is because most individuals with gambling disorder also have at least one other psychological or behavioral problem. This issue is addressed in detail in the sub-section on monetary estimates of social costs, below.

Overall, individuals with a gambling disorder may be the source of a wide variety of negative impacts that may be associated with gambling. The issues of crime, drunken-driving fatalities, and bankruptcy – on which there are objective data for analysis – have received the most research attention. There are likely other negative impacts, but unfortunately, research in those areas has not progressed because of limited data availability.

The research on these other social impacts provides less information for the likely effects of casino expansion in New York. New gaming facilities may well lead to more gambling and increased numbers of problem gamblers in the short-term. We may therefore reasonably expect more of a variety of social problems. However, it is not clear that such changes would be significant or permanent. We explain why in the next section.

6. Impacts Associated with Gambling Disorder

Most of the negative social impacts caused by gambling are due to individuals who are identified as having a gambling disorder. This is a condition characterized by gambling to such an extent that it negatively impacts a person's career, personal relationships, and/or financial well-being.[142] In this section of the report, we discuss the relationship between the expansion of legal gambling and the prevalence of gambling disorder.[143]

Social impacts were a key issue discussed in several Spectrum team interviews with New York stakeholders who deal with gambling disorders. A variety of government or government-funded organizations could potentially be affected by expanded legal gambling within the state. Specifically, the

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[141] William N. Thompson, Ricardo C. Gazel, and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," *Gaming Law Review*, Volume 1 (1997), pp. 81-89.

[142] Douglas M. Walker, *Casinonomics: The Socioeconomic Impacts of the Casino Industry*. New York, NY: Springer, 2013. A detailed discussion of gambling disorder and its diagnostic criteria is beyond the scope of this report.

[143] A detailed survey of the literature on this issue has been published, and it is the basis for our discussion in this section. See Renee A. St-Pierre, Douglas M. Walker, Jeffrey Derevensky, and Rina Gupta, "How Availability and Accessibility of Gambling Venues Influence Problem Gambling: A Review of the Literature," *Gaming Law Review and Economics*, Volume 18 (2014), pp. 150-172.

relationship between expanded gambling and the prevalence of gambling disorder is important in understanding the overall social impacts of gambling.

For most adults, casino gambling is just another form of entertainment. People are willing to spend money to visit gaming facilities and play games there, go to restaurants or shows, or shop. This is similar to spending money attending sporting events, playing golf, or shopping at a mall. However, for a small percentage of people, gambling can become a problem. Researchers have estimated that in the United States, gambling disorder affects between 0.6 percent and 1.4 percent of the population.[144] In 2019, the estimated population in New York was about 19.45 million people.[145] This means there may already be between 116,000 and 272,000 individuals with gambling disorder living in the state.[146] Certainly, some of the negative social impacts attributable to gambling are already affecting the state.

According to a 2016 report by the Association of Problem Gambling Service Administrators ("APGSA") in collaboration with the National Council on Problem Gambling ("NCPG"), New York ranked 24th out of 50 states "in terms of per capita public funds invested in problem gambling services. The average per capita allocation of public funds for problem gambling services in the 40 states with publicly funded services was 37 cents; New York's per capita public investment was 15 cents."[147]

While that study is the most recently available national survey, it does not provide a full picture of the range of services available or of the priority that New York places on gambling disorders, particularly under the current administration.

Access to gambling addiction support and education is vital to stemming adverse community impacts. Yvette Greene-Dennis, Vice President of Program Management for Crescent Consulting, says, "On a personal level, many family and friends living near the casino has gambled away their hard-earned dollars. Someone should not have to travel to Manhattan to find the closest Gamblers Anonymous. It should be mandated that a support program be locally accessible and sufficiently funded by the gaming industry."[148] Programs supporting responsible gambling should be the highest quality standard for current and future developments.

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[144] Renee A. St-Pierre and Douglas M. Walker, "Problem Gambling and Integrated Resort Development: Exposure, Adaptation, and Prevalence," Casinonomics Consulting, LLC, working paper (2015), p. 3.

[145] Estimated population from https://data.ny.gov/Government-Finance/Annual-Population-Estimates-for-New-York-State-and/krt9-ym2k/data.

[146] A dated study focused on New York found a higher prevalence rate in New York than in other states. However, even if the historical rate was higher, it would not affect the conclusions in this section, based on the expansion of legal gambling currently being contemplated. See Rachel A. Volberg, "Gambling and Problem Gambling in New York: A 10-Year Replication Survey, 1986 to 1996," Report to the New York Council on Problem Gambling (1996).

[147] Marotta, J., Hynes, J., Rugle, L., Whyte, K., Scanlan, K., Sheldrup, J., & Dukart, J. (2017). *2016 Survey of Problem Gambling Services in the United States*. Boston MA: Association of Problem Gambling Service Administrators (APGSA). https://www.ncpgambling.org/wp-content/uploads/2019/01/2016-Survey-of-PGS-in-US_FULL-REPORT-FINAL-12-19-2017-1-18.pdf

[148] Yvette Greene-Dennis, Executive Vice President of Program Management, Crescent Consulting, in interview with Spectrum, April 10, 2020.

Robert A. Kent, General Counsel for the New York State Office of Alcoholism and Substance Abuse Services ("OASAS"), notes that his agency has a broad mandate to treat drug, alcohol and problem gambling disorders in New York State. That mandate aligns with findings in the most recent *Diagnostic and Statistical Manual of Mental Disorders* ("DSM-5"), published by the American Psychiatric Association in 2013.[149]

Among the changes made in DSM-5 from previous editions of the manual is the renaming of the disorder from "pathological gambling" to "gambling disorder." Other changes included modifying the disorder class from "Impulse-controlled disorders not classified elsewhere" to "substance-related and addictive disorders."

While the psychiatric profession and OASAS recognize the similarities between these various disorders, the reality is that most adults with problem-gambling issues will not participate in programs that treat drug or alcohol abuse unless that individual also has a drug or alcohol abuse problem, according to Kent, who notes that such adults largely prefer treatment through private practitioners.[150] Consequently, OASAS is adapting by providing training programs "for private practitioners to establish some competence in treating problem gambling issues," Kent said.

OASAS has developed what, in Spectrum's experience, is a comprehensive website to address problem gambling, starting with its basic description:

> Gambling Addiction or Problem Gambling is known as the "hidden addiction" because there are no visible signs. Unlike alcohol or drug addiction, you can't visibly see the effects of someone's gambling. For example, if someone has been drinking, you may smell alcohol, or they may be slurring their speech. Because of the lack of visibility, often those suffering from a gambling addiction can hide it longer than someone with an alcohol or drug problem. Usually, gambling addiction is discovered when there is a loss of accessibility to money and/or negative actions occur.[151]

OASAS has established seven regional treatment centers throughout the state and is planning an educational campaign to help adults identify the nearest center. OASAS has not witnessed any spike in demand for its services as a result of gaming expansion and has worked to ensure that it has the capacity to meet any increase, should such an increase arise. "If we need to expand sites, we can," Kent said, noting that the Queens site has already set up branches to accommodate adults within that highly populous region.

With an annual budget of nearly $800 million and more than 700 full-time-equivalent employees, OASAS has a vast and critically important mandate, including certifying, funding and overseeing more than 1,600 local programs and 12 State Addiction Treatment Centers. The agency devotes more than $200 million in annual funding to battle New York's heroin and opioid crisis, which is twice what it was spending

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[149] "Impact of the DSM-IV to DSM-5 Changes on the National Survey on Drug Use and Health," National Institutes of Health. https://www.ncbi.nlm.nih.gov/books/NBK519704/table/ch3.t39/ (accessed January 18, 2020)

[150] January 17, 2020, interview with OASAS, OGS.

[151] New York State Office of Addiction Services and Supports, "Problem Gambling." https://oasas.ny.gov/problem-gambling (accessed April 24, 2020)

to deal with that epidemic less than a decade ago.[152] One way for OASAS to address its broad portfolio of issues is to find partners.

Most notably, OASAS has committed to a working partnership with other State agencies, such as the New York State Gaming Commission, and non-profits such as the New York Council on Problem Gambling. This "Responsible Play" partnership includes working with gaming operators, including Indian casinos and the New York Lottery.

The Cuomo Administration has encouraged State agencies to develop ongoing dialogues and to develop ways of working more closely together in fully aligned missions. This would include a range of agencies, from OASAS to the Office of General Services ("OGS"), which has a wide mandate that includes overseeing construction and construction permitting at the State-owned tracks at Saratoga, Belmont and Aqueduct.

James Maney, Executive Director of the New York Council on Problem Gambling ("NYCPG"), said he has observed an enormous amount of pro-gambling advertising in New York, while he has seen little advertising has aimed to inform consumers about the potential problems with expanded gambling. The NYCPG requests funding for its priorities through its "comprehensive plan." Its priorities include "prevention, treatment, intervention, recovery, and research," with a funding request of $15 million annually.[153]

As the Spectrum team learned from interviews such as these, various State agencies are preparing for continued – and perhaps increasing – gambling-related problems, particularly if gambling availability is expanded in New York. Therefore, an understanding of how the expansion of legal gambling affects the prevalence of gambling disorder is important. There has been a substantial amount of research on this issue.

One important observation about the prevalence rate of problem or disordered gambling in the United States is that it has remained fairly constant, or even declined, during a period in which gaming facilities have dramatically expanded in the United States.[154] Research has suggested that there may be two separate effects at play: accessibility and adaptation.

a. Accessibility

With greater accessibility to gambling, more people are likely to gamble, and more people are at risk to develop gambling disorder. For example, one study of U.S. adults found that individuals living within

[152] Office of Alcoholism and Substance Abuse Services, https://www.budget.ny.gov/pubs/archive/fy19/exec/agencies/appropData/AlcoholismandSubstanceAbuseServicesOfficeof.html (accessed April 26, 2020)

[153] Interview with James J. Maney, January 6, 2020. Supplemental information sheet provided post-interview: New York Council on Problem Gambling, "New York Council on Problem Gambling Recommends a Comprehensive Plan to Address Problem Gambling in New York," July 25, 2019.

[154] John W. Welte, et al., "Gambling and Problem Gambling in the United States: Changes Between 1999 and 2013," *Journal of Gambling Studies*, Volume 31 (2015), pp. 695-715.

10 miles of a casino are about twice as likely to have gambling problems as those living farther away.[155] Nevertheless, on closer examination, "accessibility" to gambling may work along a number of different dimensions, such as location, operating hours, venue safety, and ease of access to money.[156]

In addition, different types of games, such as roulette, blackjack, and slot machines, might attract more people to a casino, as opposed to VLT or slots-only facility, which offers only one type of game. Different types of games have different structural characteristics, such as "event frequency," which might have different effects on the prevalence of gambling disorder.[157] Survey research confirms that the more types of legal gambling, and being old enough to participate in legal gambling, are both associated with increased prevalence of gambling disorder.[158]

Researchers have examined other facets of gambling availability and accessibility, including "geographical or physical accessibility," "temporal accessibility" and "social accessibility." Most of the studies that have examined individual facets of accessibility find that increased accessibility of legal gambling is likely to lead to increased prevalence of problem or disordered gambling.[159]

Since the early 1990s, accessibility to legal gambling has expanded on a number of margins. This leads us to ask: why hasn't the prevalence rate of gambling disorder trended upward with increased accessibility to legal gambling?

b. Exposure and Adaptation

The observation that casino and other forms of legal gambling have expanded dramatically over the past three decades can be reconciled with a fairly stable prevalence of gambling disorder with the "regional exposure model" ("REM") of public health toxins and "social adaptation theory" ("SAT").

The REM applied to legal gambling considers potentially harmful gambling as a "public health toxin." The development of gambling disorder can be affected by the dose, potency, and duration of

[155] John W. Welte, William F. Wieczorek, Grace M. Barnes, Marie-Cecile Tidwell, and Joseph H. Hoffman, "The Relationship of Ecological and Geographic Factors to Gambling Behavior and Pathology," *Journal of Gambling Studies*, Volume 20 (2004), pp. 405-423.

[156] Anna Christina Thomas, Glen Bates, Susan Moore, Michael Kyrios, Denise Meredyth, and Glenn Jessop, "Gambling and the Multidimensionality of Accessibility: More than Just Proximity to Venues," *International Journal of Mental Health and Addiction*, Volume 9 (2011), pp. 88-101.

[157] Mark Griffiths, "Gambling Technologies: Prospects for Problem Gambling," *Journal of Gambling Studies*, Volume 15 (1999), pp. 265-283.

[158] John W. Welte, Grace M. Barnes, Marie-Cecile O. Tidwell, and Joseph H. Hoffman, "Legal gambling availability and problem gambling among adolescents and young adults," *International Gambling Studies*, Volume 9 (2009), pp. 89-99.

[159] For a detailed discussion of the literature on accessibility, see Renee A. St-Pierre and Douglas M. Walker, "Problem Gambling and Integrated Resort Development: Exposure, Adaptation, and Prevalence," Casinonomics Consulting, LLC, working paper (2015).

gambling availability.[160] In this model, "dose" may be considered to be the number and size of gambling venues; "potency" can be thought of as the number of different types of gambling available; and "duration" would be the length of time that legal gambling has been available to the public. In New York, of course, legal gambling has been readily available in the forms of lottery, horse racing and off-track betting, and, more recently, casinos. The possible expansion of casinos in the state would further increase regional exposure, and as a result, we would anticipate at least a short-term increase in the prevalence of gambling disorder.

Researchers developed an index of gambling exposure and tested it in Nevada. Although gambling exposure was dramatically higher in Clark County, NV, than in other counties, the prevalence of gambling disorder was actually higher in counties with less exposure. This finding supports the idea that individuals may "adapt" to the exposure to new social toxins.[161]

Adaptation theory suggests that after the exposure to a new social toxin, people eventually adjust to it and may be unaffected by it. As a result, we might expect the number of disordered gamblers in New York to initially increase after casino expansion but then decline later, as people adapt.[162] This decline might be the result of the "novelty" of new casino availability wearing off.

Given the widespread current availability of various forms of legal gambling in New York, however, the initial increase in gambling disorder prevalence would likely be negligible. This prediction has support from other recent evidence. For example, in a large-scale study in Canada, research found that participation in gambling and problem gambling risk both increased with legal gambling exposure. Yet, all four Canadian provinces that experienced casino expansion also saw population-wide declines in problem gambling prevalence rates.[163]

Overall, the expansion of gaming facilities currently being considered in New York may lead to an increase in exposure to gambling for some New Yorkers. The latest evidence suggests that this is likely to increase gambling activity and risk of gambling disorder. However, due to adaptation, the prevalence rate of gambling disorder in New York is unlikely to increase permanently. While there may be a short-term increase, it is likely to be modest, because legal gambling is already widely available in the state. Nevertheless, policymakers should be aware of this potential in advance, and they may wish to increase resources available for organizations such as OASAS and NYCPG, which help address the potential social impacts from gambling disorder.

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[160] Howard J. Shaffer, Richard A. LaBrie, and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors*, Volume 18 (2004), pp. 40-48 .

[161] Shaffer, et al. (2004), p. 45.

[162] Debi A. LaPlante and Howard J. Shaffer, "Understanding the Influence of Gambling Opportunities: Expanding Exposure Models to Include Adaptation," *American Journal of Orthopsychiatry*, Volume 77 (2007), pp. 616-623.

[163] Kahlil S. Philander, "Regional Impacts of Casino Availability on Gambling Problems: Evidence from the Canadian Community Health Survey," *Tourism Management*, Volume 71 (2019), pp. 173-178.

Keith Whyte is executive director of the National Council on Problem Gambling ("NCPG"), a non-partisan, Washington, DC-based "advocate for programs and services to assist people and families affected by problem gambling." Its membership includes the New York Council on Problem Gambling. Whyte said expanded gambling often leads to an increase in gambling problems. "It is important to consider impacts on the severity of gambling problems, not just the rate, as some existing gamblers go from occasional recreational gambling to heavy, problematic behavior on newly legal forms of gambling. There is always a cost to increased gambling revenue," he told Spectrum.

Whyte said states often make the mistake of not dedicating enough resources to prevention, treatment and recovery from gambling addiction. "Also, not writing adaptive regulations to allow for changing needs as expansion and new types of gambling shift participation patterns and risk for addiction. Not funding a prevalence study prior to expansion to set baseline and then ongoing follow-up at regular intervals. When PG programs are based on a percentage of GGR (and we suggest that 2 percent be the nationwide standard, based on the precedent set by Massachusetts), making sure to include a floor in case of declines (like we're seeing now)," he said.

Alan Feldman, Distinguished Fellow at the International Gaming Institute at the University of Nevada Las Vegas, emphasized that the potential expansion of gaming in New York to include mobile gaming as well as Downstate commercial casinos requires that the private sector become a full partner with the State in addressing problem gambling. According to Feldman, this should include requiring that applicants have a robust responsible-gambling program in place in order to qualify for licensure, as well as to win a competitive bid. And such a program should focus on the needs of both employees and customers.

7. Monetary Estimates of Social Costs

Good public policy depends on weighing the costs and benefits of policy changes. Yet, in the case of the expansion of legal gambling, the cost side of the ledger is more complicated than the benefits side. This is because, in part, the social impacts of gaming facilities are more difficult to measure than the benefits such as employment and tax revenues.

Previously in this chapter of the report, we have considered a variety of potential negative social impacts of expanded gambling in New York. These include crime, DUI fatalities, bankruptcy, divorce, and suicide. It is difficult to forecast exactly how these variables may change after the expansion of gaming facilities. Nevertheless, there have been attempts in the literature to develop monetary estimates of the social costs of gambling.

The literature on social costs and their monetary measurement began in the 1990s. Studies have suggested that the monetary cost of each disordered gambler, per year, ranged from around $1,000 up to $50,000.[164] The wide range of estimated costs obviously indicates differences in how social costs have been measured, particularly if the rate of gambling disorder is relatively stable across time and

[164] For a more detailed discussion of these studies, see Douglas M. Walker, *Casinonomics: The Socioeconomic Impacts of the Casino Industry*. New York, NY: Springer, 2013, p. 162.

jurisdictions. A narrower range of social cost estimates, which we will focus on here, is $9,400 to $10,330.[165]

One of the best studies that was published on social cost estimates was the 1997 paper by William N. Thompson, et al. The paper is well regarded because it was transparent in explaining how its social cost estimate of $9,469 per pathological gambler, per year, was calculated. The types of impacts included in the estimate are:

- Employment: lost work hours/productivity; unemployment compensation
- Bad debts: gamblers borrowing money for gambling and not repaying debts
- Civil court: bankruptcy court and other civil court costs
- Criminal justice: theft, arrests, trials, probation, incarceration
- Therapy: treatment for problem gamblers
- Welfare: aid to dependent children/food stamps

The estimated costs from each category were estimated based on survey responses from Gamblers Anonymous members. Some of the problems associated with studies like this were discussed earlier.

The estimate of $10,330, by Earl Grinols, is based on an average of a number of studies, most of which were not peer-reviewed or published in academic journals.[166] Nevertheless, the Grinols estimate is one that is commonly cited, probably because it is based on a variety of other work. Grinols also suggests that the benefits of legal gambling are outweighed by the costs, at a ratio of 3:1.[167]

After much debate in the literature, as well as two academic conferences dedicated to estimating the social costs of gambling,[168] most research on social impacts has moved away from attempting to estimate *monetary values*, to instead focus on the *types* of impacts associated with gambling disorder.

At least two serious problems with most of the social cost estimates have been published in the literature:[169]

- Most estimates include effects that are transfers of wealth.
- Studies do not account for comorbidity.

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[165] William N. Thompson, Ricardo C. Gazel, and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," *Gaming Law Review*, Volume 1 (1997), pp. 81-89; Earl L. Grinols, *Gambling in America: Costs and Benefits*. New York, NY: Cambridge University Press, 2004.

[166] See Grinols (2004), pp. 172-174.

[167] See Grinols (2004), p. 180.

[168] The conferences were held in 2000, in Whistler, British Columbia, and in 2006, in Banff, Alberta.

[169] Douglas M. Walker and A. H. Barnett, "The Social Costs of Gambling: An Economic Perspective," *Journal of Gambling Studies*, Volume 15 (1999), pp. 181-212.

Most of the published studies on the social cost of gambling included a variety of different effects or negative impacts, without first defining what is being measured. This is important because "social cost" has a specific meaning in the economics literature. Put briefly, a social cost is a decrease in overall societal wealth. This means that transfers of wealth cannot be considered to be social costs. For example, taxes are transfers, not social costs.

When New York raises tax revenue from gaming facilities, the cost to the gaming facilities is offset by gains to the State. The result is no change in overall wealth. However, many social cost studies include transfers in their measures of the social costs of gambling. Examples of such transfers include "bad debts" and "welfare" from the Thompson et al. (1997) study discussed above.

Removing transfers from social cost estimates dramatically reduces the estimated social costs of gambling. For example, the estimated social cost by Thompson et al., cited above, was $9,469. Once transfers of wealth are removed, the estimate falls to about $3,000.[170] This example illustrates that any valuation of the negative social impacts of gambling depends critically on how social cost is defined, and what is included in such measurements.

Regardless of how transfers are handled, however, a more serious problem with social cost monetary estimates is comorbidity. Research shows that the majority of disordered gamblers have other psychological disorders. For example, one meta-analysis summarized that "problem and pathological gamblers had high rates of other comorbid disorders," including a substance use disorder (57.5 percent), a mood disorder (37.9 percent), and an anxiety disorder (37.4 percent).[171]

Despite the fact that most people with gambling disorders have other behavioral problems, social cost estimates do not typically adjust their estimates for this fact. For example, the $9,469 estimate by Thompson et al. implicitly assumes that all of the negative social impacts of problem gamblers' behavior are due *solely and completely* to gambling. Yet, certainly, some of these individuals have other problems and some of their socially costly behavior is due to these other problems.

As a result, most – if not all – social cost monetary estimates are invalid. They attribute all of the social costs – whatever effects are measured – to gambling alone, even though most disordered gamblers also have other psychological problems. Unfortunately, researchers have not yet been able to effectively partition costs across behavioral problems.

The takeaway from this is that effort spent estimating monetary values for social costs would be better spent focusing on the *types and magnitudes of harms* associated with gambling disorder. We have examined several of these in this review.

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[170] See Walker and Barnett (1999), p. 202.

[171] Felicity K. Lorains, Sean Cowlishaw, and Shane A. Thomas, "Prevalence of Comorbid Disorders in Problem and pathological Gambling: Systematic Review and Meta-Analysis of Population Surveys," *Addiction*, Volume 106 (2011), pp. 490-498.

8. Summary of Potential Social Impacts

Based on Spectrum's review of academic literature, which include data-based studies that undergo a rigorous peer-review process, we found that most of the negative social impacts (or "social costs") of gambling are attributable to gambling disorder. With the expansion of legal gambling options in New York, exposure to gambling increases, and a short-term increase in gambling disorder may result. Types of effects that may increase include crime, drunken-driving fatalities, and bankruptcy. However, such increases are likely to be short-lived, as residents adapt to the expansion of gaming options. Over the longer term, the prevalence rate of gambling disorder in New York is likely to remain stable.

In short, the academic literature indicates that the expansion of gaming facilities in New York is unlikely to have a significant impact on overall negative social impacts from gambling.

G. Economic Impacts of Expanded Gaming

1. Glossary

As we also included above, it important to understand the following terms that are used to describe the results of the economic impacts of existing and expanded gaming in New York.

Employment: Employment is a count of jobs, not people, by place of work. It counts all jobs with the same weight regardless of whether the position is full-time or part-time or the labor of a self-employed proprietor. Jobs are counted as **Job-Years**, which are equivalent to one job lasting for one year. This is a similar concept to "person-hours." Jobs often carry over from year to year and therefore the jobs in one year include many of the same jobs as in the previous year. For example, if a new business opens with 10 employees, then the host community of that business will have 10 more jobs than it would have had in every future year that the company maintains its workforce. In that case, over 5 years, the business will have created 50 job-years (10 jobs at the company x 5 years = 50 job-years), though it is possible that it is not the same 10 people who are working there over time. When reviewing changes in employment across multiple years, knowledge of the concept of job-years is vital to proper interpretation.

Output: Output is the total economic value of production, sales, or business revenues, whether final (i.e., purchased by the end user) or intermediate (used by another business to produce its own output). It includes the value of inputs to production, wages paid to employees, capital expenses, taxes, and profit. It is useful as an indicator of business activity, but it should not be construed as net new economic activity.

Personal Income: Personal income is income and benefits from all sources earned by all persons living in an area. It excludes the income earned by non-resident workers who commute into an area, but it includes the income of residents who commute out.

Value-Added: Value-added is the value of all final goods and services created in an economy. It represents new economic activity and is also known as gross product or net economic impact. It differs from output by the value of inputs to production. Value-added provides a useful summary of the economy, which is why all nations and U.S. states report their economic growth in this way, calling it either gross domestic product or gross state product, as appropriate. Its usefulness derives from the elimination of the double-counting inherent in output, which stems from the inclusion of inputs.

2. Methodology and Assumptions

Spectrum employed PI^{+} model for estimating all economic impacts in this report; it is produced by Regional Economic Models, Inc. ("REMI") based in Massachusetts.

In addition, specific to this section because it involves assessing the impacts of potential new facilities, for the sole purpose of estimating the economic impacts of potential casino/VLT projects in Orange County, Manhattan, Brooklyn and Queens, Spectrum also estimated the construction costs of developing new or converted gaming facilities that were sized according to (1) our gross gaming revenue

forecasts above in Chapter D and (2) our experience analyzing gaming facilities and markets throughout the country.

Spectrum developed assumed facility specifications and construction costs as inputs to our economic impact model. They are for illustrative purposes only and are not hard budgetary numbers. They were developed using rough order of magnitude ("ROM") estimates. If anything, our assumed facility sizing (and thus estimated construction costs) could prove to be conservative, as potential casino developers opt to build larger, more elegant resorts than we have assumed.

The construction cost estimates are based on Spectrum's knowledge of the construction trades, pay rates and trends in Downstate New York, New York City and the northeastern United States over the past several years. The sizes of the structures and amenities indicated within this report are for illustrative purposes only, to establish a potential size and comfortable layout of the venue. The actual sizes and final layout of any project will require significant master planning and design development as the architectural phases of the project move forward.

To determine the ROM costs, we first established an appropriately sized gaming venue based on Spectrum's GGR forecasts. The illustrative program – including the size of the potential casino area and additional amenities – is based on Spectrum's knowledge of the current industry standards and trends in the northeastern United States and surrounding areas. The size of the gaming venue will provide ample room for an open landscape-type environment that will not appear crowded and will allow for periodic changes or realignment of the casino floor as desired by the owner or operator. Other amenity items suggested, based on the size and location of the venue as would be expected of a first-class urban resort casino, include:

- Appropriate ratio of typical rooms and suites
- Food and beverage facilities in appropriate numbers for the expected clientele
- Expected amenities include:
- Casino-level bars
- Back-of-house areas, including employee dining facility
- Pool and spa
- Entertainment and nightclub
- Convention and meeting space
- Events center
- Retail space
- Facility maintenance and central plant

The cost analysis was developed based on current industry standards and costs for construction and materials in the unique Downstate New York area, including the challenging Manhattan environment. This unique environment requires specific provisions for staging, material delivery, contractor staff parking, site access, and other items that increase the cost of construction.

There are specific items that are not possible to estimate at this stage, such as deep foundation and site remediation or environmental remediation, so they are not included in Spectrum's cost estimates. The cost and design of necessary site work and foundation must be based on the findings of a geotechnical report and soils investigation, which is necessary to determine existing soil conditions and presumptive soil bearing values. The cost of any necessary environmental remediation cannot be provided without a thorough environmental investigation and assessment of the site. Items specifically not included in the cost estimates include:

- The remediation of hazardous items encountered during demolition, such as:
- Asbestos
- Oil and abandoned oil tanks
- Lead paint
- Hazardous items or chemicals
- Site work to prepare the site
- Deep or uniquely engineered foundation work based on the findings of the geotechnical investigation

Spectrum's estimates include typical design and construction management costs as well as the hard cost of construction materials and labor. All of the estimates will increase, possibly substantially, when the additional costs of land, remediation (if necessary), and site work are established and included. The potential additional cost associated with off-site improvements such as utility extensions and road and infrastructure improvements that are not defined at this time are impossible to estimate or include and may also increase the final cost of development.

The programs provided and associated cost estimates are illustrative in nature with the potential program based on Spectrum's experience with the regulation, design and construction of similar gaming venues in many different jurisdictions. Keep in mind that the final successful developer may anticipate a design or a venue that is quite different in size, amenities and finishes than the program produced for this study, therefore affecting the final cost.

Spectrum's estimated construction costs are within the following ranges, depending on the scenarios discussed in chapters 1 and 2:

- Integrated resort in Manhattan: $1.6 billion to $2.2 billion
- Integrated resort in Brooklyn: $2.0 billion to $2.5 billion
- Integrated resort in Queens: $2.0 billion to $2.6 billion
- Conversion of a VLT facility to a full casino: $453 million
- VLT facility in Orange County: $95 million[172]

[172] Our estimate for the Orange County VLT facility is based on an interview with assumed property developer Genting Americas and excludes site-related and other non-construction costs, as discussed above.

As shown, we evaluated two representative construction scenarios for each new integrated resort, each corresponding to a low-GGR and high-GGR scenario. The construction costs for the VLT facility conversion and Orange County VLT facility scenarios did not vary materially with GGR forecasts so there is only one scenario for each of those developments. Furthermore, the estimated cost of converting Empire City and the estimated cost of converting RWNYC are similar, so we created one estimate and doubled it for the economic impact analysis.

For the purposes of the economic impact analysis, we assumed that the VLT conversions began full-year operations on January 1, 2022, while the IRs began full-year operations on January 1, 2025.

Spectrum estimated GGR for the benchmark year of 2025 for the scenarios with new IRs in New York City. Separately, we estimated GGR for the VLT conversions for the three years they could be open prior to a new IR. For the impact analysis, we forecast the 2025 estimate forward ten years. The estimate includes a three-year ramp-up period and growth based on both predicted income and tourism growth. In order to capture the change from the baseline, the GGR used to drive the economic impact analysis is the incremental change relative to existing gaming. Using the incremental change avoids double counting activity that already exists while also accounting for decreases in revenues because of new market competition.

The new gaming facilities and converted VLT facilities are also expected to have robust nongaming amenities. For the purposes of the economic impact analysis, we estimate that nongaming revenue will be 30 percent of total revenue. By its very definition an integrated resort will have significant investments in various non-gaming offerings, from hotels and dining to entertainment and meeting facilities. In the New York City market, we would assume that a 70-30 ratio between gaming and non-gaming spending is realistic, based on the relationship between gaming and non-gaming revenues in similar properties elsewhere in the country.

Integrated resorts have been recently developed in Massachusetts, however there is little history to evaluate the split between gaming and non-gaming business. The tribal properties in Connecticut can also be classed as Integrated Resorts, the Connecticut properties do not report revenue results in a manner that allows analysis, as they do not report non-gaming revenues nor do they report table-game GGR, as the state does not share in this. The casinos in Atlantic City also meet the definition of integrated resorts. These properties have long histories and can be evaluated for the percentage of revenue from gaming and non-gaming activities.

The Atlantic City casinos are located 90 minutes from the primary market of Philadelphia. Part of the reason the Atlantic City casinos offer the range of amenities is to make the trip to Atlantic City worth the effort. The Atlantic City casinos derive 55 percent of their total revenues from gaming, and the balance from non-gaming including restaurants, hotel rooms, and other features.

Figure 84: Gaming and non-gaming revenue at Atlantic City casinos

Atlantic City	CY 2019	CY 2018
Casino Revenue	$1,652,851	$1,542,752
Non-Gaming Revenue	$1,431,790	$1,282,586
Net Revenue	$3,084,641	$2,825,338
% Non-Gaming	46.4%	45.4%

Source: New Jersey Division of Gaming Enforcement

Integrated resort properties in New York City will likely derive less revenue as a percentage of the total from non-gaming amenities for two reasons. First the proximity of the population increases the number of day trips as opposed to overnight stays where non-gaming spend is increased. Second, the non-gaming amenities at New York Integrated Resorts will be competing for non-gaming dollars with every hotel, restaurant, sports team, concert, opera, and theater in New York. For these reasons we believe the Integrated Resorts in New York will derive approximately 30 percent of revenue from non-gaming activities, as opposed to the higher numbers seen in Atlantic City.

To find a change in the employment corresponding with the GGR estimates, we used an estimate of roughly $250,000 of revenues per employee. This value is near that observed in New York currently and is compatible with findings in Massachusetts and Las Vegas. We grew employment with GGR until the end of the ramp-up period in 2027. Beyond that, we held employment constant as revenue growth is expected to mostly come from higher betting, which does not need more workers to accommodate. Stable employment is likely a conservative estimate for the out years of the forecast because we do expect some increased visitation, which may increase the casinos' labor demand.

For the purposes of the economic impact analysis, we estimated a tax rate of 40 percent on slots and 10 percent on tables. While this may not be the exact rate chosen by the State, it is illustrative for this analysis. Its purpose here is to separate out a stream of revenue for the State, which will create its own economic impacts when spent. We do not expect changes around the vicinity of the 40/10 tax rate to create meaningful changes in the properties as they exist in this analysis, and therefore any changes to this tax rate would primarily affect the economic impacts via State government spending. The revenues to the State from taxes of GGR are net of gains and losses. The gains arise from the new IRs and the VLT conversions. The losses reflect the funds that would have been collected had the existing facilities remained VLT facilities and from aggregate changes in GGR due to changes in the competitive environment.

The analysis of new gaming includes many of the methodological elements of the analysis of existing gaming. Here again we estimate reallocation of consumer spending, State and local tax revenues from hotels, State and local sales tax losses from reallocation, and State tax gains from economic growth. Please refer to the section above for a description of Spectrum's handling of these issues.

As noted throughout this report, we segmented the New York gaming market into four regions, as shown in the following table:

Figure 85: Economic models by region and county

Model Region	County
New York City	Bronx
	Kings
	New York
	Queens
	Richmond
Long Island	Nassau
	Suffolk
Metro North	Dutchess
	Orange
	Putnam
	Rockland
	Westchester
Upstate	All other counties

Source: Spectrum Gaming Group

a. Data Entry in PI+

Upon completing data collection and estimation, we prepared the data for entry into the model. This data was aggregated to the four regions of the PI+ model. All casino data was entered in the arts, entertainment, and recreation industry sector, which includes casinos. All revenues to State and local governments (taxes and license fees) were entered as either State or local government spending in the year in which they accrued. We aggregated revenues to the state from each region and reallocated them back to the regions according to each region's share of total State government spending. Local revenues were spent in the region they were accrued.

Because the labor productivity (i.e., revenue per employee) of a casino worker differs from the average worker in the arts, entertainment, and recreation sector, we adjusted the model's default assumption to accommodate our known values.

The reallocation of consumer spending was modeled as a reduction in all consumption in proportion to each consumption category's prevalence and elasticity in the overall consumption basket of goods and services.

Construction spending was modeled as demand construction, while design costs were modeled as demand for professional, technical, and scientific services, which includes sectors like architecture, engineering, and design.

3. Downstate Expansion

We assumed that any new casinos developed Downstate would meet the definition of "integrated resorts, "or IRs, a commonly used reference around the world to gaming operations that offer an array of non-gaming amenities, including those that appeal to the luxury market. We evaluated more than 30 permutations of changes to the gaming landscape Downstate; however, rather than model all scenarios we selected 10 that allow policymakers to understand the bounds of expected outcomes. The scenarios can be summarized across three major areas:

- New IRs in combinations of Manhattan, Brooklyn and Queens
- Conversion of the two metro-area VLT facilities into full casinos
- A new VLT facility in Orange County

For the purposes of the economic impact analysis, we evaluated the following scenarios:

- For the individual integrated resorts:
    - High scenario: one IR in either Manhattan, Brooklyn, or Queens and VLT facilities become casinos
    - Low scenario: one IR in either Manhattan, Brooklyn, or Queens, VLT facilities become casinos, a new property in the Meadowlands, and a VLT facility in Orange County
- For all three integrated resorts combined:
    - High scenario: one IR in each of Manhattan, Brooklyn, and Queens and VLT facilities remain as VLT facilities
    - Low scenario: one IR in each of Manhattan, Brooklyn, and Queens, VLT facilities remain as VLT facilities, a new casino at the Meadowlands, and a VLT facility in Orange County
- For the Orange County VLT facility:
    - High scenario: one VLT facility in Orange County and no other Downstate changes
    - Low scenario: one VLT facility in Orange County, no other Downstate changes, and a Meadowlands casino

a. Licensing and Construction

The results for the economic impact analysis of the license fees and construction spending are presented separately from the operating impacts because they represent a discrete and temporary aspect of Downstate expansion. While these impacts are important, one-off effects are less likely to drive long-term policy decisions. Keeping these results separate will allow stakeholders to evaluate the various expansion options along both short-term and long-term impacts.

We assumed that the State would set the price of each of the three potential Downstate licenses at $500 million. Therefore, the total license fee revenue in all Downstate expansion scenarios would be the same as the new IRs and VLT conversions would pay the same. The total of license revenue is $1.5 billion. Consistent with Spectrum's modeling assumptions, all government revenue is spent in the year it is accrued. Figure 86 shows the economic impacts of one year of $1.5 billion of new State government spending allocated across the state, according to the existing pattern of spending. The additional State revenue shown in the figure are State tax collections from general economic growth and do not include the original $1.5 billion. Because most government spending goes to providing government services and these services are labor intensive, the results show strong employment increases. Value added, or gross state product, increases by nearly $1.9 billion. Government spending is a direct component of gross product so the value-added multiplier is a useful measure of the spending's ripple effects: the license fees create $0.25 of additional net new economic activity for each dollar of fee spent by the State.

Figure 86: License fees summary results, job-years[173]

Region	License Fees				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	3,247	$729	$473	$231	$16
Long Island	2,231	$398	$255	$202	$14
Metro North	1,504	$275	$176	$132	$9
Upstate	10,147	$1,533	$973	$682	$47
State Total	**17,129**	**$2,935**	**$1,877**	**$1,247**	**$86**

Source: Spectrum Gaming Group, PI+

We estimated two construction models for each IR corresponding to a low-GGR and high-GGR scenario. The low-GGR scenario also applies to the market with three new IRs and no VLT conversions. While the Manhattan IR is expected to have more revenues than either the Brooklyn or Queens IRs, it is estimated to be a smaller property with fewer square feet of hotel, casino, food and beverage, and convention/meeting space. As a result, it has lower construction costs. Because each new IR will be built in the same model region and over the same years, the difference in the economic impact results are solely determined by the difference in construction and related spending. In each case, for every dollar of construction spending, there will be $0.94 of additional output (i.e. business revenues) created elsewhere in New York State.

Figure 87: Integrated resort in Manhattan construction summary results, 4-year annual average and job-years

Region	Manhattan IR Low					Manhattan IR High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	2,084	$631	$389	$179	$12	2,877	$871	$536	$246	$17
Long Island	265	$56	$34	$44	$3	365	$77	$47	$61	$4
Metro North	126	$29	$17	$28	$2	173	$39	$24	$38	$3
Upstate	8	$4	$2	$1	$0	11	$6	$3	$2	$0
State Total	**2,482**	**$720**	**$442**	**$252**	**$17**	**3,426**	**$994**	**$610**	**$347**	**$24**

Source: Spectrum Gaming Group, PI+

[173] The state revenues column does not include the $1.5 billion of license fees.

Figure 88: Integrated resort in Brooklyn construction summary results, 4-year annual average and job-years

Region	Brooklyn IR Low					Brooklyn IR High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	2,640	$799	$492	$226	$16	3,330	$1,008	$621	$285	$20
Long Island	335	$71	$43	$56	$4	423	$89	$55	$71	$5
Metro North	159	$36	$22	$35	$2	201	$46	$27	$44	$3
Upstate	10	$5	$2	$2	$0	12	$7	$3	$2	$0
State Total	**3,144**	**$912**	**$559**	**$319**	**$22**	**3,966**	**$1,150**	**$706**	**$402**	**$28**

Source: Spectrum Gaming Group, PI+

Figure 89: Integrated resort in Queens construction summary results, 4-year annual average and job-years

Region	Queens IR Low					Queens IR High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	2,804	$849	$523	$240	$17	3,443	$1,043	$642	$295	$20
Long Island	356	$75	$46	$59	$4	437	$92	$56	$73	$5
Metro North	169	$38	$23	$37	$3	207	$47	$28	$45	$3
Upstate	10	$5	$3	$2	$0	13	$7	$3	$2	$0
State Total	**3,340**	**$968**	**$594**	**$339**	**$23**	**4,100**	**$1,189**	**$730**	**$416**	**$29**

Source: Spectrum Gaming Group, PI+

The VLT conversion scenario includes two properties, one in the New York City region and the other in the Metro North region. As a result, unlike the IR construction scenarios, there are two peak regions in the data. Though the construction costs entered for each project were the same, the results in the host regions are different. These differences are caused by variations in wages, productivity, import and export links, commuting patterns, and more. They show that identical inputs create divergent results depending on where the new economic activity occurs. The construction of the VLT facility conversions creates an output multiplier of $0.92 that is slightly smaller than that of IR construction.

Figure 90: VLT facility conversions construction summary results, 2-year annual average and job-years

Region	VLT Facility Conversions				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	1,591	$471	$290	$138	$10
Long Island	271	$53	$32	$37	$3
Metro North	1,443	$292	$176	$115	$8
Upstate	56	$12	$7	$8	$1
State Total	**3,361**	**$828**	**$505**	**$297**	**$21**

Source: Spectrum Gaming Group, PI+

The Orange County VLT facility will be in the Metro North region of the economic model. As a result, the largest impacts are seen there. The overall cost for this development is considerably lower than the others. For example, the design costs alone for the IRs are nearly three times the size of the total construction cost for the Orange County VLT facility. That said, this facility creates the largest multiplier of all the construction scenarios: $0.97 of additional output for every dollar of construction spending.

Figure 91: Orange County VLT construction summary results, 2-year annual average and job-years

Region	Orange County VLT				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	66	$24	$15	$8	$1
Long Island	24	$5	$3	$3	$0
Metro North	284	$57	$34	$21	$1
Upstate	10	$2	$1	$1	$0
State Total	**384**	**$88**	**$53**	**$33**	**$2**

Source: Spectrum Gaming Group, PI+

b. Downstate Expansion Operating Impacts

The following three figures illustrate the results of the economic analysis where there is only one Downstate IR in either Manhattan, Brooklyn, or Queens. In each case, the other market competition implied in the low and high scenarios is the same. Therefore, the differences seen in the results reflect the unique characteristics of the gaming properties themselves and their interactions in the marketplace. For example, the Brooklyn and Queens IRs have similar statewide impacts, though they differ in their regional effects. While both create their largest impacts in their host region (New York City), the Queens property creates generally larger employment, output, and value-added results there, while the Brooklyn property creates larger impacts elsewhere. On the other hand, the Manhattan IR creates the largest absolute impacts in all regions and impact categories while also suffering the most from competition from the Meadowlands casino. In general, the GGR estimates show that the inclusion of a Meadowlands casino is the main competitive threat to Downstate gaming and therefore the biggest factor in swinging the economic impacts between the low and high scenarios. In such an environment, as discussed elsewhere in this report, it is important that the State's new gaming policies consider how licensing, tax rates, and other regulations will impact the ability of Downstate gaming to remain competitive with a future Meadowlands casino. Figure 92, Figure 93, and Figure 94 summarize the results of the economic impact analyses of the single-IR scenarios discussed in the next pages, beginning with employment and ending with value added.

Depending on siting and the competitive landscape, expanding gaming Downstate via one IR and two VLT conversions will create between 16,700 and 21,500 jobs statewide, with the large majority of those jobs in the host region of New York City. Among the three single-IR scenarios, the Manhattan option is estimated to create both the largest absolute employment impacts and the largest proportional impacts. For each casino job, a Manhattan IR is expected to create nearly 0.9 additional jobs in the state compared to less than 0.8 for a Brooklyn IR or Queens IR (with Brooklyn's multiplier being slightly higher than Queens). This small difference accounts for the six or more percent gap between the difference in

direct jobs at the casino and the difference in total jobs created economy-wide. For example, between the low and high scenarios, the Manhattan IR has either 3 percent or 6 percent more direct jobs than Brooklyn while it creates 9 percent or 13 percent more total jobs.

Perhaps counterintuitively, the employment in the Metro North region is stable or larger in the low-GGR scenario. This effect is from the inclusion of the Orange County VLT facility in the low-GGR case, though its impacts are less obvious in the other impact categories. The Orange County facility is evaluated alone later in this section. In general, the difference between the low-GGR and high-GGR scenarios is roughly 2,000 jobs per year for Brooklyn and Queens and 3,000 jobs for Manhattan.

Revenues, or output, support the employment at the casinos and elsewhere in the economy. Like with employment, the Manhattan casino has both the largest absolute and proportional output impacts, creating at least $1.03 of additional revenues in the state for each casino dollar of revenue. The additional revenues are less than $1.00 for each permutation of the Brooklyn and Queens scenarios. In this case, the gap between direct revenues and total revenues is around 5 percent compared to employment's slightly larger gap of 6 percent. The difference is not large enough to suggest a materially different composition of impacted industries or regions. The differences in annual output impacts between the scenarios are $677 million, $704 million, and $1 billion for Queens, Brooklyn, and Manhattan, respectively.

In addition to supporting employment, gaming revenues are the main driver of tax impacts. The casinos create countervailing forces that both increase and decrease tax revenues. Through taxes on GGR, hotels, and sales, casinos create revenues for State and local governments. Conversely, by reallocating some existing consumer spending away from other consumption toward gaming, casinos reduce sales tax revenues elsewhere in the economy. Finally, the economic impacts they create drive tax revenues through overall economic changes. The figures below show the net result of all these different currents.

Depending on siting and scenario, a single Downstate IR and two VLT facility conversions will create average net new tax revenues to the State of between $395 million and $560 million per year, of which roughly $251 million to $375 million are taxes on GGR. The average annual tax revenues differ between the high and low scenarios from the low $60 million per year range for Brooklyn and Queens to nearly $100 million per year for Manhattan. Overall, the single-IR scenarios yield $0.50 of additional State tax revenue for each dollar of GGR taxes.

The patterns of personal income hew closely to those of employment. Income impacts range from $2.1 billion for the Queens IR in the full competition (i.e. low-GGR) scenario to $2.7 billion for the Manhattan IR in the low competition (i.e. high-GGR) scenario. The difference between the scenarios is $242 million, $252 million, and $372 million for Queens, Brooklyn, and Manhattan, respectively. The change in personal income taken together with the change in employment provides an estimate of average income per worker. The Queens IR yields the highest average income per worker of more than $125,700, while Brooklyn's is roughly $1,000 lower at $124,600 and Manhattan's another $1,000 less at $123,600.[174]

[174] Personal income includes wages, salaries, bonuses, benefits, government transfers, and all other sources of income and compensation. Therefore, it is not the same as the average annual pay of a worker.

Finally, the net new economic impacts of expanding Downstate gaming with one IR and two VLT-to-casino conversions are summarized in value added (also known as gross product). In these scenarios, New York State's economy is estimated to grow by an average annual amount of between $3.7 billion and $4.6 billion. Within each scenario, the difference in the annual average ranges from around $420 million per year to $630 million. Again, we see that the Manhattan casino has the largest impacts while also differing the most (in both absolute and percentage terms) as the competitive landscape changes.

Figure 92: Integrated resort in Manhattan summary results, 10-year annual average and job-years

Region	Manhattan IR Low					Manhattan IR High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	13,620	$4,964	$3,078	$1,518	$159	15,928	$5,757	$3,570	$1,774	$190
Long Island	758	$231	$147	$238	$43	947	$283	$180	$284	$52
Metro North	3,032	$940	$577	$392	$52	3,064	$1,009	$619	$417	$60
Upstate	1,117	$283	$181	$141	$206	1,574	$384	$244	$186	$257
State Total	18,527	$6,419	$3,983	$2,289	$461	21,514	$7,433	$4,614	$2,661	$560

Source: Spectrum Gaming Group, PI+

Figure 93: Integrated resort in Brooklyn summary results, 10-year annual average and job-years

Region	Brooklyn IR Low					Brooklyn IR High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	12,960	$4,756	$2,943	$1,451	$148	14,504	$5,288	$3,272	$1,623	$168
Long Island	627	$199	$127	$216	$38	751	$233	$148	$246	$44
Metro North	2,549	$813	$499	$341	$46	2,591	$880	$540	$360	$51
Upstate	894	$234	$150	$118	$179	1,216	$304	$194	$149	$212
State Total	**17,030**	**$6,001**	**$3,718**	**$2,126**	**$410**	**19,062**	**$6,705**	**$4,155**	**$2,378**	**$475**

Source: Spectrum Gaming Group, PI+

Figure 94: Integrated resort in Queens summary results, 10-year annual average and job-years

Region	Queens IR Low					Queens IR High				
	Emp. (M)	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	13,178	$4,832	$2,988	$1,474	$147	14,682	$5,351	$3,309	$1,642	$166
Long Island	582	$189	$121	$213	$36	702	$222	$142	$242	$42
Metro North	2,167	$708	$434	$310	$42	2,178	$766	$470	$326	$47
Upstate	817	$217	$139	$110	$170	1,127	$284	$181	$139	$201
State Total	**16,745**	**$5,946**	**$3,683**	**$2,106**	**$395**	**18,689**	**$6,623**	**$4,103**	**$2,348**	**$457**

Source: Spectrum Gaming Group, PI+

The preceding discussion presented the results of the single-IR economic impact analysis for a low-GGR scenario and a high-GGR scenario and the differences between the two. The next three figures take the absolute differences and normalize them to a change for each $10 million in total casino revenues (i.e. gaming and nongaming combined). This method allows stakeholders to estimate how the results of

Spectrum's analysis will change with changes in our estimates of the casinos' performance *and* it allows the properties to be compared across a common metric. Here we find that the normalized performance of the IRs in each borough is very close, though we also find signs to the patterns observed in the overall results. Broadly, the Manhattan IR has larger multipliers across all impact categories and the Brooklyn and Queens IRs are very similar. It is important to note that large multipliers are double-edged. They mean bigger gains for each dollar increase in revenues and bigger losses for each dollar decrease in revenues.

Figure 95: Integrated resort in Manhattan impact sensitivity to revenues, 10-year annual average and job-years

Region	Manhattan Difference per $10M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	46	$15.9	$9.8	$5.1	$0.6
Long Island	4	$1.0	$0.7	$0.9	$0.2
Metro North	1	$1.4	$0.8	$0.5	$0.2
Upstate	9	$2.0	$1.3	$0.9	$1.0
State Total	**60**	**$20.3**	**$12.6**	**$7.4**	**$2.0**

Source: Spectrum Gaming Group, PI+

Figure 96: Integrated resort in Brooklyn impact sensitivity to revenues, 10-year annual average and job-years

Region	Brooklyn Difference per $10 M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	42	$14.6	$9.0	$4.7	$0.6
Long Island	3	$0.9	$0.6	$0.8	$0.2
Metro North	1	$1.8	$1.1	$0.5	$0.1
Upstate	9	$1.9	$1.2	$0.8	$0.9
State Total	**56**	**$19.2**	**$11.9**	**$6.9**	**$1.8**

Source: Spectrum Gaming Group, PI+

Figure 97: Integrated resort in Queens impact sensitivity to revenues, 10-year annual average and job-years

Region	Queens Difference per $10 M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	43	$14.7	$9.1	$4.8	$0.6
Long Island	3	$0.9	$0.6	$0.8	$0.2
Metro North	0	$1.6	$1.0	$0.4	$0.1
Upstate	9	$1.9	$1.2	$0.8	$0.9
State Total	**55**	**$19.1**	**$11.9**	**$6.8**	**$1.8**

Source: Spectrum Gaming Group, PI+

Figure 98 reflects a variation of the full development scenario in which there are still three new licenses Downstate. Instead of one new IR and two VLT facility conversions, New York City gaming expands to include one IR in each of Manhattan, Brooklyn, and Queens while Empire City and RWNYC remain as VLT facilities. The low-GGR scenario also introduces a casino at the Meadowlands and a VLT facility in Orange County. Despite the fact that each of the IRs has its lowest estimated revenues in this scenario, in aggregate, full development creates the largest statewide impacts across all impact categories, though they are less than 60 percent more than a Manhattan casino alone in the low case and less than 50 percent greater in the high case. These findings emphasize how much smaller the property-level revenues are when there are three large integrated resorts competing in the New York City market. State tax revenues fare better. They are double the Manhattan-only scenario in the low case and 80 percent more in the high case.

The three-IR scenario has largely similar employment and output multipliers to that of the single-IR scenarios. This scenario creates 0.94 additional jobs for each direct job and just over $1.00 of additional revenues for each dollar of casino revenues. Conversely, the tax multiplier is smaller. Though creating more absolute tax revenue, the efficiency is lower than for the single-IR scenarios: $0.37 of additional State taxes for each dollar of GGR tax versus close to or over $0.50 per dollar.

Also of note is that the substantial gaming opportunities in the city draw economic activity away from the Metro North region, resulting in small or slightly negative impacts there. The improved results in the low scenario suggest that the presence of VLTs in Orange County offsets most of this decline.

Figure 98: Integrated resorts in Manhattan, Brooklyn and Queens, 10-year annual average and job-years

Region	Three IRs Low					Three IRs High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	24,410	$8,704	$5,387	$2,705	$313	26,172	$9,298	$5,754	$2,898	$334
Long Island	1,437	$431	$275	$432	$91	1,561	$465	$297	$464	$97
Metro North	127	$136	$90	$245	$76	-269	$66	$47	$227	$78
Upstate	2,880	$687	$440	$328	$480	3,151	$747	$477	$353	$509
State Total	**28,854**	**$9,958**	**$6,192**	**$3,708**	**$960**	**30,616**	**$10,576**	**$6,576**	**$3,942**	**$1,019**

Source: Spectrum Gaming Group, PI+

Figure 99 shows the findings for the three-IR scenario normalized to a $10 million change in revenues. Although it creates larger absolute statewide impacts than all the single-IR scenarios, when evaluated in this way, the three-IR scenario creates impacts per $10 million of revenue that are similar to the single-IR scenarios. This finding suggests that at the state level all four IR scenarios scale proportionally to revenues in similar ways. A notable difference among the scenarios is the regional mix of impacts. The single-IR scenarios create larger impacts for Metro North and smaller impacts for New York City. These differential impacts are explained by the differences in the gaming landscape envisioned in the scenarios. In the single-IR scenarios, the VLT conversions help to spread gaming activity to Metro North. However, in the three-IR scenarios, there is no conversions of the VLT facilities so all new gaming activity occurs in New York City, which draws activity away from Metro North to New York City.

Figure 99: Integrated resorts in Manhattan, Brooklyn and Queens impact sensitivity to revenues, 10-year annual average and job-years

Region	Three IRs Difference per $10 M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	58	$19.6	$12.1	$6.4	$0.7
Long Island	4	$1.1	$0.7	$1.1	$0.2
Metro North	-13	($2.3)	($1.4)	($0.6)	$0.1
Upstate	9	$2.0	$1.2	$0.8	$1.0
State Total	**58**	**$20.4**	**$12.7**	**$7.7**	**$1.9**

Source: Spectrum Gaming Group, PI+

In the single-IR scenarios, we estimate that the new IRs would begin operation in 2025. However, the converted VLT facilities could begin operating as casinos as soon as 2022 and thus would have three years as the only full-service casinos in the New York City area (not including possible developments at the Meadowlands). This advantage in speed to market allows the State to begin receiving possible benefits in taxes and economic impacts sooner than if it waits for three new IRs to be sited, permitted, and built. We analyzed the economic impacts of the converted VLT facilities separately for the three years from 2022 to 2024. From 2025 onward, the GGR at these properties would follow the estimates for the appropriate IR development scenario. The summary results are presented in Figure 100.

There are some notable high-level findings for the VLT facility conversions. First, converting the VLT facilities to casinos draws economic activity from all regions to the new casinos, which causes some negative economic impacts. Offsetting these negative impacts are local increases in employment and economic activity and the statewide distribution of new tax dollars. This pattern applies to all scenarios, not only the VLT facility conversions. However, uniquely for the VLT facility conversions alone, the balance of these forces yield net decreases in economic activity in the Upstate region. The second key finding that applies only to the VLT facility conversions (both alone and in combination with an IR) is a net reduction in tax revenues from GGR. Because VLT facilities currently remit a large percentage of revenues to the State, increasing GGR through becoming a full casino does not fully offset the reduced effective tax rate. The net loss in taxes on GGR is about $7 million per year. That said, when incorporating all sources, converting the VLT facilities to casinos yields a net increase in State revenue of $29 million per year, as shown in Figure 100.

Figure 100: VLT conversion first three years, 3-year annual average and job-years

Region	VLT Conversions First Years					Difference 2022-2024				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	3,033	$1,128	$691	$261	$18	80	$194	$125	$55	$5
Long Island	162	$36	$22	$38	$3	46	$19	$12	$15	$2
Metro North	2,516	$797	$480	$156	$11	77	$102	$65	$33	$3
Upstate	-810	($130)	($80)	($43)	($3)	28	($15)	($10)	($7)	$4
State Total	**4,901**	**$1,830**	**$1,113**	**$412**	**$29**	**231**	**$300**	**$192**	**$96**	**$14**

Source: Spectrum Gaming Group, PI+

Directly comparing the results of the VLT facility conversions' first three years to the full development scenarios is uninformative because the scale of the new facilities is quite different. However, we can use the multipliers and impact sensitivity to do the comparison. The employment and output multipliers of the VLT facility conversions alone are smaller than a scenario with an IR and VLT facility conversions or with three IRs and no VLT facility conversions. On the other hand, the sensitivity of the impacts to changes in revenues are greater for the VLT facility conversions' first three years than for any of the other Downstate expansion scenarios, meaning that swings in the revenues create larger proportional effects (with employment being the one exception). The findings from the multipliers and impact sensitivity together suggest that the VLT facility conversions create smaller additional impacts for each direct job or dollar of revenue at the casinos while also creating larger initial impacts in response to changes in revenues. In other words, the activities at the VLT facilities conversions create smaller secondary and tertiary effects for other businesses and consumers, but the VLT facility conversions themselves are more responsive to changes in activity at the casino itself.

Figure 101: VLT conversion first three years impact sensitivity to revenues, 3-year annual average and job-years

Region	VLT Conversion Difference per $10 M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	15	$35.6	$22.9	$10.0	$0.9
Long Island	8	$3.5	$2.2	$2.7	$0.3
Metro North	14	$18.8	$12.0	$6.1	$0.5
Upstate	5	($2.8)	($1.8)	($1.3)	$0.8
State Total	**42**	**$55.0**	**$35.3**	**$17.6**	**$2.6**

Source: Spectrum Gaming Group, PI+

4. Orange County VLT Facility Operating Impacts

The final group of scenarios is the evaluation of a VLT facility in Orange County in the absence of any IRs in New York City. The high scenario reflects the economic impact of the new VLT facility in Orange County without any other new casinos in New York or New Jersey. The low scenario adds a casino at the Meadowlands. In the low scenario, the negative impacts reflect the negative impacts of gaming dollars flowing out of New York to New Jersey rather than any negative effects of VLT facilities. In fact, the presence of the VLT facility in Orange County helps offset the negative employment and value-added impacts in that region.

Despite representing a smaller change in the gaming landscape than what is considered in the previous section, the Orange County development creates the largest proportional results. It will create at least 1.3 additional jobs per direct job and $2.79 additional dollars of revenue for each direct dollar. However, the Orange County facility creates smaller proportional tax impacts of only around $0.13 per dollar of taxes on GGR.

Figure 102: VLT facility in Orange County summary results, 10-year annual average and job-years

Region	Orange County VLT Low					Orange County VLT High				
	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)	Emp.	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	-563	($141)	($88)	($62)	($13)	51	$42	$29	$11	$16
Long Island	-69	($19)	($12)	($14)	($5)	91	$25	$16	$13	$8
Metro North	223	$40	$24	$13	($3)	1,007	$201	$123	$88	$13
Upstate	-400	($82)	($51)	($34)	($33)	338	$78	$51	$41	$58
State Total	**-809**	**($202)**	**($127)**	**($97)**	**($54)**	**1,487**	**$347**	**$219**	**$153**	**$95**

Source: Spectrum Gaming Group, PI+

The Orange County facility analysis shows the largest absolute and proportional swings to competition from a casino in the Meadowlands. The negative effects of the New Jersey casino pulling gaming activity out of New York overwhelm these findings. The revenue difference between the low and high scenario is $276 million, or roughly half the difference in the Brooklyn, Queens, and three-IR scenarios, and it is concentrated on smaller facilities. Of that total difference, $59 million is at Orange County. With a Meadowlands casino, Spectrum's estimates show a 10 percent reduction in the combined revenues of the New York area VLT facilities including Orange County and a 24 percent reduction just at Orange County. The important takeaway from Figure 102 and Figure 103 (and less obviously from the previous section) is that a new VLT facility in Orange County provides support to its region against the competitive pressure of new gaming opportunities in northern New Jersey.

Figure 103: VLT facility in Orange County impact sensitivity to revenues, 10-year annual average and job-years

Region	Orange County VLT Difference per $10 M of Revenue				
	Employment	Output (M)	Value-Added (M)	Personal Income (M)	State Revenue (M)
New York City	22	$6.6	$4.2	$2.6	$1.0
Long Island	6	$1.6	$1.0	$1.0	$0.5
Metro North	28	$5.8	$3.6	$2.7	$0.6
Upstate	27	$5.8	$3.7	$2.7	$3.3
State Total	**83**	**$19.9**	**$12.5**	**$9.1**	**$5.4**

Source: Spectrum Gaming Group, PI+

H. Assessment of New York Gaming Market Potential without Expansion

In this chapter, we assess the New York gaming market potential without adding more facilities, i.e., how the industry could or should be performing today – and then actions that could be taken to reach that potential.

1. Understanding the Market

Spectrum constructed a series of large-scale gravity models based upon the real-world drive times from each existing and potential casino in New York and the surrounding region. First, base models were calibrated to match the existing revenue and visitation patterns experienced at New York's casinos in 2019. This calibration considered:

1. Detailed demographic statistics and forecasts;[175]
2. Proprietary survey data on the casino gaming behavior of the adult population;[176]
3. Publicly reported gross gaming revenues for commercial casinos and VLT facilities;
4. Estimates of the gross gaming revenues for tribal gaming facilities;
5. The geographic relationship of facilities to population centers (via drive-time calculations);
6. The current competitive environment for casino gaming; and
7. Interviews with commercial, racetrack, and tribal gaming operators. The 2019 performance to which these models were calibrated is detailed in the following table.

[175] 2019/2024 ESRI Updated Demographics, ESRI. Full Methodology Statement:

http://downloads.esri.com/esri_content_doc/dbl/us/J10268_Methodology_Statement_2019-2024_Esri_US_Demographic_Updates.pdf

[176] 2019/2024 United States – Advanced Demographics, ESRI.

https://doc.arcgis.com/en/esri-demographics/reference/data-providers.htm#ESRI_SECTION1_9FF9489173C741DD95472F21B5AD8374

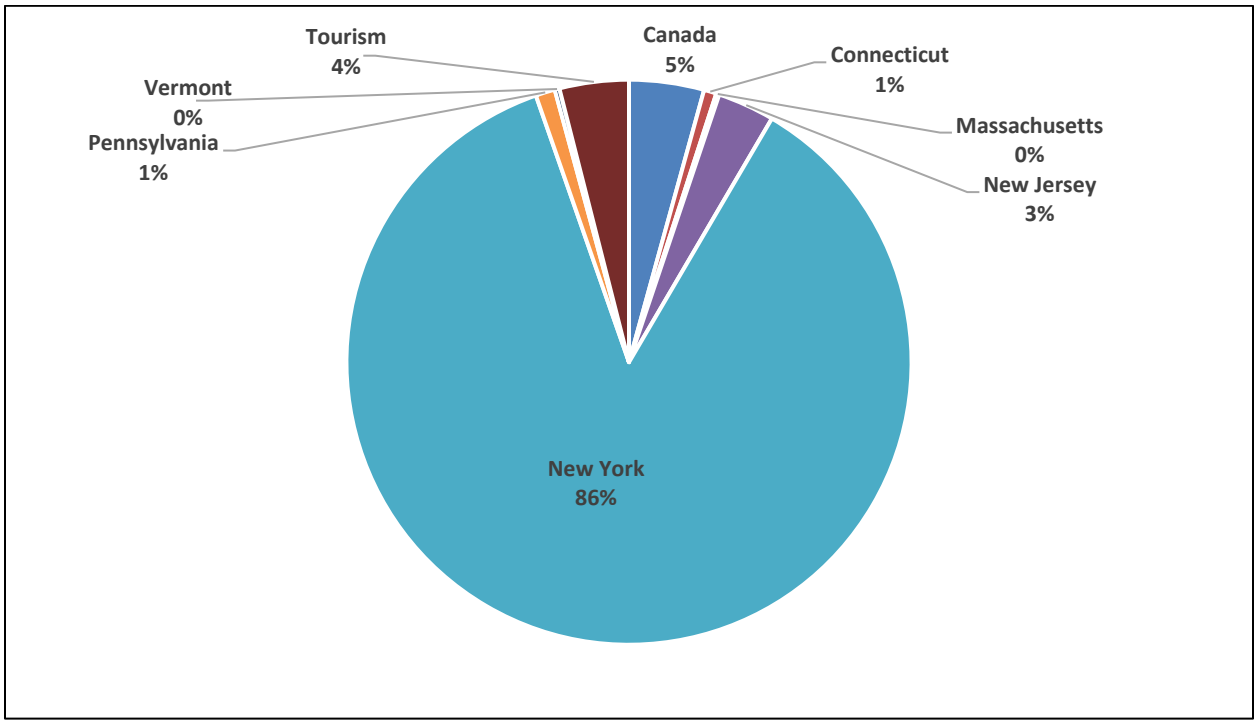
Figure 104: New York gaming facility gross gaming revenue by region, 2019

Region	Facility	CY 2019 GGR
Upstate		
	Batavia	$61,994,552
	Finger Lakes	$105,158,675
	Vernon Downs	$29,127,184
	Saratoga	$125,990,076
	Hamburg	$63,582,409
	Monticello (Closed 4/19)	$6,091,333
	Del Lago	$157,280,988
	Rivers	$169,109,235
	RW Catskills	$208,697,653
	Oneida	$383,369,000
	Seneca	$609,968,000
	St. Regis Mohawk	$100,486,000
	Est. Upstate GGR	**$2,020,855,105**
Long Island		
	Jake's 58	**$227,684,572**
New York City		
	RWNYC + Nassau OTB	**$883,931,160**
Metro North		
	Empire	**$609,159,186**
Total GGR		**$3,741,630,022**

Source: New York State Gaming Commission

The outputs of the statewide base gravity model are estimates of gaming visits, win per visit, and gaming revenues for each county included in the model, as well as the allocation of those visits and spending at each casino facility within the model. Total gaming revenues at New York's commercial and tribal casinos and VLT facilities in 2019 are estimated at over $3.7 billion, with more than $3.2 billion accruing from New York residents, $368 million from out-of-state residents in the surrounding region (Connecticut, New Jersey, Massachusetts, Pennsylvania, Vermont, and Canada), and $148 million from tourists or out-of-market residents.

Figure 105: Estimated GGR contributed to New York gaming facilities by state/region segment, 2019



Source: Spectrum Gaming Group

With this understanding of the existing market, Spectrum next evaluated what the New York gaming market's potential could be versus its actual revenue generation – to uncover potential pockets of untapped demand, as well as areas which may be saturated.

2. Estimating Market Potential

Spectrum developed the estimated market potential for New York GGR both statewide and by region – for all types of gaming facilities, including commercial casinos, Indian casinos and VLT facilities – by applying five different methodologies, and then comparing and contrasting the validity and reasonableness of the outcomes for each region.

Five distinct methods of analyzing the gaming revenue potential for New York's gaming facilities on a statewide and regional basis were developed as follows:

- **Method 1:** County-level estimates of gross domestic product
- **Method 2:** Gaming participation rates and spending levels in non-New York markets across the United States, adjusted for New York income levels
- **Method 3:** Gaming spend per adult in non-New York markets across the United States, adjusted for New York income levels
- **Method 4:** Gaming spend based on modeling indices of household participation rates in gaming, as reported by our demographic data supplier, ESRI
- **Method 5:** Disposable income and relationship to gaming spend in markets across the United States

Applying the different methodologies allows Spectrum to triangulate what could be New York's true potential. These methodologies, described below, account for demographics including population, age, and income, the gross domestic product of New York and comparable locales, gaming participation data specific to the New York market, and national trends in gaming participation and spending.

It must be noted, however, the gaps between actual GGR and potential may not be entirely realized. While potential growth could exist for some properties, many of New York's counties are apparently over-participating or over-spending on gaming as compared to other regions of the country. Some counties appear to be heavily saturated with little to no room for growth in gaming spend, while counties such as Dutchess, Kings, Nassau, Richmond, Rockland, and Westchester could contain significant untapped potential.

Adding facilities to the market or changing laws will not change the potential of the market, but adding facilities or changing laws may change the amount of the market potential *that is captured*.

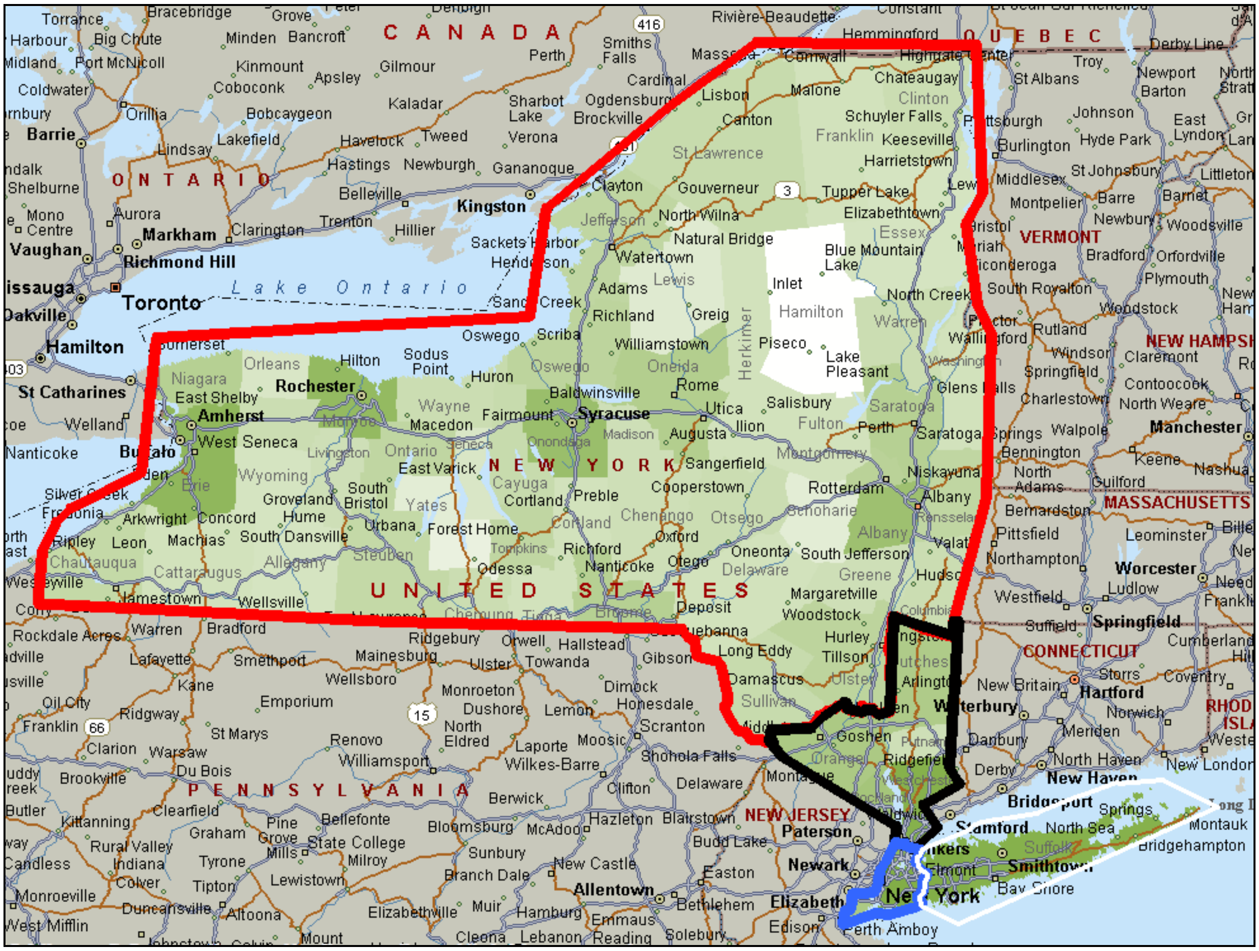
a. New York Gaming Regions Defined

As Spectrum did in analyzing economic impacts (Chapter G), we segmented the state into four regions, as follows and as shown in Figure 106:

- **Blue:** New York City
- **White** Long Island
- **Black**: Metro North
- **Red:** Upstate; includes 50 counties

The following maps reflect the population by county, which is one indicator of potential gaming demand.

Figure 106: New York state map of gaming regions for analysis grouping



Source: Microsoft MapPoint, Spectrum Gaming Group. **Red:** Upstate; includes 50 counties. **Black:** Metro North. **Blue:** New York City, Five Boroughs. **White:** Long Island. In the green gradient, darker shades reflect more-populous counties, lighter shades reflect less-populous counties.

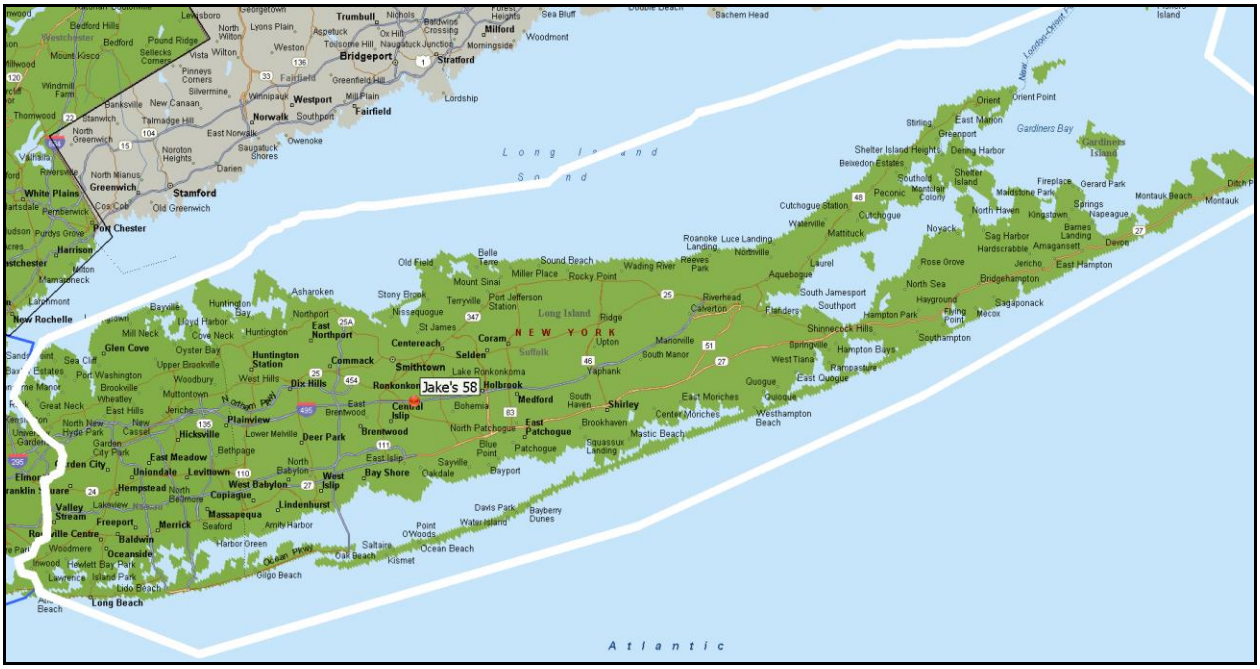
New York City: In the New York City region, there is only one operating gaming facility: Resorts World New York City ("RWNYC") at Aqueduct Racetrack, which began gaming operations in 2011. The Nassau OTB machines are hosted at RWNYC. As noted below, Empire City is in the Metro North region, but it is more focused on the New York City area as a major feeder market.

Figure 107: Map of New York City region

Source: Microsoft MapPoint, Spectrum Gaming Group

Long Island: The Long Island region includes Suffolk and Nassau counties, as shown in Figure 108. Jake's 58 – a VLT facility – is the lone operator in that market, although RWNYC (in the New York City region) is proximate to the more densely populated western end of the region. As mentioned above, the Nassau OTB machines are hosted at RWNYC.

Figure 108: Map of Long Island region



Source: Microsoft MapPoint, Spectrum Gaming Group

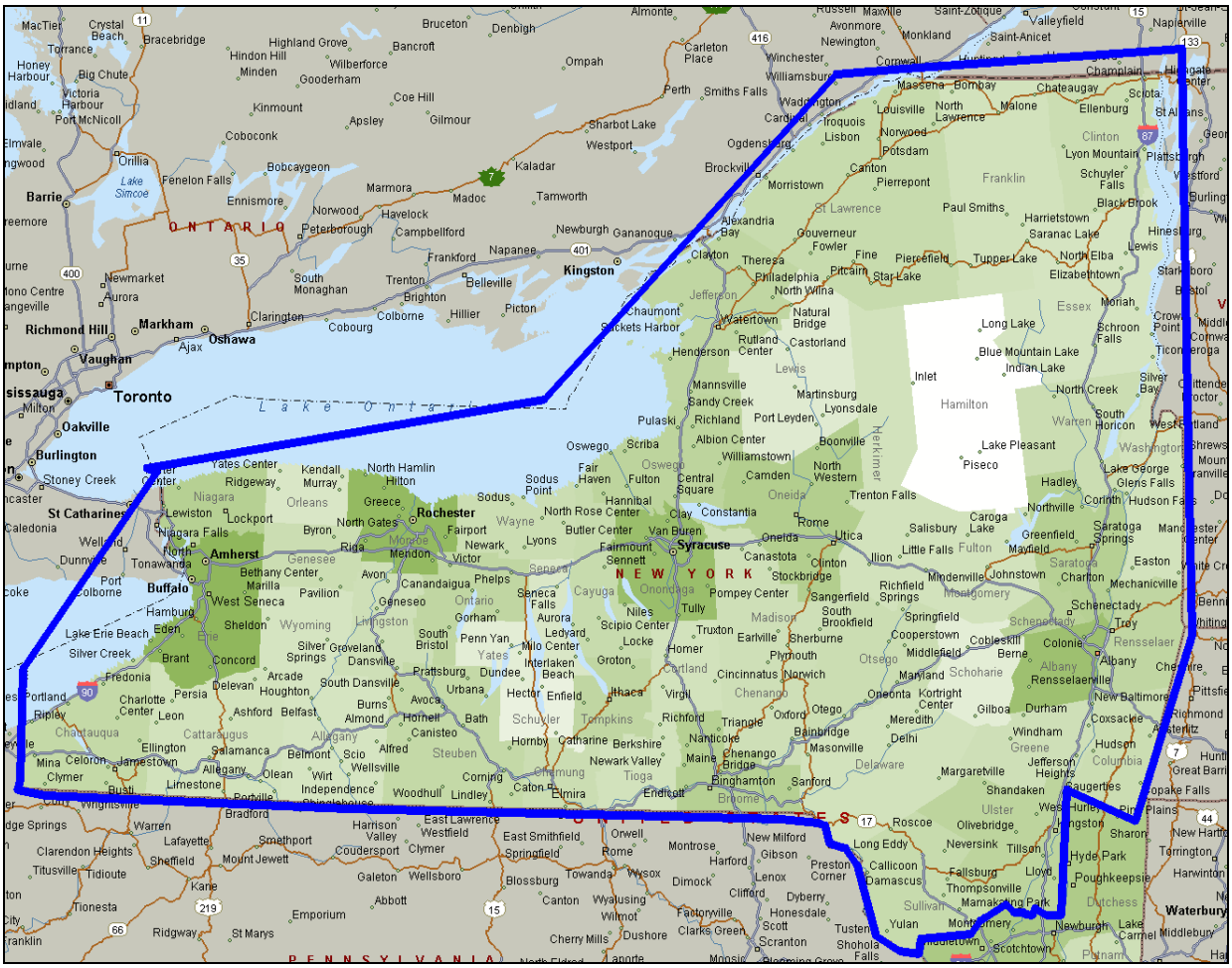
Metro North: The Metro North region includes Westchester, Putnam, Duchess, Orange, and Rockland counties. The only gaming in the region is Empire City Casino at Yonkers Raceway, which is a VLT facility. It should be noted that while Empire City is located in the Metro North region, it abuts the New York City area, which is a significant feeder market. However, Empire City's market to the north is affluent and well-populated. It also bears watching that there is a plan to place a VLT facility in Orange County.

Figure 109: Map of Metro North region

Source: Microsoft MapPoint, Spectrum Gaming Group

Upstate: The 50-county Upstate market is a critical focus of this segment of Spectrum's assessment, primarily because of the variety and extent of the gaming venues in this region. All four commercial casinos opening in the past four years are located in this region, although it should be noted that Resorts World Catskills, because of its proximity to Downstate populations, is focused more on markets Downstate and in other regions. Upstate is also home to all of the Indian gaming operations in the state, as well five of the state's eight VLT facilities.

Figure 110: Map of Upstate New York region



Source: Microsoft MapPoint, Spectrum Gaming Group

b. Market Potential by Methodology

In estimating the potential size of the New York gaming market, it is important to note that Spectrum applied various methodologies to triangulate what could be its true potential. These methodologies, described in the following sections, account for demographics including population, age, and income, the gross domestic product of New York and comparable locales, gaming participation data specific to the New York market, and national trends in gaming participation and spending.

1) Method 1: Gross Domestic Product

The U.S. Bureau of Economic Analysis ("BEA") estimates gross domestic product ("GDP") by state, county and MSA.[177] Using the GDP data from the BEA and gaming data from State agencies, it is possible to develop the percentage of area GDP that is spent on casino-style gaming. This metric can be used to generate estimates of potential spending on gaming. Unlike a static measure of GGR per adult or per slot machine, using a GDP-based metric takes into account the relative wealth of the area as well as a measure of tourism. Higher disposable incomes lead to higher spending on all forms of entertainment, including casino-style gaming.

Evaluating the market potential in 2015 – prior to the expansion of commercial gaming in New York – provides a baseline from which an estimate of market penetration can be developed. Using an estimate of 2019 GDP, we can develop an estimate of the current potential GGR and the percentage captured by existing gaming facilities. This analysis is useful when evaluating the performance of properties already operating, and for estimating the potential demand for additional gaming.

All forms of gambling account for an estimated 0.91 percent of GDP in the United States.[178] This estimate includes all major forms of gambling – lottery, sports wagering, digital gaming, pari-mutuel, and casino/VLT gaming. The St. Louis Federal Reserve provides data on personal consumption expenditures ("PCE") and the portion of PCE dedicated to "Services: Gambling."[179] Using these data, it is possible to develop an estimate of the percentage of personal consumption dedicated to gambling, including all forms of legal gambling, of which casino/VLT gaming is a subset.

Figure 111: Gambling Services as a percentage of personal consumption expenditures

	Personal Consumption Expenditures ("PCE") (B)	PCE: Gambling Services (B)	Gambling Services as % of PCE
2014	$12,040	$122	1.01%
2015	$12,089	$126	1.04%
2016	$12,481	$131	1.05%
2017	$13,079	$136	1.04%
2018	$13,698	$143	1.04%
2019	$14,228	$147	1.03%

Source: Federal Reserve Economic Data, St. Louis Federal Reserve

Analyzing casino/VLT gaming expenditure in a market as a percentage of its local GDP offers one method to evaluate the potential market for gaming. Using the BEA's GDP data on counties and MSAs –

[177] Bureau of Economic Analysis, "Gross Domestic Product by Metropolitan Area, 2017," September 18, 2018. https://www.bea.gov/news/2018/gross-domestic-product-metropolitan-area-2017

[178] Research and Markets, "Global Gambling Market 2018-2022 - Gambling Accounted for 0.91% of the U.S. GDP in 2017, Research and Markets," February 13, 2018. https://www.prnewswire.com/news-releases/global-gambling-market-2018-2022---gambling-accounted-for-091-of-the-us-gdp-in-2017-300597808.html

[179] St. Louis Federal Reserve, "Personal consumption expenditures: Services: Gambling," through January 30, 2020. https://fred.stlouisfed.org/series/DGAMRC1A027NBEA

along with published gaming data from selected states – it is possible to calculate the levels of casino/VLT gaming expenditure as a percentage of GDP. Spectrum's research suggests that larger and more populous urban areas with casino/VLT gaming tend to spend a lower percentage of GDP on gaming than smaller MSAs. This could be due to the variety of other forms of entertainment in the more populous urban areas.[180]

In evaluating the ratio of casino/VLT GGR, which inherently includes gaming revenues generated by both locals and those residing out-of-market, to GDP, we assessed the MSAs of St. Louis, Cincinnati, Cleveland, and the Quad Cities. These areas were selected due to similar characteristics to the metro areas where gaming facilities have been developed in Upstate New York – large, populous urban areas that are not traditional tourist or gaming destinations, and MSAs that are well-defined with few gaming properties surrounding them that could lead to "leakage" of GGR out of the MSA. While the Downstate New York market is not as directly comparable to these MSAs, this method of analysis is still useful when assessing the potential for Downstate New York, as the GDP for Downstate includes much more than the product of its residents, and may account for potential gaming behavior from those living outside the market.

Other metro areas that offer gaming – such as Baltimore, Philadelphia and Pittsburgh – have casinos outside the MSA that are patronized by MSA residents and were therefore not deemed appropriate for comparison. For example, Atlantic City is a one-hour drive from Philadelphia, and Pittsburgh-area patrons visit casinos in Ohio and West Virginia. This bleeding of patronage across MSA and state lines is true in New York, as gaming facilities in Upstate New York already attract patrons from other states, while competing against properties in those states. By way of a graphic example, Cleveland and Buffalo even share the same lake. As such, the selected MSAs shown in Figure 112 present an opportunity to estimate the prevalence of casino/VLT gaming and later use that to derive estimates for gaming potential.

The presence of licensed video gaming terminals ("VGTs") in retail locations in Illinois has been factored in to develop the full picture of gaming in the state-line-straddling MSAs of St. Louis and the Quad Cities. Currently in Illinois, there are more than 34,000 machines in over 7,200 locations, competing with casinos for patrons' gambling dollars. For these comparison MSAs, GGR equates to an average of 0.52 percent of GDP.

[180] The MSAs selected for comparison all have significant entertainment options. For example, the large MSAs of St. Louis, Cincinnati and Cleveland all have major league baseball teams. The Ohio MSAs of Cincinnati and Cleveland also host professional football teams. Cleveland has a professional basketball team, and St. Louis has a professional hockey team. The Cleveland Symphony is world renowned.

Figure 112: GGR as percentage of GDP in selected MSAs

Market	GDP	Casino Win	Casino or VLT Win % GDP	VGT Win	VGT Win % GDP	Gaming as % GDP
Quad Cities MSA (IA & IL)	$20,546,900,000	$204,800,000	1.00%	$ 25,800,000	0.13%	1.12%
St Louis MSA (MO & IL)	$169,839,400,000	$747,000,000	0.44%	$123,400,000	0.07%	0.51%
Cincinnati-Dayton	$170,677,900,000	$953,631,000	0.56%	$0	0.00%	0.56%
Cleveland-Akron	$187,372,400,000	$807,267,000	0.43%	$0	0.00%	0.43%
Selected MSAs	**$548,436,600,000**	**$ 2,712,698,000**	**0.49%**	**$149,200,000**	**0.03%**	**0.52%**

Source: State regulatory agencies, Bureau of Economic Analysis, Spectrum Gaming Group

In developing our estimates of the potential for gaming in Upstate New York, Spectrum relied on datapoints from other MSAs to guide our assumptions. We applied different factors (estimates of the ratio of casino/VLT gaming win to GDP) to urban and rural counties. We applied a factor of 0.52 percent of GDP as gaming expenditure to urban counties, which is in line with the average of the MSAs in Figure 112, and we applied a 0.8 percent factor of GDP as a percentage of the GDP in rural counties. For the purpose of this analysis, rural counties are those that in 2015 had a GDP of under $27 billion and in 2020 had an estimated GDP of less than $30 billion.

Spectrum's analysis of the potential GGR in the region is based on the GDP of the region. The percentage captured is the GGR of the gaming properties in the region. For example, Metro North and Long Island both only have one property. Some of the potential as indicated by the GDP method is likely being captured by properties outside the region, and some of the actual GGR is likely generated from people living outside the region.

Upstate

The Upstate region has a significant supply of gaming, which has increased over the past five years. Additional capacity has made it more convenient for players to visit a casino, and gaming revenues have increased. Figure 113 shows the increases in slots and tables in the Upstate region.

Figure 113: Upstate gaming venues, numbers of EGDs and tables, 2015 vs. 2019

Gaming Venue	Est. 2015		Est. 2019	
	EGDs	Tables	EGDs	Tables
Seneca Allegany	2,100	32	1,750	30
Seneca Salamanca Class II	350		350	-
Seneca Irving Class II	650		650	-
Seneca Buffalo Creek	800	20	1,100	36
Seneca Niagara	3,000	110	2,850	80
Seneca Oil Spring Class II			110	-
Del Lago			1,715	67
Hamburg	767		919	-
Batavia Downs	788		869	-
Finger Lakes	1,541		1,195	-
Vernon Downs	767		512	-
Lakeside Entertainment Class II	86		86	-
Turning Stone	2,000	126	2,000	126
Point Place			600	20
Yellow Brick Road			430	14
SavOn Canastota			14	-
PlayOn Oneida			16	
PlayOn Upper Lennox			15	
PlayOn Oneida Lake			21	
PlayOn Sherrill			16	
SavOn Verona			35	-
Tioga Downs	800		943	32
Akwesasne	1,600	30	1,600	30
Resorts World Catskills			2,155	133
Monticello	1,110		-	-
Rivers			1,150	67
Saratoga	1,782		1,392	-
Totals	**18,141**	**318**	**22,493**	**635**
Venues	**15**		**27**	

Source: New York State Gaming Commission, Spectrum Gaming Group

Applying the aforementioned shares of GDP potentially spent on gaming (0.52 percent for urban counties and 0.8 percent for rural counties) to the GDP of the region, we estimate the potential spend on casino gaming in the Upstate region. For 2015, this calculation results in an estimate of gaming revenue potential of $2.064 billion. With growth in GDP, the calculated gaming potential of this region in 2019 was $2.283 billion.

Figure 114: Estimated Upstate gaming revenue potential, 2015 and 2019, by Method 1

	Est. Upstate GDP (M)	Est. Gaming Potential (M)	Potential GGR as % Of GDP
2015	$313,542	$2,064	0.66%
2019	$351,670	$2,283	0.66%

Source: Bureau of Economic Analysis,[181] Spectrum Gaming Group

As shown in Figure 114, Spectrum estimated that the Upstate gaming potential has grown in the past several years. The primary reason for this is the growth in GDP, as the estimated potential share of GDP dedicated to gaming has remained constant.

Building on estimates of GGR for all types of gaming facilities in the Upstate region,[182] a measure of capture can be developed. Spectrum found that, as a whole, the 50-county Upstate market is performing at potential. While additional gaming venues have grown the market, a shift of GGR from Indian casinos to commercial casinos has not been realized, tourism has not generated substantial GGR, and therefore the performance of the commercial gaming properties has not met expectations. While it may be possible for individual properties to grow their share of the market through new marketing initiatives, investments in hotels, restaurants, or other attractions to increase visitation or length of stay at the property, increasing the total, collective GGR growth beyond the rate of inflation at the existing gaming facilities is unlikely.

Figure 115: Estimated Upstate gaming spend capture, 2015 and 2019, by Method 1

	Est. Gaming Potential (M)	Est. Upstate GGR (M)	% Captured
2015	$2,064	$1,392	67.40%
2019	$2,283	$2,021	88.52%

Source: Bureau of Economic Analysis, Spectrum Gaming Group

Figure 115 indicates that there may be nearly $260 million in potential gaming revenues that are not being captured – and will likely never be captured, given the regulatory environment. Gaming spending, like spending on other forms of entertainment, is driven by convenience. If there were a casino closer to Rochester in Monroe County, more of the gaming potential could be captured. If the VLT facilities in the Seneca and Oneida exclusivity zones were able to offer live table games, more of the potential demand could be captured. This, however, would not be possible without a breach of the State-Indian

[181] U.S. Bureau of Economic Analysis, "Local Area Gross Domestic Product 2018," December 12, 2019. https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas

[182] The New York State Gaming Commission provided data on the actual GGR of each VLT operator and commercial casino in the state. The Oneida Nation presented a detailed breakdown of the revenue-sharing payments they have made since the signing of the Oneida Claims Settlement agreement in 2013. Estimates for GGR at the Seneca and Mohawk casinos were developed using the revenue-sharing payment information accessible on Open Book New York, a website maintained by the State Comptroller's office.

gaming compacts.[183] Barring a renegotiation of the gaming compacts, the region is essentially meeting its potential.

Metro North

Using the same methodology described above, we developed an estimate of potential gaming revenue for the Metro North region.

Figure 116: Estimated Metro North gaming potential, 2015 and 2019 by Method 1

	Est. GDP (M)	Est. GGR Potential (M)	GGR as % GDP
2015	$128,060	$812.6	0.63%
2019	$147,030	$929.1	0.63%

Source: Bureau of Economic Analysis, Spectrum Gaming Group.

Empire City is the only gaming facility in Metro North. Looking at the percentage of capture at Empire City may not be as instructive given the proximity of New York City and the intense marketing effort Empire City makes in the city.

Figure 117: Estimated capture of Metro North gaming potential, 2015 and 2019 by Method 1

	Est. GGR Potential (M)	GGR in Area Gaming (M)	% Capture
2015	$813	$558	68.70%
2019	$929	$609	65.55%

Source: Bureau of Economic Analysis, New York State Gaming Commission, Spectrum Gaming Group

New York City

New York City hosts only one operating gaming facility: Resorts World New York City at Aqueduct Racetrack, which began gaming operations in 2011. Over the years, the property expanded to 5,500 VLTs and electronic table games ("ETGs"). In October 2016, Nassau Downs OTB and RWNYC agreed to designate up to an additional 1,000 VLTs as those of Nassau OTB. With the latest expansion, the combined property now has more than 6,500 VLTs, including ETGs.

Figure 118: New York City VLT GGR, 2015-2019

Calendar Year	VLT GGR (M)	VLTs at Year End
2015	$831	5,104
2016	$826	5,081
2017	$850	6,019
2018	$852	6,061
2019	$884	6,548

Source: New York State Gaming Commission, Spectrum Gaming Group

[183] The gaming compacts define where Indian casinos can be located and the types of gaming that can occur in the exclusivity zones. The Seneca compact restricts the Nation to three casinos. Monroe County, home to Rochester, is in the Seneca exclusivity zone, but does not have a casino. The closest gaming to Rochester is Finger Lakes Racing and Gaming in Farmington, about 30 miles away.

The GGR at RWNYC in 2019 was $884 million, making it perhaps the highest-grossing slot operation in the world.[184] While this is a large number, the true question is how much potential gaming spend is not being captured in the market either because of a lack of gaming opportunities, the types of games available, or the location of the casino.

Using the GDP methodology discussed above, Spectrum developed estimated potential gaming revenue for the five boroughs that make up New York City.

Figure 119: New York City estimated GDP and potential gaming revenue, 2015 and 2019, by Method 1

County (Borough)	Est. 2015 GDP (M)	Est. GGR Potential 2015 (M)	Est. 2019 GDP (M)	Est. GGR Potential 2019 (M)
Richmond (Staten Island)	$14,276	$74	$17,689	$92
Kings (Brooklyn)	$87,658	$456	$110,218	$573
New York (Manhattan)	$627,913	$3,265	$740,738	$3,852
Queens (Queens)	$93,536	$486	$113,149	$588
Bronx (Bronx)	$41,974	$218	$51,341	$267
Total City	**$865,358**	**$4,500**	**$1,033,136**	**$5,372**

Source: Bureau of Economic Analysis, Spectrum Gaming Group

Figure 120 presents the estimated market potential and the realized GGR at RWNYC. By this analysis, RWNYC is capturing only approximately 17 percent of the market's potential. However, this comparison ignores the proximity of other gaming options just outside the arbitrary boundary line of the New York City market which capture some of its potential.

Figure 120: Estimated GGR capture in New York City, 2015 and 2019, by Method 1

	Est. Potential Casino GGR (M)	Actual RWNYC GGR (M)	% Capture
2015	$4,500	$831	18.50%
2019	$5,372	$884	16.80%

Source: New York State Gaming Commission, Spectrum Gaming Group

From the analysis above, it would appear there is an untapped market for gaming in New York City. However much of the GDP generated in New York City is created by commuters who live in the Metro North region or out of state in New Jersey or Connecticut.

Long Island

As in the other New York gaming market areas, we developed an estimate of the potential for gaming revenue based on the GDP in the market. We estimate there is more than $1 billion in potential casino/VLT GGR for a gaming facility in the Long Island market.

Figure 121: Long Island estimated gaming potential, 2019, by Method 1

Long Island	Est. GDP (M)	Est. Gaming Potential (M)	GGR as % GDP
2019	$193,835	$1,008	0.52%

Source: Bureau of Economic Analysis, Spectrum Gaming Group

[184] Indian casinos throughout the United States and certain state jurisdictions do not report property-level GGR.

Currently, Jake's 58 is the only gaming facility in the market. The property is restricted by law to 1,000 VLTs. This capacity constraint limits its GGR potential. Of the VLT operators in the New York City area, Jake's is the smallest, and its high daily win per unit – nearly double that of Empire City – reflects this. If Jake's were authorized to operate more VLTs, Spectrum believes its GGR could increase substantially, as more machines would result in less crowding, less waiting to play, a wider variety of games, and the introduction of more food and beverage offerings, all equating to a more attractive property.

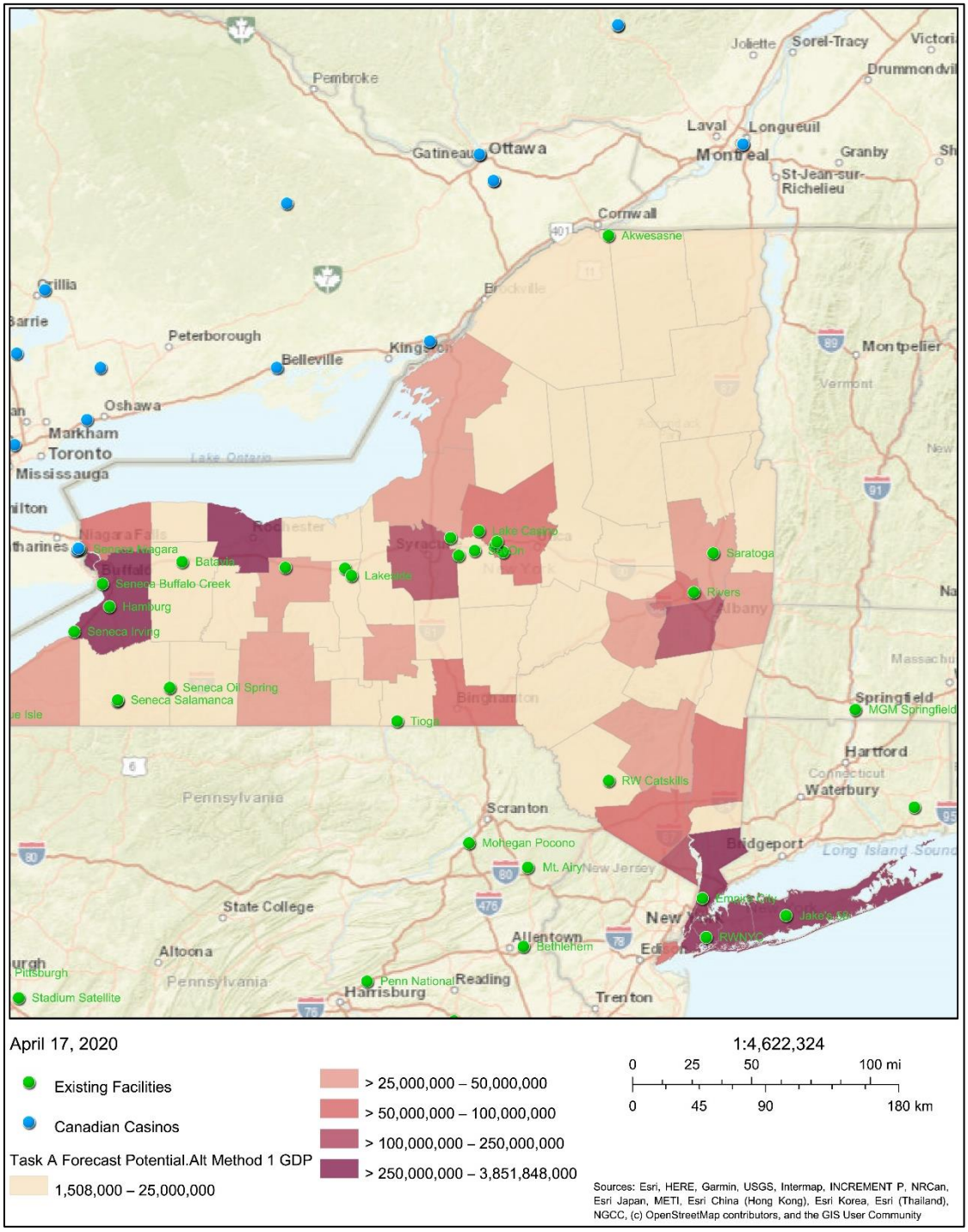
Figure 122: Estimated GGR capture on Long Island, 2019

Year	Est. Gaming Potential (M)	Jake's 58 VGT GGR (M)	% Captured
2019	$1,008	228	22.6%

Source: New York State Gaming Commission, Spectrum Gaming Group

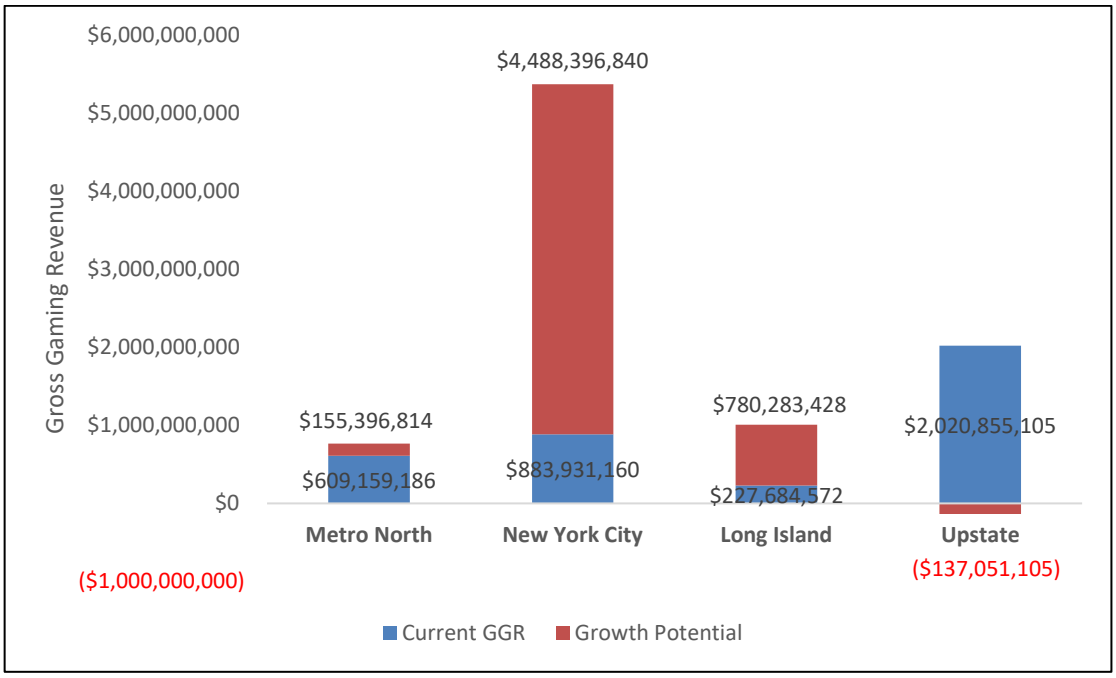
The area's one gaming facility, Jake's 58, is capturing only approximately 24 percent of the potential gaming spend in the Long Island market, which can be attributed in part to the legal limit on the number of gaming positions.

Figure 123: Map of potential gaming revenue by New York county (2019), Method 1



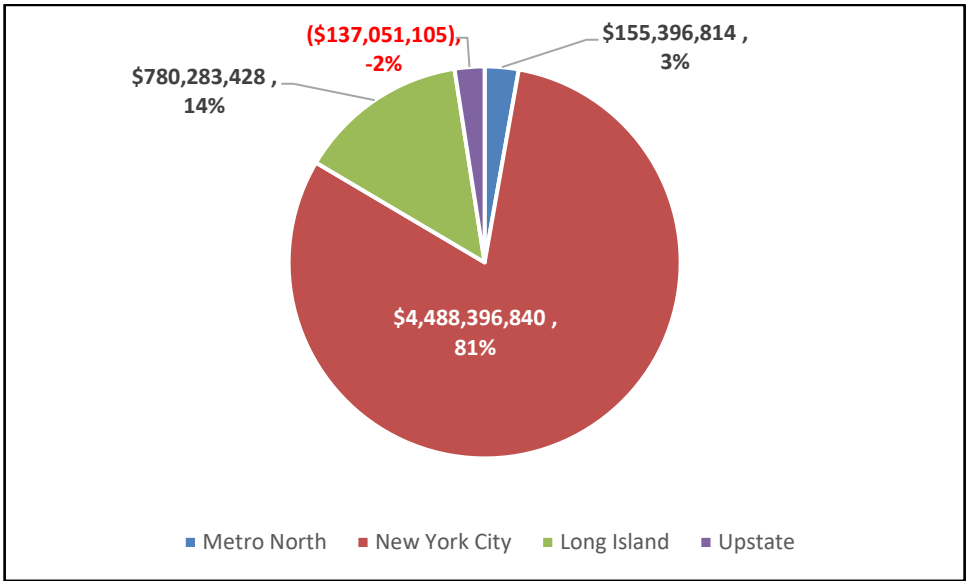
Source: ESRI, Spectrum Gaming Group. Amounts in $.

Figure 124: Summary of current GGR and growth potential by New York region, 2019, Method 1



Source: Spectrum Gaming Group

Figure 125: Summary of GGR growth potential by region, 2019, Method 1



Source: Spectrum Gaming Group

2) Method 2: Standardized Gaming Participation, Win per Visit

While it is possible to estimate the market potential of a region by using a percentage of GDP, as shown in the previous analysis, there is concern that in regions such as the Metro North (which includes a great number of commuters) and New York City (which includes the work product of not just those living in New York City), the GDP of the county may not reflect the residents' actual work product. As a check on the GDP method of market estimation, a second method that relies on average gaming participation

rates nationwide and household income ("HHI") factors can be applied. This method relies on data from other MSAs with casinos, and it examines the average participation rate in casino/VLT gaming, the frequency of visitation, and the average spend at the gaming facility per player visit.

Participation is defined as the percentage of adults that will visit a gaming facility over the course of a year. Participation increases with the number and accessibility of facilities According to the American Gaming Association's 2019 State of the States survey, 35 percent of the U.S. adult population had visited at least one of the more than 1,000 gaming facilities in the United States in the past year, whether for gaming or non-gaming purposes, or both.

Based on this information, as well as Spectrum's experience in analyzing multiple gaming markets, we believe the gaming facility participation rate for adults who live near[185] a gaming facility may reasonably approach 40 percent annually. On a national basis, many other jurisdictions feature less-accessible options and less competition among operators, making casino/VLT gaming a less attractive entertainment alternative that, in turn, leads to lower participation rates. This implies that casino/VLT gaming participation is higher in areas with more accessible gaming options, which is clearly consistent across the hundreds of operations with which Spectrum's team has worked.

Frequency is the average number of annual visits an adult will make to a casino. Like participation, frequency is influenced by the number and accessibility of facilities available in any particular market area. The more distant a facility, the fewer trips a player makes. However, those individuals who travel farther generally have higher gaming budgets on those occasions, which to a certain extent offsets less frequent visitation.

Spend is the amount spent gambling by a player during a gaming facility visit. Spend tends to increase with distance and decrease with frequency. People who live closer to a gaming facility visit more often but spend less on each visit. In examining visitation counts and GGR reported by State regulatory agencies, we estimate an average spend per visit to a gaming facility at $97.82, as shown in the following table. It should be noted that this exercise is not possible for every gaming market in the country, as only select states report admissions or visitation counts.

Figure 126: Analysis of casino admissions, adult population, and GGR in select Midwest markets

Date	State	Admissions	Casino GGR (Win)	Win/Visit	Population '18	Est. Adults	Win per Adult per Year
CY 2018	IL	10,913,072	$1,374,862,061	$125.98	12,741,080	9,300,988	$148
FY 6/30/18	IN	14,242,124	$1,757,060,457	$123.37	6,691,878	4,885,071	$360
FY 6/30/19	IA	19,863,057	$1,457,011,629	$73.35	3,156,145	2,303,986	$632
FY 6/30/19	MO	19,640,125	$1,735,757,881	$88.38	6,126,452	4,472,310	$388
Totals		**64,658,378**	**$6,324,692,028**	**$97.82**	**28,715,555**	**20,962,355**	**$302**

Source: State regulatory agencies, U.S. Census Bureau, Spectrum Gaming Group

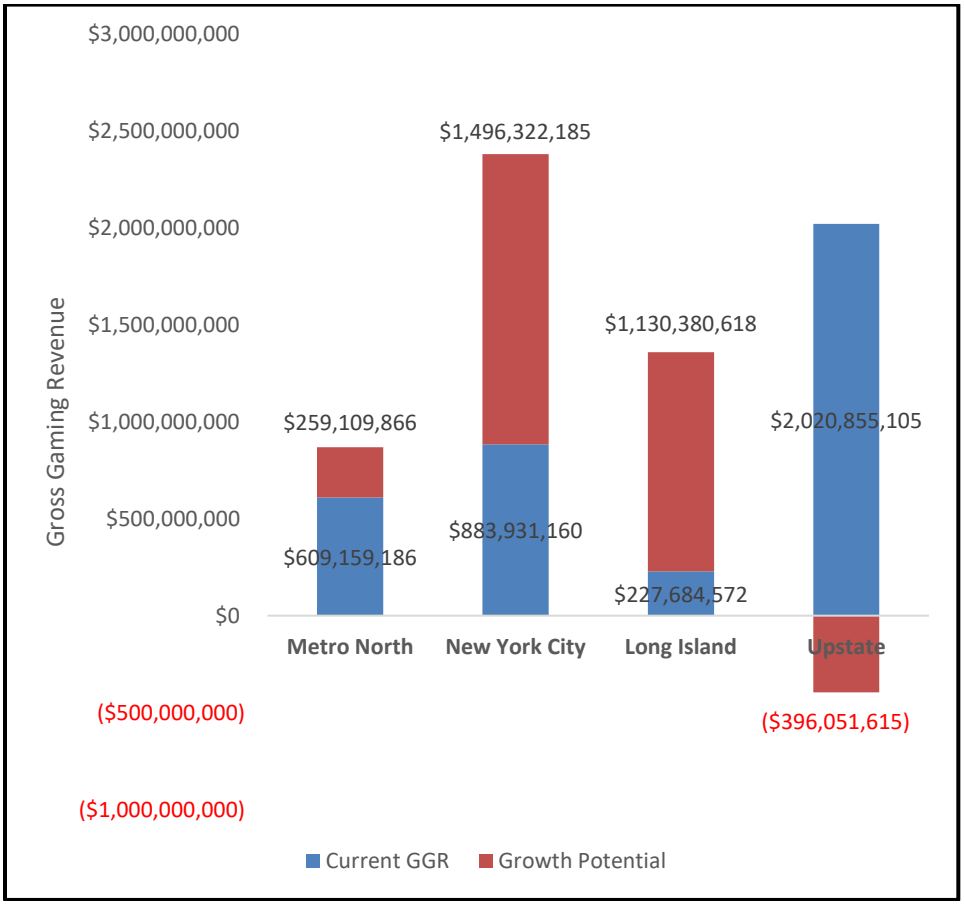
The factors of adult population, participation and frequency are used to distribute player visits. Average win (also called win per visit) is the average GGR generated from each player per visit and is

[185] The definition of "near" varies by market, but generally approximates to a 30-minute drive-time area from existing casinos.

estimated based on public reports, player surveys, and proprietary information shared by specific operators in this and other market areas. Average win[186] tends to increase with disposable income levels and distance traveled. Projected GGR is then calculated by multiplying the estimated number of visits and the average win.

If the adults in the New York region behave in-line with averages nationwide (33 percent gaming participation, and an average of 12 visits a year for active participants), and with a gaming spend per visit adjusted for income levels, the result would be $6.23 billion in GGR for New York gaming facilities 2019. It should be noted that this estimation of market potential considers the current spend by out-of-market residents and tourists at New York gaming facilities, as the metrics on which the analysis are based (see Figure 126) inherently include such spending.

Figure 127: Gross gaming revenue growth potential by region, 2019, Method 2



Source: Spectrum Gaming Group

[186] Average win per visit was adjusted for each ZIP Code and county in the models by comparing each's median household income to national levels. Higher household incomes translate into higher spending on entertainment, including casino gaming. For instance, the median household income in ZIP Code 12045 was reported by the U.S. Census Bureau as 85.2% of the national median household income, and therefore the $97.82 win per visit became an estimated $83.31. Our estimate of gaming expenditures incorporates this factor.

3) Method 3: Midwest Gaming GGR/Adult, Adjusted for Income Levels

Gross gaming revenue per adult is another method for assessing a gaming market. As shown in Figure 126 above, casino/VLT gaming win per adult per year in comparable U.S. markets approximates $302, a figure that includes spending by not just locals but also out-of-market residents and tourists. Were spending on casino/VLT gaming in New York to fall in line with this pattern, and after adjusting for income levels for each ZIP Code in New York, the result would be $4.85 billion in GGR generated at New York gaming facilities in 2019.

Figure 128 demonstrates these calculations for ZIP Codes in Albany County, including gaming spend per adult, adjustments for income levels, and resulting gaming expenditure estimates. This same exercise was repeated for each county in New York; results are summarized at the county level[187] in Figure 129.

[187] While the calculations have been summarized at the county level for this report, Spectrum's analyses were performed at the more granular ZIP Code level.

Figure 128: Sample calculations of gaming spend potential for Albany County ZIP Codes, Method 3

ZIP Code	City	County	Median Income	Adults	HHI Index	Spend per Adult	Method 3 Est. Casino Revenue
12009	Altamont	Albany	$93,975	5,724	155.8%	$470	$2,689,859
12023	Berne	Albany	$68,807	1,539	114.0%	$344	$529,479
12041	Clarksville	Albany	$87,566	493	145.1%	$438	$216,087
12045	Coeymans	Albany	$51,389	253	85.2%	$257	$65,095
12046	Coeymans Hollow	Albany	$82,692	780	137.1%	$414	$322,691
12047	Cohoes	Albany	$53,977	15,158	89.5%	$270	$4,091,536
12054	Delmar	Albany	$100,677	12,483	166.9%	$503	$6,284,519
12059	East Berne	Albany	$84,091	1,210	139.4%	$421	$508,648
12067	Feura Bush	Albany	$75,909	1,182	125.8%	$380	$448,627
12077	Glenmont	Albany	$98,716	4,892	163.6%	$494	$2,414,754
12084	Guilderland	Albany	$64,868	3,621	107.5%	$324	$1,174,513
12085	Guilderland Center	Albany	$43,710	327	72.4%	$219	$71,483
12110	Latham	Albany	$76,652	16,559	127.0%	$383	$6,347,296
12120	Medusa	Albany	$49,732	429	82.4%	$249	$106,566
12143	Ravena	Albany	$55,179	3,468	91.5%	$276	$956,782
12147	Rensselaerville	Albany	$69,375	428	115.0%	$347	$148,404
12158	Selkirk	Albany	$85,458	5,195	141.6%	$427	$2,219,905
12159	Slingerlands	Albany	$86,991	5,558	144.2%	$435	$2,417,869
12161	South Bethlehem	Albany	$78,750	137	130.5%	$394	$53,757
12183	Troy	Albany	$49,875	1,913	82.7%	$249	$477,195
12186	Voorheesville	Albany	$92,852	4,549	153.9%	$464	$2,112,343
12189	Watervliet	Albany	$52,363	12,885	86.8%	$262	$3,373,765
12193	Westerlo	Albany	$77,396	1,347	128.3%	$387	$521,267
12202	Albany	Albany	$28,857	6,798	47.8%	$144	$980,934
12203	Albany	Albany	$55,817	22,721	92.5%	$279	$6,341,931
12204	Albany	Albany	$50,721	5,488	84.1%	$254	$1,391,989
12205	Albany	Albany	$64,107	19,330	106.3%	$321	$6,196,823
12206	Albany	Albany	$31,812	11,706	52.7%	$159	$1,862,227
12207	Albany	Albany	$12,396	1,199	20.5%	$62	$74,302
12208	Albany	Albany	$60,430	15,867	100.2%	$302	$4,794,881
12209	Albany	Albany	$49,853	7,630	82.6%	$249	$1,902,113
12210	Albany	Albany	$46,712	6,842	77.4%	$234	$1,598,109
12211	Albany	Albany	$100,357	8,294	166.3%	$502	$4,162,441
12469	Preston Hollow	Albany	$49,500	458	82.0%	$248	$113,297

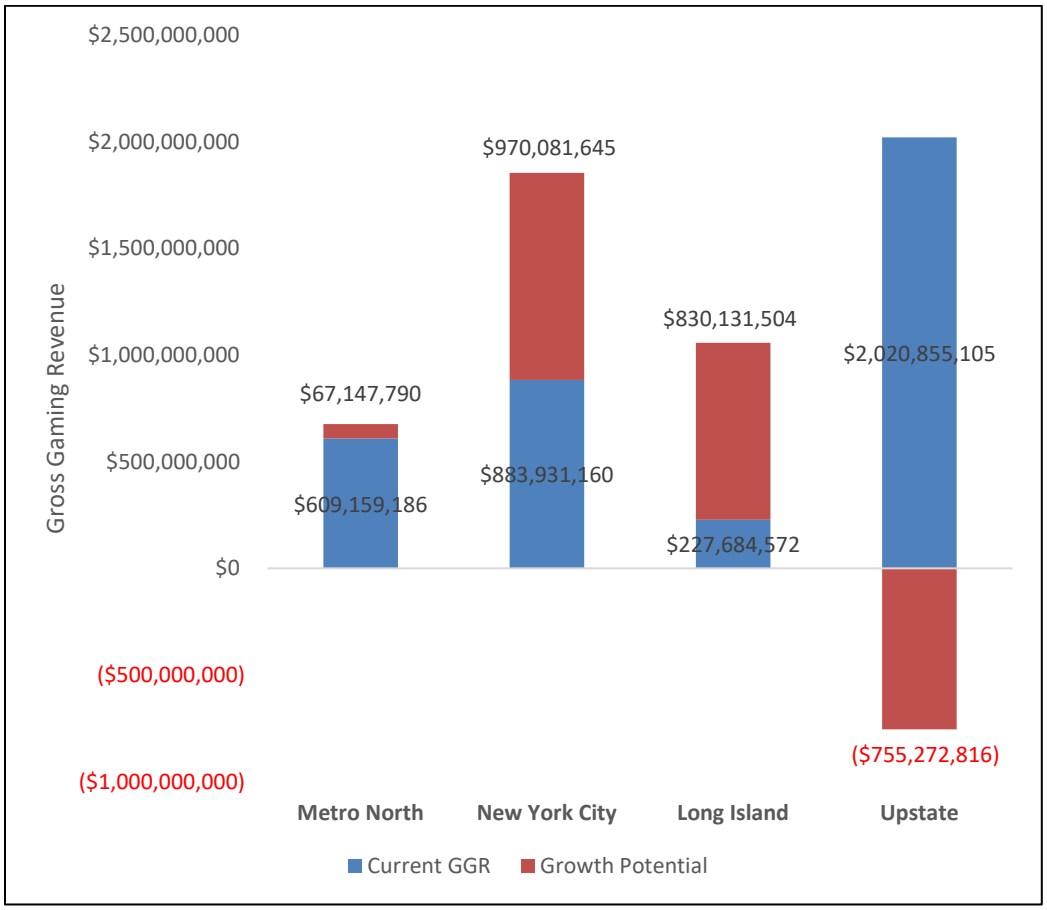
Source: U.S. Census Bureau, Spectrum Gaming Group

Figure 129: Potential GGR by New York counties, Method 3

County	Potential GGR Method 3	County	Potential GGR Method 3
Albany	$66,971,488	Oneida	$43,842,286
Allegany	$7,623,712	Onondaga	$103,646,649
Bronx	$205,956,153	Ontario	$24,834,602
Broome	$35,467,050	Orange	$105,774,025
Cattaraugus	$12,971,316	Orleans	$7,154,720
Cayuga	$14,504,197	Oswego	$22,966,659
Chautauqua	$21,409,648	Otsego	$11,160,088
Chemung	$15,701,705	Putnam	$36,971,701
Chenango	$9,347,405	Queens	$536,889,499
Clinton	$16,208,305	Rensselaer	$37,413,365
Columbia	$13,261,859	Richmond	$133,562,524
Cortland	$9,457,544	Rockland	$101,857,452
Delaware	$7,183,385	Saratoga	$19,428,880
Dutchess	$84,250,001	Schenectady	$63,939,225
Erie	$193,132,062	Schoharie	$42,139,153
Essex	$6,326,000	Schuyler	$5,421,905
Franklin	$9,910,635	Seneca	$3,148,408
Fulton	$8,785,485	St. Lawrence	$6,040,792
Genesee	$11,746,996	Steuben	$17,564,867
Greene	$10,237,371	Suffolk	$514,070,490
Hamilton	$732,135	Sullivan	$15,203,477
Herkimer	$10,795,349	Tioga	$10,011,453
Jefferson	$21,950,752	Tompkins	$20,802,011
Kings	$534,900,149	Ulster	$41,385,432
Lewis	$4,782,248	Warren	$14,240,577
Livingston	$12,879,427	Washington	$11,569,224
Madison	$14,987,248	Wayne	$19,227,689
Monroe	$161,667,668	Westchester	$347,453,796
Montgomery	$10,573,730	Wyoming	$8,398,889
Nassau	$543,745,586	Yates	$5,147,185
New York	$442,704,480	**Total**	**$4,853,718,145**
Niagara	$2,280,026		

Source: Spectrum Gaming Group

Figure 130: Gross gaming revenue growth potential by region (2019), Method 3



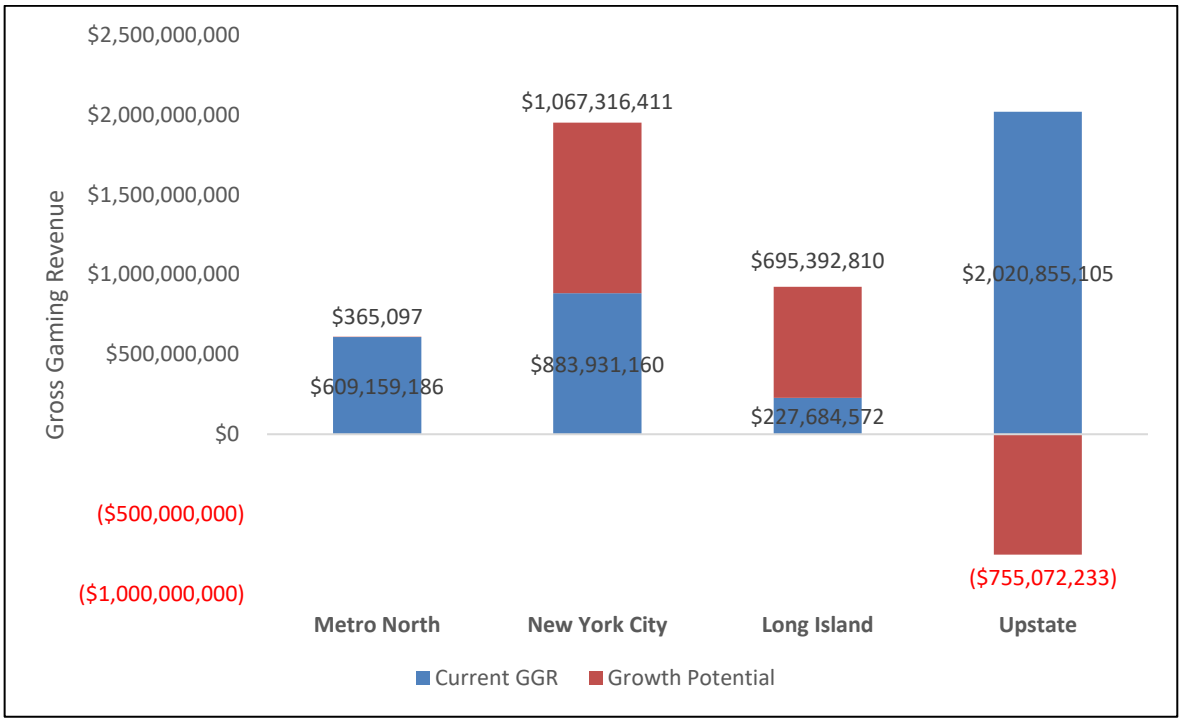
Source: Spectrum Gaming Group

4) Method 4: Theoretical Gaming Visits

In considering the potential growth for casino/VLT gaming in New York, we also returned to the original base gravity models. During the model calibration process, the original estimates of gaming participation based upon the ESRI survey data were necessarily adjusted to reflect not only the GGR generation of the existing gaming facilities, but also the reported feeder markets and market share of each gaming facility as revealed in the interview and analysis process. Removing these market-specific adjustments results in what Spectrum has termed "theoretical" gaming visits and gaming spend potential. In this scenario, the result would be an aggregate $1.01 billion in additional GGR for New York gaming facilities[188] This figure incorporates the theoretically possible growth in gaming behavior by New York residents, as well as spending from out-of-market residents and tourists.

[188] The "theoretical" estimate does not take into consideration the expected growth in gaming participation in Downstate New York that would result from new gaming options in Orange County and the New York City region.

Figure 131: Gross gaming revenue growth potential by region (2019), Method 4



Source: Spectrum Gaming Group

5) Method 5: Disposable Income

Because casino/VLT gaming is a leisure activity that is largely influenced by disposable income, we evaluated the performance of other gaming facilities in the United States in relation to disposable income of the regional population. On average, the relatively comparable markets exhibit a spend of 0.95 percent of disposable income on casino/VLT gaming, as shown in the following table. It should be noted that this ratio includes spending from out-of-market residents and tourists, as it is calculated on total GGR and not simply GGR from the local populations.

Figure 132: GGR to disposable income in U.S. gaming markets

Market	Annual Casino/VLT GGR	2019 Total Population Age 21+ (ESRI)	2019 Aggregate Disposable Income	Disposable Income/Capita (Age 21+)	Casino/VLT GGR to Aggregate Disposable Income
Chicago MSA (IL & IN)	$ 1,756,600,000	7,146,810	$251,263,645,665	$35,157	0.70%
St Louis MSA (MO & IL)	$747,000,000	2,434,401	$81,022,909,517	$33,282	0.92%
Quad Cities MSA (IA & IL)	$204,800,000	579,987	$17,336,071,418	$29,890	1.18%
Peoria MSA (IL)	$74,100,000	471,695	$15,374,632,538	$32,594	0.48%
Cincinnati – Dayton (OH)	$953,631,000	1,620,632	$56,949,990,394	$35,141	1.67%
Columbus (OH)	$471,753,000	1,536,210	$54,160,991,842	$35,256	0.87%
Cleveland – Akron (OH)	$807,267,000	1,570,678	$51,043,947,877	$32,498	1.58%
Total/Average	**$ 5,015,151,000**	**15,360,413**	**527,152,189,251**	**$34,319**	**0.95%**

Source: State regulatory agencies, ESRI, Spectrum Gaming Group

According to data from ESRI, New York's residents collectively had $512.8 billion in disposable income in 2019. Applying this rate of 0.95 percent to disposable income levels results in an estimate of $4.88 billion in GGR potential. When compared to the GGR generated by New York gaming facilities, this method of analysis indicates the potential for just under$1.14 billion in growth. However, this total does not tell the entire story, as this same analysis indicates that the Metro North and Upstate markets are over-saturated with no potential for growth, and perhaps even over-spending on gaming. Figure 133 (over two pages) and the following maps demonstrate the aggregate disposable income for New York's counties and the resulting calculation of gaming expenditure by New York residents.

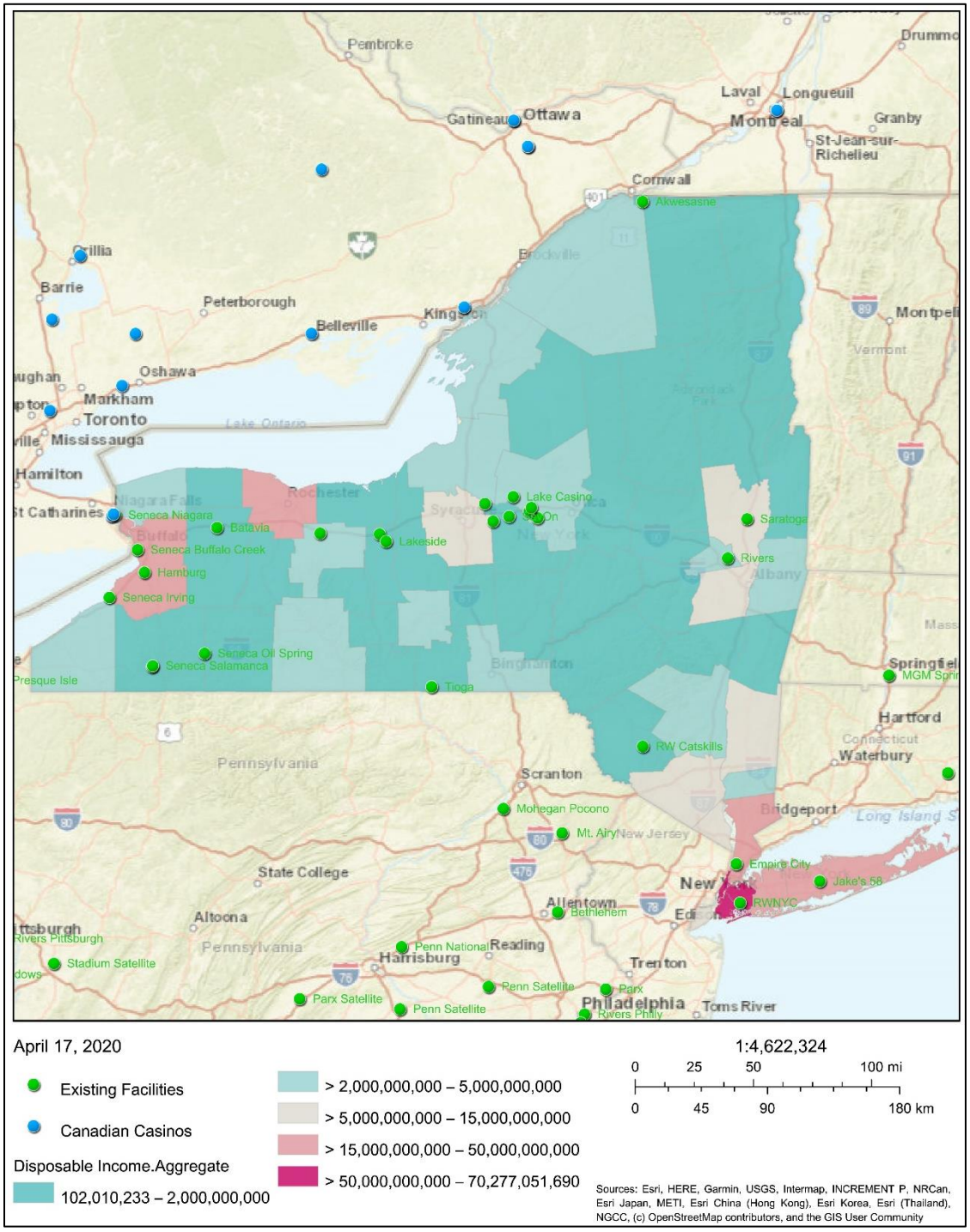
Figure 133: Potential GGR as calculated from aggregate incomes, per New York county (2019), Method 5

County	2019 Aggregate Disposable Income	Est. Gaming Spend (0.95% of Aggregate Disposable Income)	Potential Growth
Albany County	$8,583,022,256	$81,656,026	$6,804,272
Allegany County	$780,433,803	$7,424,788	$1,033,535
Bronx County	$21,720,091,726	$206,637,745	-$13,375,774
Broome County	$3,955,770,320	$37,633,886	-$33,700,563
Cattaraugus County	$1,501,022,035	$14,280,226	-$13,160,352
Cayuga County	$1,769,681,908	$16,836,166	-$8,166,677
Chautauqua County	$2,399,062,722	$22,823,887	-$3,039,442
Chemung County	$1,796,260,926	$17,089,030	-$14,983,577
Chenango County	$994,591,995	$9,462,218	$2,482,367
Clinton County	$1,747,671,582	$16,626,767	$11,200,391
Columbia County	$1,714,147,933	$16,307,835	$7,138,722
Cortland County	$920,985,998	$8,761,955	$1,932,015
Delaware County	$914,598,872	$8,701,190	$2,965,244
Dutchess County	$8,055,112,161	$76,633,664	$24,575,137
Erie County	$21,908,482,370	$208,430,031	-$69,876,423
Essex County	$841,402,908	$8,004,828	$1,704,782
Franklin County	$984,868,441	$9,369,712	$6,846,784
Fulton County	$1,123,255,762	$10,686,283	-$3,350,406
Genesee County	$1,273,173,546	$12,112,551	-$1,182,750
Greene County	$1,073,752,330	$10,215,323	$332,412
Hamilton County	$102,010,233	$970,492	$245,098
Herkimer County	$1,236,298,732	$11,761,736	-$7,538,725
Jefferson County	$2,054,336,321	$19,544,274	$12,320,757
Kings County	$60,966,961,280	$580,019,439	$128,465,454
Lewis County	$540,307,515	$5,140,306	$1,278,964
Livingston County	$1,285,756,066	$12,232,257	-$4,242,515
Madison County	$1,521,431,669	$14,474,396	-$5,209,681
Monroe County	$17,930,659,721	$170,586,347	-$84,505,727
Montgomery County	$978,951,842	$9,313,423	-$2,042,168
Nassau County	$44,332,607,244	$421,765,714	$200,948,253

County	2019 Aggregate Disposable Income	Est. Gaming Spend (0.95% of Aggregate Disposable Income)	Potential Growth
New York County	$70,277,051,690	$668,592,549	$475,973,670
Niagara County	$4,903,647,496	$46,651,675	-$28,124,117
Oneida County	$4,885,050,481	$46,474,749	-$45,462,427
Onondaga County	$11,196,736,979	$106,522,040	-$66,004,768
Ontario County	$2,852,561,136	$27,138,320	-$7,068,133
Orange County	$9,646,750,974	$91,775,988	$12,309,120
Orleans County	$750,613,318	$7,141,086	$2,889,972
Oswego County	$2,422,779,626	$23,049,521	-$8,504,099
Otsego County	$1,305,945,565	$12,424,333	$5,440,612
Putnam County	$3,126,541,707	$29,744,880	$13,288,168
Queens County	$51,927,638,322	$494,022,319	-$47,178,014
Rensselaer County	$4,194,188,010	$39,902,113	-$4,518,252
Richmond County	$12,645,325,385	$120,303,430	$73,424,601
Rockland County	$8,889,258,790	$84,569,458	$32,572,996
Saratoga County	$7,235,435,196	$68,835,529	$10,465,850
Schenectady County	$3,840,325,413	$36,535,582	-$26,829,056
Schoharie County	$661,234,061	$6,290,761	-$1,766,375
Schuyler County	$357,112,934	$3,397,454	-$2,070,625
Seneca County	$652,895,294	$6,211,429	-$6,793,501
St. Lawrence County	$2,044,613,090	$19,451,770	$10,305,740
Steuben County	$2,036,642,299	$19,375,939	-$5,219,904
Suffolk County	$43,269,293,108	$411,649,696	$240,562,056
Sullivan County	$1,732,433,658	$16,481,799	-$6,987,065
Tioga County	$1,119,180,717	$10,647,514	-$5,692,394
Tompkins County	$2,399,518,247	$22,828,220	$6,514,249
Ulster County	$4,454,254,298	$42,376,297	$7,639,359
Warren County	$1,756,885,730	$16,714,428	-$8,246,279
Washington County	$1,241,783,794	$11,813,919	-$7,476,302
Wayne County	$1,800,276,916	$17,127,237	-$15,860,187
Westchester County	$32,916,237,835	$313,154,164	$48,143,635
Wyoming County	$767,121,914	$7,298,143	-$1,247,141
Yates County	$502,462,354	$4,780,260	-$1,549,549
Total	**$512,818,506,554**	**$4,878,785,099**	**$788,831,246**

Source: Spectrum Gaming Group

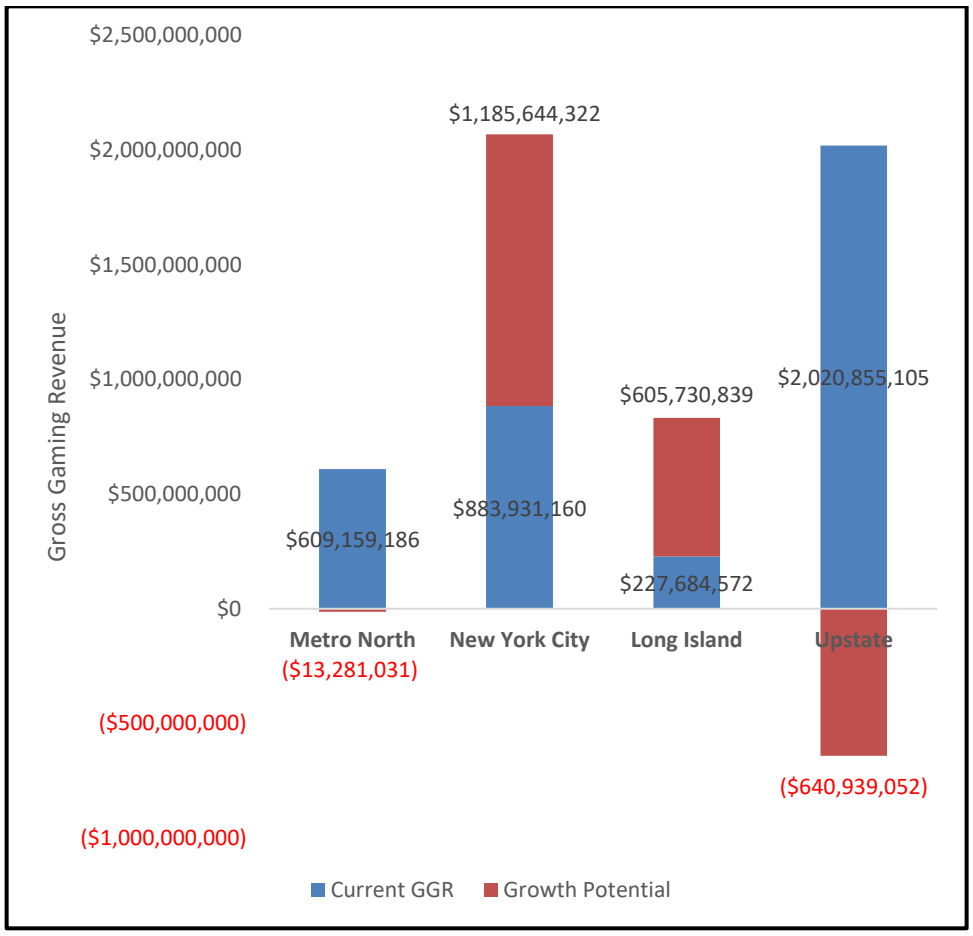
Figure 134: Map of aggregate disposable income by New York county, 2019



Source: ESRI, Spectrum Gaming Group. Disposable income is in $.

As noted in previous sections of this study, the vast majority of revenue growth potential is estimated to come from the Downstate region, while the remainder of the state – the Upstate region – shows little growth potential.

Figure 135: Gross gaming revenue growth potential by region (2019), Method 5



Source: ESRI, Spectrum Gaming Group

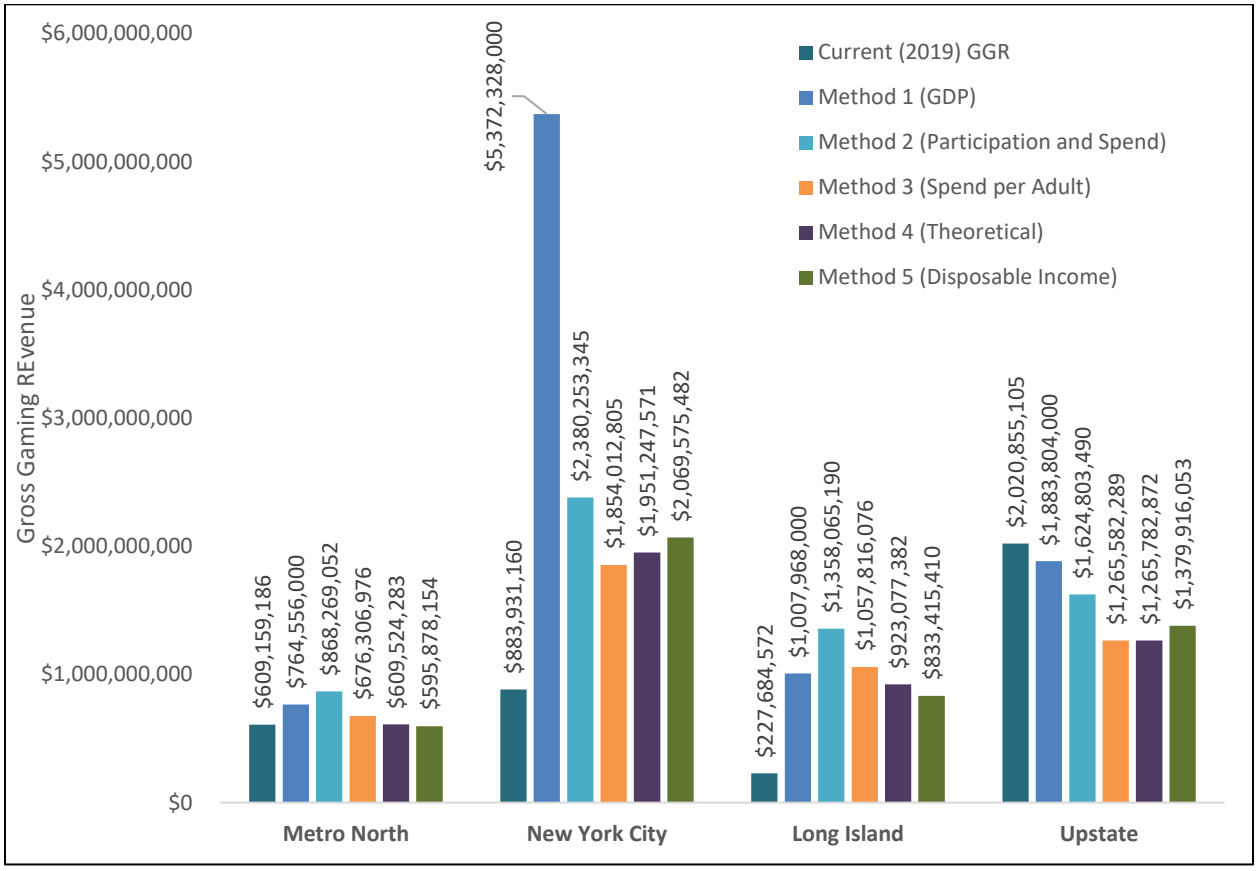
6) Summary and Conclusions

Comparing the five analysis methods of expenditure potential is informative for all of the markets in New York but does not yield a definitive projection of gaming revenues. These analyses were utilized for comparison purposes and to refine aspects of Spectrum's forecasting models as discussed in Chapter D of this report.

The five methods of comparative analysis employed by Spectrum indicate that New York's gaming facilities have the potential for generating between $4.85 billion and $9.03 billion in gaming revenues, or growth of between $1.01 billion and $5.29 billion over 2019 actual GGR. However, the potential for growth is not uniform across the regions of New York, and the Upstate market in particular shows indications of over-saturation. Were growth possible for individual Upstate gaming facilities, this growth would necessarily occur through unprecedented growth in tourism or though shifts of GGR from one facility to another. The gravity model-produced estimates of actual 2019 gaming spend by the population

within each region are shown for comparison purposes in Figure 136 and Figure 138 (refer also to the Current Gaming Spend in Figure 124, Figure 127, Figure 130, Figure 131, and Figure 135) as compared to the various methods of assessing market spend potential.

Figure 136: New York GGR and estimated potential by region, comparison by methods of analysis

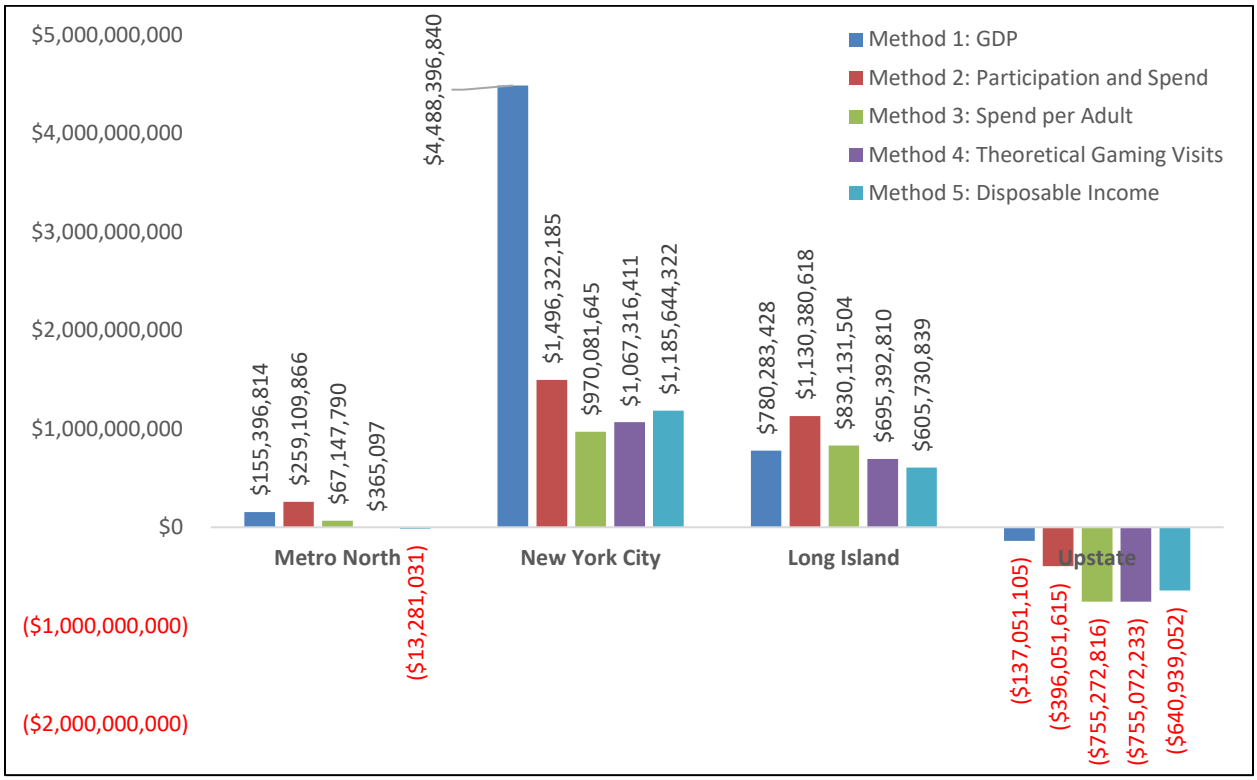


Source: Spectrum Gaming Group

While no single method of estimating the potential for casino/VLT gaming can be solely relied upon, together they unveil patterns and indicate areas of potential saturation as well as those for future growth. The Downstate counties clearly exhibit the greatest potential for growth (ranging from $970 million to $4.49 billion for New York City, and $606 million to $1.13 billion for Long Island

Figure 137 and Figure 138 summarize the gaming spend growth potential by analytical method.

Figure 137: New York GGR growth potential by region, comparison by methods of analysis



Source: Spectrum Gaming Group

Figure 138: Gross gaming revenue growth potential by region, comparison of methods of analysis

	Metro North	New York City	Long Island	Upstate	Total
Current (2019) GGR	**$609,159,186**	**$883,931,160**	**$227,684,572**	**$2,020,855,105**	**$3,741,630,022**
Method 1: GDP					
Potential GGR	$764,556,000	$5,372,328,000	$1,007,968,000	$1,883,804,000	$9,028,656,000
Growth Potential	$155,396,814	$4,488,396,840	$780,283,428	($137,051,105)	$5,287,025,978
Method 2: Participation and Spend					
Potential GGR	$868,269,052	$2,380,253,345	$1,358,065,190	$1,624,803,490	$6,231,391,076
Growth Potential	$259,109,866	$1,496,322,185	$1,130,380,618	($396,051,615)	$2,489,761,054
Method 3: Spend per Adult					
Potential GGR	$676,306,976	$1,854,012,805	$1,057,816,076	$1,265,582,289	$4,853,718,145
Growth Potential	$67,147,790	$970,081,645	$830,131,504	($755,272,816)	$1,112,088,123
Method 4: Theoretical Gaming Visits					
Potential GGR	$609,524,283	$1,951,247,571	$923,077,382	$1,265,782,872	$4,749,632,107
Growth Potential	$365,097	$1,067,316,411	$695,392,810	($755,072,233)	$1,008,002,085
Method 5: Disposable Income					
Potential GGR	$595,878,154	$2,069,575,482	$833,415,410	$1,379,916,053	$4,878,785,099
Growth Potential	($13,281,031)	$1,185,644,322	$605,730,839	($640,939,052)	$1,137,155,077

Source: Spectrum Gaming Group

The following table displays the averages of the five methods of estimating potential GGR for each region in New York. While the true potential for each market likely lies somewhere within the five methods of estimation, Spectrum believes it is reasonable to assume the market spending potential for each region equals the average of the methods, as shown below. For instance, while the gaming property in the Metro North region generated $609 million in 2019, we believe it reasonable for this market to generate $703 million. The Upstate region, estimated to currently be generating $2.02 billion in GGR, is operating above its reasonable potential of $1.48 billion; this negative figure of -$537 million is not a forecast for spending declines, but indicates market saturation and no future growth potential outside of organic or inflationary growth.

Figure 139: Assumed potential GGR by region

GGR (M)	Metro North	New York City	Long Island	Upstate	Total
Current GGR (2019)	$609	$884	$228	$2,021	$3,742
Est. Potential (average)	$703	$2,725	$1,036	$1,484	$5,948
Growth Potential	$94	$1,842	$808	-$537	$2,207

Source: Spectrum Gaming Group

c. Analysis of Regional Market Capture

While the previous analyses discussed the gaming expenditure potential, the capture of that spending by New York's gaming properties was not specifically addressed. Herein we compare this underlying factor to the analyses of gaming spend potential discussed in the section covering Market Potential by Methodology.

Based on the five methodologies we consider as determining potential spending by New York residents, we estimate that New York's gaming facilities capture approximately 63 percent of potential GGR. However, capture of all potential GGR is not possible in any real-world situation, and the markets that exhibit the greatest potential for growth (NYC and Long Island) are unique in terms of population density and volumes of tourism and out-of-market participation in economy, and are not truly comparable to any gaming market in the United States. A much more nuanced analysis of the potential GGR for the Downstate market is addressed in Section D of this study.

For the Upstate region, all of the methods of analysis indicate substantial over-saturation. While higher than average gaming participation and spend by the regional population appear evident, this region's gaming properties also draw from those living in other regions as well as tourists to vacation spots such as Niagara Falls and the Finger Lakes region, increasing realized GGR to seemingly over-saturated levels.

Figure 140: Capture of potential GGR at New York gaming facilities, 2019

	Metro North	New York City	Long Island	Upstate	Total
Current GGR at NY Gaming Facilities (2019)	**$609**	**$884**	**$228**	**$2,021**	**$3,742**
Low Potential	$596	$1,854	$833	$1,266	$4,549
Capture	*102%*	*48%*	*27%*	*160%*	*82%*
Average Potential	$703	$2,725	$1,036	$1,484	$5,948
Capture	*87%*	*32%*	*22%*	*136%*	*63%*
High Potential	$868	$5,372	$1,358	$1,884	$9,482
Capture	*70%*	*16%*	*17%*	*107%*	*39%*

Source: Spectrum Gaming Group

It must be noted, additionally, that the difference between New York facility capture and market potential is a mix of latent demand and the capture of GGR by out-of-state properties. However, outflows can be counter-balanced by players coming in from nearby states, as well as tourists.

3. Assessment of Needs to Meet Potential

In site visits to New York gaming facilities, Spectrum found that their size, quality and offerings are largely on par with the casino offerings in the nearby jurisdictions of Pennsylvania and Ontario, but they are generally smaller and less attractive than those in Connecticut, Massachusetts and New Jersey – the latter two of which have laws that essentially require that casino properties be large-scale gaming resorts.

The New York gaming facilities range from destination resorts such as Seneca Niagara Falls and Turning Stone to high-volume slot houses such as the Resorts World New York City and Empire City VLT facilities to small, locals-oriented casinos such as Yellow Brick Road.

When evaluating individual properties and the potential for additional investment to attract additional revenue, it is important to assess the regions in which the properties operate because each region has different markets, demographics, and competitive concerns. As noted in the previous chapter, the Client divided the state into four gaming regions: New York City, Long Island, Metro North, and Upstate.

In the saturated Upstate market, investment in amenities would merely shift GGR among properties rather than grow GGR marketwide. Simply adding more gaming machines and table games does not add people to play them, unless any particular property is operating at or near capacity during periods of peak demand. Any capital investment in the Upstate market would have to achieve one or more goals that are in the common interest of the state and the operator, such as:

- Capturing or recapturing gaming spend from out-of-state gaming properties.
- Expanding the demographic and/or geographic reach of gaming operators to attract more adults who presently offer little to no visitation to gaming properties.
- Extending the length and frequency of gaming visits from existing customers.

Notably, while the Upstate market is well served, the Long Island market is underserved. In this case, adding more gaming capacity at Jake's 58 would increase GGR, but we note there is a current limit of 1,000 gaming positions at that gaming facility.

a. New York City and Metro North

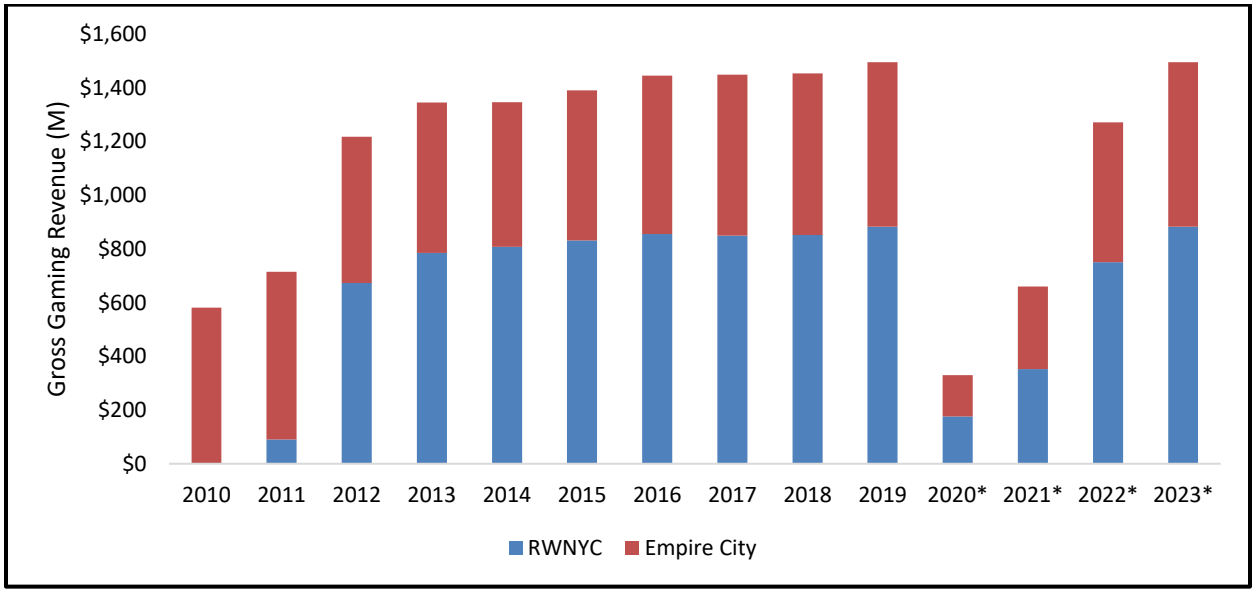
Although they are distinct regions, Spectrum believes it is helpful to examine the New York City and Metro North regions at once. Each region has one gaming facility:

- New York City: This region includes the five boroughs of the city. Resorts World New York City at Aqueduct Racetrack, a VLT facility in Queens, began gaming operations in 2011. It is the only gaming facility in the region and includes the 1,000 Nassau OTB VLT machines.
- Metro North: This region includes Westchester, Putnam, Duchess, Orange, and Rockland counties. The only gaming in the region is Empire City Casino at Yonkers Raceway, which is a VLT facility. It should be noted that while Empire City is located in the Metro North region, it abuts the New York City area, which is a significant feeder market. However, Empire City's market to the north is affluent and well-populated. It also bears watching that there is a plan to place a VLT facility in Orange County.

1) Previous Gaming Revenue Growth

The two gaming facilities (including the 1,000 Nassau OTB machines) in the New York City and Metro North gaming regions generated GGR of $1.5 billion. The chart and table below show the yearly change in GGR from 2010 through 2019, as well as forecasts through 2023 that factor in Spectrum's impacts that the COVID-19 epidemic will have on gaming in New York, as detailed in Chapter A of this report.

Figure 141: New York City and Metro North gaming facility GGR by property, 2010-2023



Source: New York State Gaming Commission, Spectrum Gaming Group. *Spectrum estimate

Figure 142: New York City and Metro North gaming facility GGR by property, 2010-2023

Annual CY GGR in $M	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2021*	2022*	2023*
RWNYC		89.9	672.6	785.1	808	831.2	855.6	849.5	851.9	882.3	176.5	352.9	750	882.3
Empire City	581.2	624.4	544.7	559.9	537.5	558.3	589.7	599.2	600.7	613.1	153.3	306.6	521.1	613.1

Source: New York State Gaming Commission, Spectrum Gaming Group. *Spectrum estimate

2) Potential for Future Growth

Section D of this report provides a broad analysis of the revenue potential and fiscal impacts of allowing new casino licenses in the New York City market, as well as the revenue potential for a VLT facility in Orange County. Spectrum's estimates for the potential incremental GGR in Metro North, detailed previously in this study, range from -$13.3 million in Method 5 to nearly $259.1 million in Method 2.

The untapped potential of the Metro North region could be realized with the addition of an Orange County VLT facility, as well as with the expansion of gaming further Downstate. However, such expansion would have negative impacts on Resorts World Catskills, and to lesser extent on Rivers Casino.

Adding a 300-room to 400-room hotel to Empire City has the potential to extend the length of visits by converting day trippers into overnight guests. An overnight guest would be expected to generate twice the GGR of a day player, while a significant portion of the rooms would be double occupancy. Figure 143 shows estimates of the potential impact on GGR of such an addition, a $25.6 million increase in GGR. It should be noted that these assumptions are conservative. Spectrum's estimate includes hotel occupancy of 85 percent, with 75 percent of those room nights at double occupancy, the primary guest generating incremental GGR of $150 per night, and the second guest generating $75 of GGR. Spectrum cautions that it is not simply the addition of gaming supply that makes a property successful. As a case in point, in the months preceding the COVID-induced closure (gradually between August 2019 and February 2020), the operator of Empire City reduced VLT capacity at the property but grew GGR through reconfiguring sections of the gaming area and removing underperforming machines.

Figure 143: Estimated GGR from a 400-room hotel at Empire City Casino

Rooms	Room Nights	Incremental GGR per Room Night	Incremental GGR	Est. State Revenue
400	124,100	$ 206	$25,600,000	$12,800,000

Source: Spectrum Gaming Group

b. Long Island

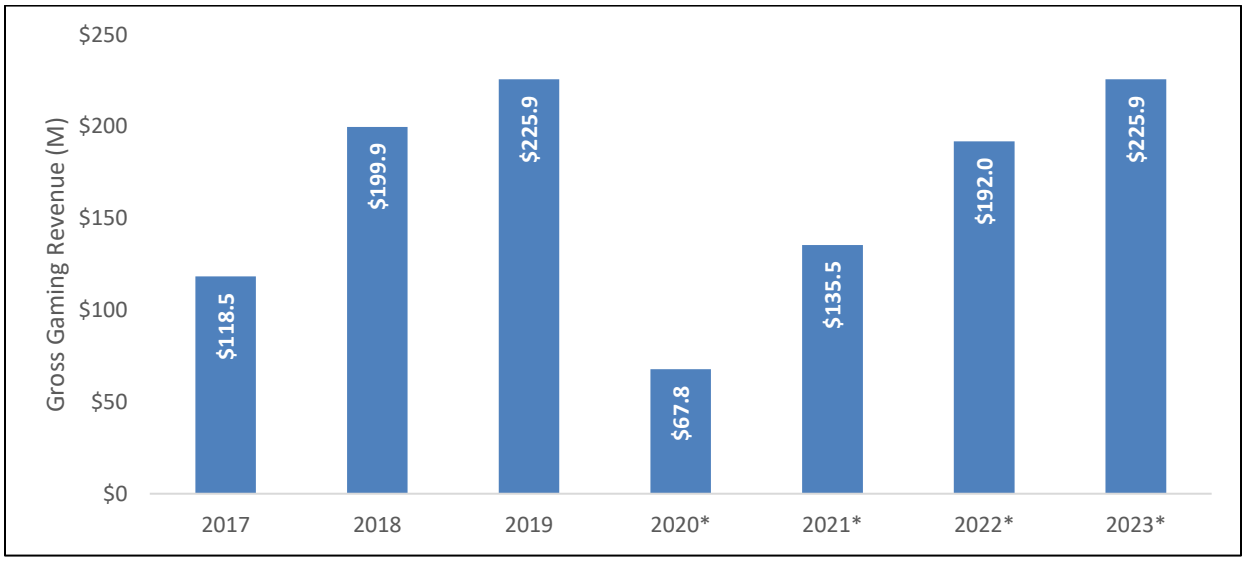
The Long Island region includes Suffolk and Nassau counties, as shown in Figure 108. Jake's 58 – a VLT facility – is the lone operator in that market,[189] although RWNYC (in the New York City region) is proximate to the more densely populated western end of the Long Island region.

[189] In 2014, as the State of New York State finalized legislation that authorized the creation of commercial casinos, a decision was made to initially limit the development of the first four commercial casinos to Upstate. The Upstate Economic Development Act of 2014 also authorized two 1,000-machine VLT facilities for the Nassau Regional Off-Track Betting Corporation ("Nassau OTB") and Suffolk Regional Off-Track Betting Corporation ("Suffolk OTB").

1) Previous Gaming Revenue Growth

The only Long Island gaming facility, Jake's 58, in 2019 generated GGR of $225.9 million. The chart and table below show the yearly change in GGR from its 2017 opening through 2019, as well as Spectrum's forecasts through 2023 that factor in the impacts that the COVID-19 epidemic will have on gaming in New York, as detailed in Chapter A of this report.

Figure 144: Long Island gaming facility GGR by property, 2017-2023 (chart)



Source: New York State Gaming Commission, Spectrum Gaming Group. **Note:** Jake's 58 opened in 2017. *Spectrum estimate

Figure 145: Long Island gaming facility GGR by property, 2017-2023 (table)

Annual GGR in $M	2017	2018	2019	2020*	2021*	2022*	2023*
Jake's 58	118.5	199.9	225.9	67.8	135.5	192.0	225.9

Source: New York State Gaming Commission, Spectrum Gaming Group. **Note:** Jake's 58 opened in 2017. *Spectrum estimate

2) Potential for Future Growth

As noted, Spectrum estimates that the Long Island market is underserved with regard to gaming. Spectrum's estimates for the potential incremental GGR generation in Long Island range from $605.7 million in Method 5 to $1.13 billion in Method 2. In order to capture this potential growth in spending, new or expanded gaming facilities in the Downstate region would be necessary. Adding capacity to Jake's 58 would likely increase the gaming spend by Long Island residents. Currently, the property is operating at $627 win per unit,[190] a high level. Indeed, a daily win per unit in excess of $600 makes clear that capacity constraints are hamstringing players who are being turned away from their favorite machines during peak periods and beyond. The situation also might be discouraging some players from participating at all. (By

[190] Win per unit ("WPU") is a measure of the gross gaming revenue for a facility per gaming device per day. It is a common measure of performance and volume in the gaming industry.

comparison, the 2019 average win per unit among all East Coast slot machines in reporting jurisdictions was $302.[191])

Figure 146: Jake's 58 potential expansion and GGR, post-expansion

	VLTs	GGR (M)	Est. State Rev	WPU
2019	1,000	$228	$102	$618
Add 50%	1,500	$299	$135	$546
Add 100%	2,000	$345	$155	$473

Source: New York State Gaming Commission, Spectrum Gaming Group

In terms of demand, Jake's 58 could easily double the number of games offered without significantly cannibalizing other New York properties, as we have demonstrated sufficient potential in Long Island. Doubling the capacity of Jake's 58 could increase GGR by 50 percent, or nearly $117 million, a conservative estimate. Given the large unmet demand in this market area, the GGR growth could be higher.

Adding capacity would require expanding the building while adding new slot machines. However, the investment would likely be worth the expenditure for the operator and the Lottery (which receives revenue from VLT facilities). Additionally, gaming capacity would likely also necessitate food and beverage ("F&B") expansion in order to accommodate the related increase in patron F&B needs.

3) Issues with Siting Gaming on Long Island

Nassau OTB resides in Nassau County on the New York City border of Queens. Nassau County is the denser of the two Long Island counties and is a preferred location for many commuters because of the proximity to New York City and the good reputation of the schools and suburban quality of life for their families.

After passage of the legislation giving Nassau OTB the right to open a 1,000-VLT facility, Nassau OTB moved quickly to identify possible sites. While it privately considered numerous sites, only three sites rose to serious consideration and were put before public scrutiny. In January 2015, the first site publicly considered was at a former Fortunoff Department Store in Westbury. The area is a large and popular retail corridor that draws customers from a large radius and is populated with many brand name stores and restaurants. The community opposition to the proposal came quickly, with more than 1,000 people attending the first public meeting and many concerned about the new facility attracting rowdy crowds, clogging the roads and lowering the overall quality of life.[192] Within two weeks, Nassau OTB dropped this plan and began looking for another site.

[191] Spectrumetrix, "East Coast Slot Analysis," December 2019, based on data reported by state regulatory agencies.

[192] Ida Siegal, "Neighbors Protest Proposed Casino at Site of Old Fortunoff Store in Westbury, NBCNewYork.com, January 22, 2015. https://www.nbcnewyork.com/news/local/casino-proposal-westbury-fortunoff-store-residents-protest/732841/

After considering and dispensing a site based in Inwood because of community concerns about traffic and quality-of-life issues,[193] Nassau OTB turned to the largest betting venue in Nassau County – Belmont Racetrack. Located in Elmont on the Queens border, Belmont is a thoroughbred racetrack with a storied history and pedigree in the horse racing world. The Belmont facility sits on hundreds of acres and at the time had surplus property that Nassau OTB thought could be a perfect site for its 1,000-machine VLT facility.[194] Belmont is leased and managed by the New York Racing Association and owned by the State. Previous discussions by the State to consider VLTs at Belmont were defeated, and once again community opposition was evident, with thousands of people turning up at a rally to oppose the project.

Within a few months, Nassau OTB finalized a deal to operate their VLTs not in Nassau County but in Queens – at Resorts World New York City.[195] Nassau OTB and RWNYC entered into a hosting agreement in which the parties agreed to designate the entire Nassau OTB allocation of 1,000 machines as electronic table games ("ETGs").

Suffolk County has a smaller population, and the residents have a longer commute to New York City, but the county is still popular as residents seek lower school taxes and housing prices.

Suffolk OTB began its process by running a competition to select an operating partner, and it chose Delaware North Companies. Suffolk OTB and Delaware North initially purchased a former movie theater site in Medford as a site for the 1,000-VLT facility. The community opposition was strong and the project could not garner support at the town or county government level.[196]

Subsequently, Delaware North purchased the Marriott hotel in Islandia[197] and were able to successfully site the 1,000 VLTs at the location. They eventually branded the facility Jake's 58 Casino Hotel. Jake's 58 has both VLTs and ETGs.

4) Implications of a Potential Shinnecock Casino

The issue of a potential Shinnecock casino on Long Island is discussed in Chapter H.2.b.(4) of this report. In summary, should a Shinnecock casino come to fruition, however, the gaming facility that would be most at risk is Jake's 58, as we estimate that between 42 percent and 56 percent of that property's business in 2025 will originate from Suffolk County. Spectrum envisions in a worst-case scenario that 20 percent of Jake's 58's market would be at risk from a Shinnecock competitor, but in more likelihood, less than 5 percent (assuming no Jake's 58 expansion). If Jake's 58 expands its gaming supply, a more

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[193] Jeff Bessen, "No VLT casino in Inwood."LIHerald.com, October 28, 2015.
https://www.liherald.com/fivetowns/stories/no-vlt-casino-in-inwood,73011

[194] Tom Precious," OTB Corporation wants VLT Casino at Belmont," *Bloodhorse*, December 29, 2015.
https://www.bloodhorse.com/horse-racing/articles/204133/otb-corporation-wants-vlt-casino-at-belmont

[195] Steve Smirti, "Deal brokered ending VLT's at Belmont," LIHerald.com, March 31, 2016.
https://www.liherald.com/stories/deal-brokered-ending-vlts-at-belmont,78332?page=1

[196] Timothy Bolger, "Suffolk Pols Nix Bill Opposing Medford Casino Plan," *Long Island Press*, March 3, 2015.
https://www.longislandpress.com/2015/03/03/suffolk-pols-nix-bill-opposing-medford-casino-plan/

[197] Rick Chalifoux, "Hitting the Jackpot," *The Suffolk County News*, January 5, 2017.

significant share of the incremental GGR (as projected in Figure 146) could be at risk, but still appears to be limited to a potential maximum GGR impact of 5 percent.

Additionally, Spectrum estimates that the GGR at risk for any other venue in the market from Shinnecock would be less than 2 percent, and probably less than 1 percent.

As shown elsewhere in Spectrum's analyses, the Long Island market is underserved with regard to gaming. Our estimates for the potential incremental GGR generation for this region residents range from $605.7 million to $1.13 billion. In order to capture this potential, new or expanded gaming facilities in the Downstate region would be necessary. Adding capacity to Jake's 58 would likely increase the gaming spend by Long Island residents. Such additional gaming capacity would likely also necessitate food and beverage ("F&B") expansion in order to accommodate the related increase in patron F&B needs. However, we note that there may be limited space to make such an expansion at Jake's 58, and any change in permitted gaming positions would have a statutory impact on permissible gaming positions at Resorts World New York City, as they are linked.

c. Upstate

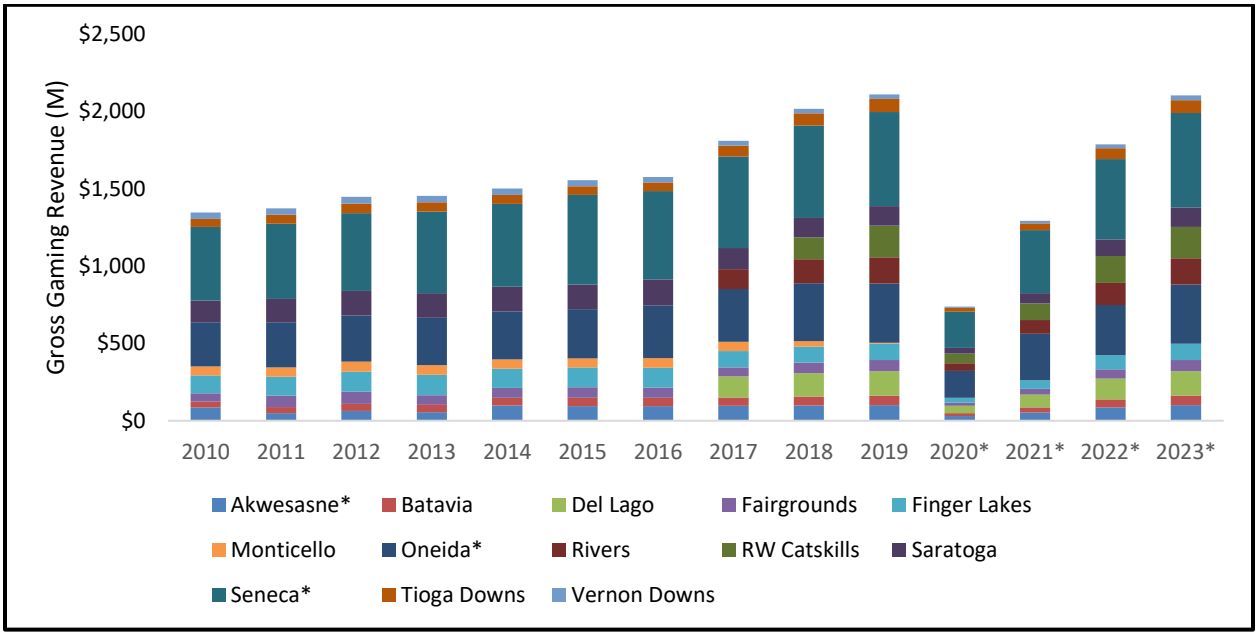
The 50-county Upstate market contains all four commercial casinos opening in the past four years. Upstate is also home to all of the Indian gaming operations in the state, as well five of the state's eight VLT facilities.

The residents of the Upstate market, the largest geographically, are well served by the existing operators. While there may be isolated areas where a new, small casino could be successful, adding capacity or amenities to existing operations would for the most part redistribute the existing regional market GGR rather than grow the market enough to warrant the attendant capital expense. The addition of hotel and resort amenities at select properties could, however, allow such operators to tweak their business models. That would result in a small amount of incremental visitation from out-of-market tourists and convention/meeting business, although significant capture of these market segments has thus far proven elusive for the existing commercial casino operators.

1) Previous Gaming Revenue Growth

The Upstate gaming facilities in 2019 generated GGR of $2 billion. The chart and table below show the yearly change in GGR from 2010 through 2019, as well as Spectrum's forecasts through 2023 that factor in the anticipated impacts that the COVID-19 epidemic will have on gaming in New York, as detailed in Section A of this report.

Figure 147: Upstate gaming facility GGR by property, 2010-2023 (chart)



Source: New York State Gaming Commission, Spectrum Gaming Group. *Spectrum estimate

Figure 148: Upstate gaming facility GGR by property, 2010-2023 (table)

Annual GGR ($M)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2021*	2022*	2023*
Akwesasne*	85.3	49.1	64.0	55.9	99.2	94.8	94.7	97.5	98.5	100.5	30.2	52.8	85.4	100.5
Batavia	37.7	39.8	45.1	46.5	49	52.6	53.4	53.9	57.6	62.1	18.6	32.6	52.8	62.1
Del Lago								136.3	151	158.0	47.4	83.0	134.3	158.0
Fairgrounds	55.0	73.4	79.2	63.5	65.1	69.6	66.4	56.3	68.2	71.8	21.5	37.7	61.0	71.8
Finger Lakes	115.7	122	129.6	131.5	124.4	127.4	128.8	107.5	104.2	105.3	31.6	55.3	89.5	105.3
Monticello	57.4	60.9	63.9	62.8	59.1	59.3	61.1	58.5	34.5	6.1				
Oneida*	286.6	292.4	298.4	304.5	310.7	317.1	342.8	341.2	375.9	383.4	172.4	301.6	325.6	383.0
Rivers								128.2	154.4	168.9	50.7	88.7	143.6	168.9
RW Catskills									140.6	204.6	61.4	107.4	173.9	204.6
Saratoga	139.7	150.4	159.8	159.6	158.8	160.9	167.2	137.4	126.4	126.4	37.9	66.4	107.4	126.4
Seneca*	475.7	486.6	502.5	528.6	536.8	578.0	571.4	592.3	598	610.0	233.1	407.9	518.5	610.0
Tioga Downs	53.0	57.0	61.7	59.6	57.0	57.0	54.4	69.2	78.2	83.1	24.9	43.6	70.6	83.1
VernonDowns	41.3	42.3	43.7	41.5	41.5	39.1	37.0	31.2	29.0	29.3	8.8	15.4	24.9	29.3

Source: New York State Gaming Commission, Spectrum Gaming Group. *Spectrum estimate

From 2015 to 2019, the total GGR for gaming facilities in the Thruway corridor – from Vernon Downs in the East to Seneca Allegany in the Southwest – grew at about the rate of inflation, as shown in Figure 149. While the existing operators in the market posted a modest GGR decline with the opening of del Lago Resort and Casino (a 1 percent decline from 2016 to 2017), marketwide GGR has regained those

losses and grown at the rate of inflation.[198] The addition of the $425 million del Lago Resort & Casino to the market grew GGR by $157 million. The property itself has been unable to capture or cannibalize large portions of the market held by Indian casinos, has been unable to capture significant tourism visits, and therefore has been unable to reach its pre-opening forecasted GGR.

Figure 149: GGR at Upstate Thruway corridor casinos, 2015-2019

CY GGR ($M)	2015	2016	2017	2018	2019	$ Ch	% Ch
All Seneca*	$578	$571	$592	$598	$610	$32	5.53%
Batavia Downs	$53	$53	$54	$58	$62	$9	16.98%
Fairgrounds	$65	$64	$59	$59	$64	($1)	-2.18%
Finger Lakes	$127	$129	$108	$104	$105	($22)	-17.32%
All Oneida*	$317	$343	$341	$376	$383	$66	20.82%
Vernon Downs	$39	$37	$31	$29	$29	($10)	-25.64%
All except del Lago	**$1,179**	**$1,198**	**$1,185**	**$1,224**	**$1,253**	**1.54% CAGR**	
Del Lago 1/31/17			$136	$151	$157		
All Gaming	**$1,179**	**$1,198**	**$1,322**	**$1,375**	**$1,410**	**4.57% CAGR**	

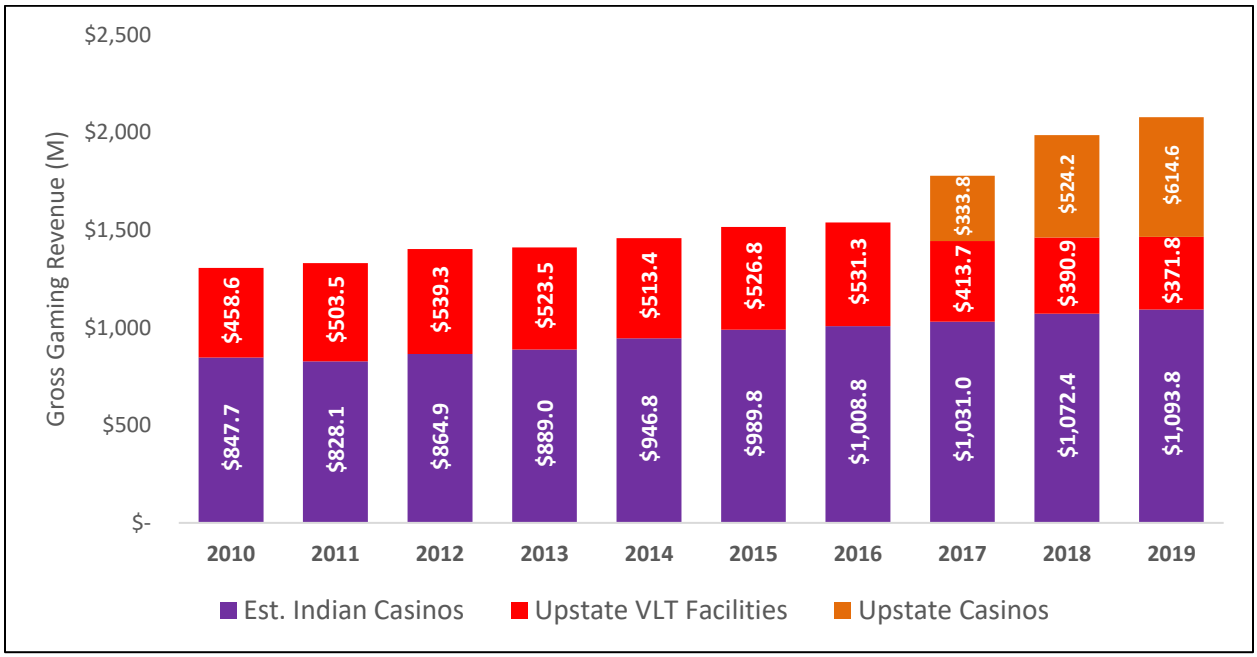
Source: New York State Gaming Commission, New York State Comptroller, Spectrum Gaming Group. *estimated

From 2010 through 2019 there were many changes in the market, yet overall GGR grew relatively little. Figure 150 shows the division of the Upstate GGR by segment. The Indian casinos are incumbents, with a degree of customer loyalty, and have retained or grown market share.

Growth in the Indian segment has come primarily from the enhancements at the Seneca Buffalo Creek Casino and the additions of Point Place Casino and Yellow Brick Road Casino by the Oneida. In the past decade, Seneca Buffalo Creek Casino grew from a 457-machine "slot house" to a full casino with 1,100 machines, 30 table games and several dining options. The expansion at that property likely cannibalized revenue from the VLT facility at Fairgrounds in Hamburg, which experienced a GGR decline of $4.7 million from FY 2015 to FY 2017. The Oneida additions appear to have impacted GGR at Vernon Downs, which experienced a GGR decline of $7.7 million in that same period, and likely captured play that otherwise would have gone to del Lago.

[198] During this period, the distribution of GGR shifted, with the Seneca expansion of Buffalo Creek taking share from properties near Buffalo, the Oneida capturing market share near Syracuse, and Finger Lakes revenue being eroded by del Lago.

Figure 150: Upstate GGR by segment, 2010-2019



Source: New York State Gaming Commission, New York State Comptroller, Spectrum Gaming Group

2) Potential for Future Growth

It has been suggested that the addition of amenities to existing Upstate gaming properties – including more hotel rooms, enhanced meeting space, and other features – would make the Upstate commercial casinos more attractive to tourists and meeting and event planners. The hope is that additional amenities could also recapture market share from out-of-state properties, as well as potentially increase market penetration by attracting some level of spending from adults who otherwise would not visit a gaming facility.

To grow their individual market shares, properties could add amenities to draw players, although Spectrum's analysis (Figure 115) shows that the regional market is already capturing 88 percent of the available potential. Any such additional amenities would likely result in market shifts, or cannibalization of one's competitors, rather than growing the market as a whole. It is also possible that facility expansions could be countered by more aggressive marketing efforts by competitors, in which case nobody wins.

From the standpoint of a single property – for instance, Finger Lakes – a regional meeting that shifts from Turning Stone or a Rochester hotel is a plus. But from the perspective of tourism and meeting potential statewide, it is a zero-sum game. In a saturated market such as Upstate, adding amenities or capacity to one property will not grow the market significantly. Any growth in Gaming Facility A likely comes at the expense of Gaming Facility B. The experience of the casinos along the New York Thruway

bears this out. The compound annual growth rate for GGR in the period was 1.42 percent. Annual inflation in that period averaged 2.1 percent,[199] meaning that in real terms GGR was shrinking.

3) Upstate – Conclusion

In the saturated Upstate market, investment in amenities would likely only shift GGR among properties rather than grow GGR marketwide. Simply adding more gaming machines and table games does not add people to play them, unless any particular property is operating at or near capacity during periods of peak demand. Any capital investment in the Upstate market would have to achieve one or more goals that are in the common interest of the state and the operator, such as:

- Capturing or recapturing gaming spend from out-of-state gaming properties.
- Expanding the demographic and/or geographic reach of gaming operators to attract more adults who presently offer little to no visitation to gaming properties.
- Extending the length and frequency of gaming visits from existing customers.

The analyses of potential growth in gaming spend for Upstate are re-presented and summarized in Figure 151. All of the methods of analysis indicate that there is no room for revenue growth in the Upstate market.

Figure 151: Upstate gaming spend growth potential by comparison of methods of analysis

	GGR
Current GGR (2019)	**$2,020,855,105**
Method 1: GDP	
Potential GGR	$1,883,804,000
Growth Potential	($137,051,105)
Method 2: Participation and Spend	
Potential Gaming Spend	$1,624,803,490
Growth Potential	($396,051,615)
Method 3: Spend per Adult	
Potential Gaming Spend	$1,265,582,289
Growth Potential	($755,272,816)
Method 4: Theoretical Gaming Visits	
Potential Gaming Spend	$1,114,852,929
Growth Potential	($755,072,233)
Method 5: Disposable Income	
Potential Gaming Spend	$1,379,916,053
Growth Potential	($640,939,052)

Source: Spectrum Gaming Group

[199] U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCSL], retrieved from FRED, Federal Reserve Bank of St. Louis, on May 28, 2020. https://fred.stlouisfed.org/series/CPIAUCSL

Figure 152 displays the averages of the five methods of estimating potential gaming spend for Upstate. While the true potential for each market likely lies somewhere within the five methods of estimation, Spectrum believes it is reasonable to assume the market potential for each region equals the average of the analysis methods, as shown below. The Upstate region, currently estimated to be generating approximately $2.02 billion in GGR, is operating above its reasonable potential of $1.48 billion,[200] indicating market saturation and no future growth potential. While higher than average gaming participation and spend by the regional population appear evident from the model results, this region's gaming properties also draw from those living in other regions as well as tourists, increasing realized GGR to seemingly over-saturated levels. . A portion of the current GGR is generated from visitors to the Upstate region from Pennsylvania and Ontario. Based on our experience in the market, Spectrum believes this to be approximately $200 million across all Upstate properties including commercial casinos, Indian casinos and VLT facilities.

Figure 152: Assumed gaming spend potential for Upstate

(GGR in M)	Upstate
Current GGR (2019)	$2,021
Est. Potential (average)	$1,484
Growth Potential	**-$537**

Source: Spectrum Gaming Group

[200] It should be noted that the figure of -$537 million is not a projection for revenue declines, but rather an indicator of market saturation.

I. Analysis of Gaming-Tax Rates

In New York, as in any other market, the critical factors that will determine the future of gaming include location, the tax rate combined with license fee, and other local factors. Political considerations have driven the authorization and expansion of gaming in New York for decades. Going forward, one goal is to develop future policies and practices in an environment that is effectively free of political pressures, in which decisions are rendered on an economic basis. The goal of making policy decisions that are free of political considerations may be laudable, but it flies in the face of harsh realities, such as:

- Generally, policymakers in New York cannot relocate gaming facilities. The existence of gaming facilities is fixed, and policies must be developed that recognize that reality. The geographic location of a gaming property is a key determinant, with future success being dependent on variants that include distance to population centers, the size and demographics of that target market, the existence of a tourism infrastructure (or the lack thereof) and the existing or future presence of competition.
- Political leadership can do little or nothing to alter any of those location-dependent factors. Taxes, however, are entirely different and are entirely within the power and purview of political leadership to set and alter.
- Location and gaming tax requirements work in tandem to help establish the business model that gaming operators can adopt, and they ultimately combine to determine to a great degree whether a gaming operation will succeed or fail in its goals of being both profitable and productive in meeting its public policy goals.
- A property in a less-than-desirable location that faces a high tax burden will develop a convenience-based business model in which it is wholly or nearly wholly dependent on its access to nearby population centers. Its ability to enhance tourism or attract meetings and conventions will range from limited to non-existent.
- That, in turn, means that the property will be limited in its non-gaming offerings and employment levels. As the following sections makes clear, the reverse is also true for operations with access to large population centers.

Additional complicating factors include the realities that:

- Existing rules that operators already abide by cannot, in most instances, be altered or amended easily, if at all. Such rules – which include prohibitions on table games at VLT facilities – are set within the State Constitution or, in certain instances, within compacts negotiated between the State and Indian nations.
- State government has few tools that can improve the economic conditions of gaming properties or make such properties operate more efficiently and in the best interests of operators, local communities and the State.

Over time, New York developed differing gaming tax rates, different VLT commission rates, special exceptions to rates, rebates on certain payments, and other nuances that have ranged from effective to confusing.

1. Current Tax Rates

In FY 2004, three VLT facilities (Saratoga, Finger Lakes, and Hamburg) opened in New York. The effective tax rates for VLT facilities have declined from 61 percent in the first year after opening, FY 2004, to 43.2 percent in FY 2021, a 17.8 percentage-point drop or 29 percent decline. The declines in effective tax rates varied across VLT facilities, with Vernon seeing the largest decline.

There are three VLT facilities whose effective tax rate is currently lower than their tax rate:

- Saratoga and Finger Lakes receive an additional commission (up to 10 percent of their prior year GGR) at the expense of their education contribution to offset the impact of the nearby competing casinos.
- Vernon Downs also receives a 6.4 percent additional commission at the expense of its education contribution (effective until March 31, 2023) and receives an additional 7.5 percent from the 10 percent administration allowance for operating expenses, provided it causes it to no more than breakeven; this is in effect until June 21, 2021. The administration allowance retained is included as a reduction to its FY 2021 effective tax rate as it is a portion of revenue the facility is receiving at the expense of the State that no other operator is allowed. This adjustment is not made for the effective tax rate calculation in prior years which only reflect education revenue.

In total, these additional commissions reduced FY 2020 total tax liability by $24 million and an additional $1.3 million was directed to Vernon from the State's administrative allowance.

Since the effective tax rate is calculated based on the total tax revenue as a share of total GGR, the effective tax rates for these three VLT facilities are substantially lower than their tax rates. Effective tax rates for any and all years reflect the negative impact these additional commissions have on tax revenue. Please note that FY 2021 tax revenue amounts in subsequent figures reflect FY 2021 rates applied to FY 2020 GGR.

Figure 153: Effective tax rates for current VLT facilities in New York

	Opening Date	Effective Tax Rate, First Year of Opening	Effective Tax Rates, FY 2021	Percentage Difference
Statewide		**61.0%**	**43.2%**	**17.8%**
Batavia Downs Casino	May, 2005	50.0%	39.0%	11.0%
Empire City	October, 2006	55.8%	50.5%	5.3%
Finger Lakes	February, 2004	61.0%	36.5%	24.5%
Hamburg	March, 2004	61.0%	34.0%	27.0%
Jake's 58	February, 2017	45.0%	45.0%	0.0%
Nassau OTB at Resorts World NYC	October, 2016	45.0%	45.0%	0.0%
Resorts World NYC	October, 2011	44.0%	40.0%	4.0%
Saratoga	January, 2004	61.0%	36.5%	24.5%
Vernon Downs	October, 2006	50.0%	20.1%	29.9%

Source: New York State Gaming Commission. **Notes:** Tioga Downs VLT was opened in July 2006 and closed in November 2016. Monticello was opened in June 2004 and closed in April 2019.

The 2013 constitutional amendment allowed New York to enact a law permitting the licensing, regulation, and taxation of commercial casinos. New York has a flat tax rate on slot machines at casinos, but the tax rates vary from casino to casino, with Tioga and del Lago paying 37 percent, Resorts World paying 39 percent, and Rivers paying 45 percent. These slot tax rates were equivalent to the lowest tax rate tier of the nearby competing VLT facility in a casino's respective region at that time. However, all four casinos pay substantially lower tax of 10 percent on table games, poker tables, and sports wagering. Finally, all casinos also pay an annual license fee of $500 for each slot machine and table game. In New York, the tax from commercial casinos is distributed in the following manner: 80 percent goes to education and property tax relief, 10 percent is split equally between the host municipality and the host county, and the remaining 10 percent is split among non-host counties within the region on a per capita basis.[201]

Figure 154 shows slot tax rates vs. effective tax rates for all four commercial casinos in New York. The effective tax rate is calculated based on the total tax revenue as share of total GGR. As mentioned, the tax rates on table games, sports wagering, and poker tables are set at 10 percent. Therefore, effective tax rates are substantially lower compared to tax rates on slots. Moreover, the total effective tax rate is substantially lower compared to the total effective tax rate on VLT facilities. The effective tax rate across all four commercial casinos is 30.3 percent compared to a 43.2 percent effective tax rate across all VLT facilities in New York.

Figure 154: Slot tax rates vs. overall effective tax rates at commercial casinos in New York State (including sports wagering) as of 2020

	Opening Date	Current Slot Tax Rate	Current Effective Tax Rate	Percentage Difference
Tioga Downs	December, 2016	37.0%	33.0%	-4.0%
Del Lago	January, 2017	37.0%	29.7%	-7.3%
Rivers	February, 2017	45.0%	34.6%	-10.4%
Resorts World Catskills	February, 2018	39.0%	26.3%	-12.7%
Statewide (based on total GGR and total tax revenue)		**39.8%**	**30.3%**	**-9.5%**

Source: New York State Gaming Commission

2. Achieving Tax Fairness

The history of legalized gaming in the United States, as noted in **Appendix J**, shows that tax rates are largely determined through a combination of political and market realities. The rates are effectively a function of what can be achieved politically in combination with what any specific market can bear. However, neither market nor political realities remain fixed over time.

As New York seeks to understand and revise its tax policies, one goal is to ensure that political pressures do not play an outsized role, and market realities should play a greater determinant role in the revision of tax policies.

[201] New York State Assembly Ways and Means Committee, "New York State Economic and Revenue Report, Fiscal Years 2019-20 and 2020-21," February 2020. https://nyassembly.gov/Reports/WAM/2020economic_revenue/2020economic_revenue_report.pdf

New York is one of the few states that imposes various tax rates on various facilities, a reality that has created issues and questions regarding equity and fairness. New York, however, is a highly diverse state in every sense, as this report makes clear. One statewide rate is simply not a reasonable option in the face of such economic and demographic diversity.

Our research into achieving tax fairness examined a range of options, including assessing rates based on factors such as capital amortization or the asset valuation of each facility. The benefits of such options are that they are established through pure quantitative measures that, by definition, remove political considerations while they presumably would encourage capital investment if greater investment translates into lower tax obligations. The downside, however, is that such factors are highly dependent on state law and statutory limitations. Developing tax rates on measures that are ostensibly quantitative and apolitical would require imposing similar measures on both facilities that are allowed to offer table games and those that cannot. Statutory proscriptions that are in place do not allow such divergent facilities to offer similar business models or to offer similar capital structures.

At the same time, however, the goal of achieving equity and fairness between properties that compete within the same geographic space for a share of wallet from the same adults needs to be considered in an environment free of political concerns that is focused on market-based realities that, in turn, are centered on core principles, including:

- A gaming license, whether for a VLT operation or a commercial casino, is a privilege granted to entities that can affirmatively demonstrate their good character, honesty and integrity and that will operate facilities that advance certain public policies, including expanding employment and other economic opportunities for the State and for their regions.
- The State cannot simply grant tax relief in the absence of any understanding or promise that the proceeds from such relief will advance those public policies.
- The responsibility for promoting that understanding and making those promises lies squarely with the licensed operators, in line with the principle that they have been granted a special privilege by the public.

Specifically, for a tax rate to be established on an economic, rather than a political foundation, certain factors would have to be in place:

- The rates would have to be established before licenses were granted, capital was invested, and properties were built. While states can – and clearly should – continually evaluate tax rates based on changing economic, demographic, and industry conditions, the reality is that the initial tax rate is a critical element in determining the original business model and level of capital investment.
- The rates would have to be sufficiently competitive and attractive, as capital will flow toward the investment opportunities that offer the greatest reward balanced by acceptable risk.
- The rates would have to be established at a level that would allow operators to pursue the most advantageous business model acceptable in that geographic region.
- Most important, the capital program that accompanied these optimal rates would have to pursue that most advantageous business model to qualify for licensure.

To put that point another way, if a property's business model and capital investment are structured to focus on the local market that would be attracted to convenience-based gaming, it would make no sense in most instances for the state to lower an existing tax rate. Because the taxable gaming revenue would not grow under a lower rate, the state would be leaving money on the table.

However, as our analysis notes, a lower tax rate may be needed in some instances simply to allow a gaming property to remain open and operational. This analysis harkens back to the core point made in the initial introduction to this entire report: Any change in gaming policy in New York must be built on what already exists. That means that tax policy must be considered in light of the properties that have been authorized and are operating, and it must start with the tax rates that are presently in place.

Investment decisions were made to develop properties based on current tax rates in existing locations. Lowering the tax rate for any operator in the absence of a clear public benefit for such relief would not be in the State's interest.

We also note that, in our analysis, we suggest rates for potential integrated resorts in the New York City area that might arguably be lower than operators pay in other New York markets. That lower rate, however, would be accompanied by requirements for significantly greater capital investment to develop a more robust business model that captures more revenue streams, employs more people and advances more public policies, including tourism development. Potential integrated resorts in that market would also be required to pay an upfront license fee of $500 million, an advance on future tax revenues that other operators have not been required to pay.

As emphasized throughout this analysis, fairness can best be achieved by allowing operators to petition the State for tax relief, and the State can determine the general parameters that would be considered in reviewing such petitions, including the core question: How will the operator leverage the benefits of tax relief? Options could include an increase in promotional spending, or to fund capital improvements. At the same time, certain operators might simply seek a level playing field within their region to obtain a fair market share, or in the worst case, tax relief may be needed for an operation to continue servicing its debt and to remain a going concern.

At the very least, the State needs to understand the use of any proposed tax relief to avoid potential scenarios in which the relief would be used for purposes that the State would not deem to be necessary, such as to invest in facilities outside New York, or to repurchase stock or pay dividends.

As noted below, Spectrum analyzed the tax-rate equalization alternative and concluded that equalization is not feasible without a significant loss in tax revenue. Spectrum also analyzed several alternative scenarios such as VLT uniform tax rates, tax rates based on GGR (revenue neutral, progressive, graduated and modified graduated),[202] commercial casino tax relief and our recommended approach, a robust petition process. Due to the proximity of these facilities, in the Upstate region, such approaches would clearly impact the competitive dynamics of the industry.

[202] A graduated tax rate would likely mean that VLTs and casinos pay different effective tax rates. This is in contrast to an equalized rate.

3. Assessment of Impacts of Tax-Rate Equalization

Equalizing tax rates for properties in different markets that operate different business models would be neither fair nor would it be good public policy. Tax parity requires policy parity. If New York policymakers were to establish one tax rate for all gaming properties it would presumably have to be at or near the revenue-sharing rate paid by tribal operators – 25 percent on slots and 0 percent on tables – to meet a definition of statewide parity.

Implementation of a rate that would be anything close to that level would, in the absence of additional capital investment by operators, be quite costly to the State. From March 2019 to February 2020, the State received more than $1 billion in revenue from slots and VLTs at commercial casinos and video lottery facilities, on taxable revenue of $2.6 billion.

If this same level of revenue was taxed at 25 percent, the tax revenue would have been $626 million in FY 2020, or only 58.7 percent of what the State received under current rates. Generating the same volume of tax revenue at a 25 percent slot or VLT tax rate, taxable revenue would need to increase to $4.3 billion, a goal that is not attainable by the existing gaming facilities. The shortfall between actual tax revenue and potential tax revenue under that equalized rate is shown in Figure 155 for the past 17 fiscal years:

Figure 155: Fiscal shortfalls under equalized rate, FY 2004-FY 2020

	VLT Tax Revenue Analysis				Casino Tax Revenue Analysis (Includes Taxes on Sports Wagering)			
	Education Contribution ($)	Effective Tax Rate	Education Contribution ($) (25% Tax on Slots)	Estimated Lost Tax Revenues ($) under 25% Scenario	Gaming Tax ($)	Effective Tax Rate	Gaming Tax ($) (25% Tax on Slots)	Estimated Lost Tax Revenues ($) under 25% Scenario
FY 2004	13,283,108	61.0%	5,443,897	(7,839,211)				
FY 2005	141,348,192	61.0%	57,929,587	(83,418,605)				
FY 2006	162,021,558	51.3%	78,925,126	(83,096,432)				
FY 2007	273,489,255	52.3%	130,667,133	(142,822,122)				
FY 2008	480,029,774	54.8%	218,820,321	(261,209,452)				
FY 2009	429,913,540	44.5%	241,268,594	(188,644,947)				
FY 2010	463,961,399	44.7%	259,312,039	(204,649,360)				
FY 2011	521,339,952	47.0%	277,390,560	(243,949,392)				
FY 2012	667,041,170	46.8%	356,696,039	(310,345,130)				
FY 2013	831,920,649	45.6%	456,342,234	(375,578,415)				
FY 2014	870,196,511	45.5%	478,079,952	(392,116,559)				
FY 2015	866,900,960	45.5%	476,327,133	(390,573,827)				
FY 2016	906,034,098	45.6%	496,843,217	(409,190,881)				
FY 2017	903,194,342	45.2%	499,151,841	(404,042,501)	23,425,384	32%	15,570,885	(7,854,499)
FY 2018	888,244,335	43.7%	508,672,573	(379,571,762)	118,145,452	31%	78,273,346	(39,872,106)
FY 2019	911,928,426	43.8%	520,609,990	(391,318,436)	170,211,499	31%	113,360,266	(56,851,233)
FY 2020	882,736,545	43.8%	503,469,116	(379,267,429)	183,716,527	30%	122,477,030	(61,239,497)
Total	**10,213,583,812**	**45.9%**	**5,565,949,352**	**(4,647,634,461)**	**495,498,861**	**31%**	**329,681,527**	**(165,817,335)**

Source: New York State Gaming Commission, Spectrum Gaming Group. **Notes:** Analysis in this table is based on the flat tax rate of 25 percent for all slots and 10 percent tax rate for table games, poker tables, and sports wagering. Monticello was closed in April 2019, but is included in this analysis for more complete historic analysis.

4. Reconsidering a Restructured Tax Model

Spectrum's analysis began with the premise that tax rates could be reconsidered and restructured statewide, assuming a blank slate for all non-tribal gaming facilities. We sought an economic calculation that could theoretically be applied to multiple gaming facilities, even within regions in which properties compete against each other, but operate under different rules. This would apply to regions in which commercial casinos compete against VLT facilities, even though they must function under differing proscriptions. The most visible examples are that VLT facilities cannot offer table games or retail sports wagering, and they are limited to certain suppliers, putting them at a disadvantage to commercial casinos. At the same time, however, VLT facilities do not have to allocate capital for the purchase of slot products, as do commercial casinos.

While virtually every gaming state bases gaming taxes on a variation of a percentage of gross gaming revenue ("GGR"), Spectrum examined whether a different basis could be developed.

a. Uniform Tax Rates for VLT operators

The VLT facilities in New York pay differing effective tax rates that initially were derived through the VLT implementation process, and later varied as a result of competitive pressures from other forms of gaming. The VLT operators act as agents of the Lottery, which means that the operators in most cases own the facilities but not the 17,181[203] video lottery terminals ("VLTs") at those facilities; the New York Lottery owns the terminals. Slot machines generally average about $20,000 per unit if purchased outright. The Lottery has an estimated $343 million invested in VLTs. These machines generated $883 million in Education Contribution in the fiscal year ended March 31, 2020. That would appear to be a good investment.

The "Effective Tax Rate" for the VLT operators in FY 2021 will range from 20.1 percent to 50.5 percent. On average, in FY 2021 the VLT operators will pay 43.2 percent (which includes the reductions from additional commissions and administrative allowance retention) to fund education. So the same 43.2 percent rate could apply to all operators to preserve education funding while eliminating the additional commissions and administrative allowance retention. Figure 156 below provides the FY 2020 results if the 43.2 percent rate were applied to all VLT facilities.

[203] New York State Gaming Commission Statewide Video Gaming Terminals Fiscal Year 2019/20 https://www.gaming.ny.gov/pdf/finance/Web%20Site%20Report%20-%20Statewide%20Totals.pdf

Figure 156: FY 2019-2020 VLT GGR, education contribution and operator revenue at 43.2% rate

VLT Operator	VLT GGR FY 2020 ($M)	Effective Tax Rate FY 2021	"Tax" Revenue ($M)	Uniform 43.2% Rate	"Tax" Revenue under 43.2% rate ($M)	$ Change from Effective Rate ($M)	% Change from Effective Rate
Batavia Downs	60.1	39.0%	23.4	43.2%	26.0	2.5	10.8%
Empire City	576.6	50.5%	291.2	43.2%	249.1	(42.1)	-14.5%
Finger Lakes	102.1	36.5%	37.3	43.2%	44.1	6.8	18.4%
Hamburg	62.3	34.0%	21.2	43.2%	26.9	5.7	27.1%
Jake's 58	218.7	45.0%	98.4	43.2%	94.5	(3.9)	-4.0%
Nassau OTB at RWNYC	217.7	45.0%	98.0	43.2%	94.1	(3.9)	-4.0%
Resorts World New York City	625.9	40.0%	250.4	43.2%	270.4	20.0	8.0%
Saratoga	121.1	36.5%	44.2	43.2%	52.3	8.1	18.4%
Vernon Downs	28.4	20.1%	5.7	43.2%	12.2	6.6	114.9%
Statewide VLT Facilities	**2,012.8**	**43.2%**	**869.7**	**43.2%**	**869.5**	**(0.2)**	**0.0%**

Source: New York State Gaming Commission, Spectrum Gaming Group.

A straight assessment of 43.2 percent would negatively impact the Upstate facilities while benefiting some of the Downstate facilities. Hamburg, Vernon, and Batavia (three of the VLT facilities in highly competitive markets) would see large increases in payments to education, reducing the income for the operators. Empire City, in a less competitive environment would see a reduction in education payments. Two other facilities – Jake's 58 and Nassau OTB would also see slight reductions in education payments.

b. Revenue Neutral Tax Rates Based on GGR

An alternative that is revenue neutral to education, but accommodates the fact that properties with lower GGR levels require a greater percentage of GGR to cover fixed costs is outlined below. A plan that would set "tax" rates based on the average GGR of the VLT operation for the prior three fiscal years on a set schedule, as detailed in Figure 157 below. The rate of "tax" would be based on the average GGR achieved by the VLT facilities in the prior three fiscal years. These rates factor in that the additional commissions and administrative allowance retention would no longer be paid out.

Figure 157: Revenue-neutral "tax rates"

GGR (M)	"Tax Rate"
Under $40	20%
$40- $75	30%
$75 - $150	35%
$150 - $250	45%
Over $250	46%

Source: Spectrum Gaming Group

Figure 158: Revenue-neutral VLT GGR "tax rates"

VLT Operator	VLT GGR FY 2020 ($M)	Effective Tax Rate FY 2021	"Tax" Revenue (M)	Revenue Neutral Rate	"Tax" Revenue under neutral rate ($M)	$ Change from Effective Rate ($M)	% Change from Effective Rate
Batavia	60.1	39.0%	23.4	30.0%	18.0	(5.4)	-23.1%
Empire City Yonkers	576.6	50.5%	291.2	46.0%	265.2	(25.9)	-8.9%
Finger Lakes	102.1	36.5%	37.3	35.0%	35.7	(1.5)	-4.1%
Hamburg	62.3	34.0%	21.2	30.0%	18.7	(2.5)	-11.8%
Jake's 58	218.7	45.0%	98.4	45.0%	98.4	0.0	0.0%
Nassau OTB	217.7	45.0%	98.0	45.0%	98.0	0.0	0.0%
Resorts World NYC	625.9	40.0%	250.4	46.0%	287.9	37.6	15.0%
Saratoga	121.1	36.5%	44.2	35.0%	42.4	(1.8)	-4.1%
Vernon	28.4	20.1%	5.7	20.0%	5.7	(0.0)	-0.5%
Statewide VLT Facilities	**2,012.8**	**43.2%**	**869.7**	**43.2%**	**870.0**	**0.3**	**0.0%**

Source: Spectrum Gaming Group

This exercise effectively puts each of the VLT facilities into one of five tiers:

- Vernon Downs with average annual GGR of under 30 million in the prior three Fiscal Years would have a "tax rate" of 20 percent (which takes into account that the additional commission and administrative amount are no longer paid out).
- The two VLT facilities with average annual GGR between $40 million to $75 million in the prior three Fiscal Years, Batavia Downs and Hamburg Gaming would have a "tax rate" of 30 percent.
- The two VLT facilities that generated GGR of between $75 million and $150 million, Finger Lakes, and Saratoga, would pay a "tax rate" of 35 percent (which takes into account that the additional commissions are no longer paid out).
- The two VLT facilities operated on behalf of the OTBs, Jake's 58 and the Nassau OTB at RWNYC each generated between $150 and $250 million annually, and in this scenario would pay a "tax rate" of 45 percent.
- The two largest grossing VLT facilities, Empire and RWNYC, which each grossed over $250 million, would pay a "tax rate" of 46 percent. RWNYC is the only facility that would pay a higher tax rate under this proposal, as compared to its FY 2021 effective tax rate.

c. Progressive or Graduated Tax

Another means to rationalize the tax structure would be to implement a graduated GGR tax, or allow properties to suggest such rates when petitioning for tax reform. Such structures exist in various states (including Illinois, Indiana and Mississippi) although in such states, the rates are imposed by legislation and are not proposed by individual properties seeking such relief. Notably, in 2019, New York simplified the VLT rate structure by reducing the number of tax rates from over 20, including different tiers depending on GGR level, to just seven flat tax rates.

As the properties generate more GGR, the marginal tax rate on the GGR increases. This enables the property to retain more of the first dollar of GGR to pay operating expenses (as discussed below in

more detail regarding Colorado). The same graduated rate structure could be applied to the commercial casinos and the VLT operators, providing some parity in rates.

The table below shows how graduated rates could potentially work in New York. Note that the higher rates would only be levied on the incremental revenue, which helps ensure that properties would have an incentive to pursue greater GGR.

Figure 159: Example of graduated tax rates for non-EGD (slots and VLTs) gaming and EGD gaming

Tax Rate on Non-EGD Gaming GGR		
From	To	
$ -	$ 5,000,000	10.0%
$ 5,000,001	$ 10,000,000	12.5%
$ 10,000,001	$ 15,000,000	15.0%
$ 15,000,001	$ 25,000,000	17.5%
$ 25,000,001	$ 40,000,000	20.0%
$ 40,000,001		22.5%

Tax Rate on Slot & VLT (EGD) Gaming GGR		
From	To	
$ -	$ 25,000,000	30%
$ 25,000,001	$ 50,000,000	35%
$ 50,000,001	$ 75,000,000	40%
$ 75,000,001	$ 125,000,000	43%
$ 125,000,001	$ 150,000,000	45%
$ 150,000,001	$ 250,000,000	48%
$ 250,000,001		50%

Source: Spectrum Gaming Group

If the graduated tax structure presented in Figure 159 above were implemented in the commercial casinos, there would be slight increase in overall taxes, as shown below. As noted earlier, gaming is a high-fixed-cost business. A graduated GGR tax structure takes this into account. A flat GGR tax does not.

Figure 160: Estimated commercial casino GGR tax revenue using graduated tax in example

Existing FY 2020 Taxes	Del Lago	Tioga	Rivers	RW Catskills	Total Upstate
Non-EGD Tax Revenue	$4,126,131	$1,191,401	$4,948,911	$9,043,042	$19,309,484
Slot (EGD) Tax Revenue	40,965,038	25,441,942	52,914,286	45,085,768	164,407,034
Total GGR Tax Revenue	**$45,091,169**	**$26,633,343**	**$57,863,197**	**$54,128,810**	**$183,716,519**
Tax Revenue as % of GGR	29.7%	33.0%	34.6%	26.3%	30.3%
Taxes under Graduated Example					
Non-EGD Tax Revenue	$6,908,794	$1,412,101	$8,760,048	$17,971,844	$35,052,786
Slot (EGD) Tax Revenue	41,429,434	23,754,802	44,349,603	43,506,925	153,040,764
Total GGR Tax Revenue	**$48,338,228**	**$25,166,902**	**$53,109,651**	**$61,478,769**	**$188,093,550**
Tax Revenue as % of GGR	31.8%	31.2%	31.8%	29.8%	31.1%

Source: Spectrum Gaming Group

The graduated tax structure could also be applied to the VLT operators, in an effort to standardize payments, and provide some relief to lower GGR generating operators or those in more competitive markets. An example of applying the graduated rates to the VLT operators is depicted below.

Figure 161: Estimated FY 2019-2020 VLT GGR and education contribution using graduated rates in example

VLT Operator	VLT GGR FY 2020 ($M)	Effective Tax Rate FY 2021	"Tax" Revenue ($M)	Effective Tax Rate under Graduated Tax Structure	"Tax" Revenue Using Graduated Rates ($M)	$ Change from Effective Rate ($M)	% Change from Effective Rate
Batavia Downs	60.1	39.0%	23.4	33.8%	20.3	(3.1)	-13.4%
Empire City	576.6	50.5%	291.2	46.9%	270.3	(20.9)	-7.2%
Finger Lakes	102.1	36.5%	37.3	37.1%	37.9	0.6	1.7%
Hamburg	62.3	34.0%	21.2	34.0%	21.2	(0.0)	-0.1%
Jake's 58	218.7	45.0%	98.4	42.1%	92.0	(6.4)	-6.5%
Nassau OTB at RWNYC	217.7	45.0%	98.0	42.0%	91.5	(6.5)	-6.6%
Resorts World NYC	625.9	40.0%	250.4	47.1%	294.9	44.6	17.8%
Saratoga Gaming & Raceway	121.1	36.5%	44.2	38.0%	46.1	1.9	4.2%
Vernon Downs	28.4	20.1%	5.7	30.6%	8.7	3.0	52.2%
Statewide VLT* (Excl. Monticello)	**2,012.8**	**43.2%**	**869.7**	**43.9%**	**882.8**	**13.1**	**1.5%**

Source: Spectrum Gaming Group

While applying graduated rates uniformly across the various forms of gaming in New York sounds appealing, the potential increase in tax revenues for some operators might raise concerns and objections.

This exercise underscores a key finding that the imposition of a statewide or regional rate on facilities regardless of type, will not, by itself, resolve the issue of fairness or prove to be tenable for all operators.

By way of example, tax rates could be based on the following structure:

- 35 percent for GGR of less than $100 million
- 40 percent for GGR of over $100 million but less than $250 million
- 45 percent for GGR of over $250 million but less than $500 million
- 50 percent for GGR of over $500 million but less than $1 billion
- 55 percent for GGR of over $1 billion

Graduated tax rates in such instances imply that the operator's effective tax rates would be lower than the marginal tax rate. In the interest of ensuring that the structure continues to provide optimal fairness, suggested tax brackets could be adjusted for inflation annually.

Under those potential graduated tax rates, six of the nine VLT facilities in New York would have paid less in tax revenues in FY 2020, two VLT facilities (Hamburg and Vernon) would have paid just slightly more, and Resorts World NYC would have paid $20 million more in tax revenues. All four commercial casinos would have paid more under the proposed graduated tax rates. The State would receive about $19.4 million less in tax revenues under the graduated tax rates in FY 2021. The revenue gains and shortfalls – as well as the difference between current effective tax rates and average tax rates under graduated tax structure – are shown in Figure 162 for FYs 2019-2021 by facility.

Figure 162: Revenues under graduated tax rates, FY 2019-FY 2021

Facility	Current Tax Revenues ($M)			Graduated Tax Revenues ($M)			Revenue Difference ($M)		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	24.6	23.5	23.4	20.5	21.0	21.0	(4.1)	(2.4)	(2.4)
Empire City Yonkers	306.6	290.5	291.2	260.5	245.8	245.8	(46.1)	(44.7)	(45.4)
Finger Lakes	31.6	43.1	37.3	36.5	35.8	35.8	4.9	(7.3)	(1.4)
Hamburg	20.8	21.2	21.2	20.8	21.8	21.8	(0.0)	0.6	0.6
Jake's 58	94.1	98.4	98.4	78.6	82.5	82.5	(15.5)	(15.9)	(15.9)
Nassau OTB	73.8	98.0	98.0	60.6	82.1	82.1	(13.2)	(15.9)	(15.9)
Resorts World NYC	299.7	250.4	250.4	306.0	270.4	270.4	6.3	20.1	20.1
Saratoga	42.7	48.9	44.2	45.3	43.4	43.4	2.6	(5.4)	(0.8)
Vernon	10.0	8.4	5.7	10.0	9.9	9.9	(0.0)	1.6	4.2
Total VLTs	***903.9***	***882.3***	***869.7***	***838.9***	***812.8***	***812.8***	***(65.0)***	***(69.5)***	***(56.9)***
Del Lago	46.6	45.1	45.7	56.2	55.8	55.8	9.6	10.7	10.1
Resorts World Catskills	44.0	54.1	54.4	60.8	77.4	77.4	16.9	23.3	23.0
Rivers	53.3	57.9	59.0	57.8	61.8	61.8	4.5	4.0	2.9
Tioga Downs	26.3	26.6	26.8	27.8	28.2	28.2	1.5	1.6	1.4
Total Casinos	***170.2***	***183.7***	***185.8***	***202.7***	***223.3***	***223.3***	***32.5***	***39.6***	***37.4***
Statewide total	**1,074.1**	**1,066.0**	**1,055.5**	**1,041.6**	**1,036.1**	**1,036.1**	**(32.5)**	**(29.9)**	**(19.4)**

Facility	Current Effective Tax Rate			Average Tax Rates under Graduated Tax Structure			Rate Difference		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	42.0%	39.1%	39.0%	35.0%	35.0%	35.0%	-7.0%	-4.1%	-4.0%
Empire City Yonkers	50.6%	50.4%	50.5%	43.0%	42.6%	42.6%	-7.6%	-7.8%	-7.9%
Finger Lakes	30.4%	42.3%	36.5%	35.2%	35.1%	35.1%	4.8%	-7.2%	-1.4%
Hamburg	35.0%	34.0%	34.0%	35.0%	35.0%	35.0%	0.0%	1.0%	1.0%
Jake's 58	45.0%	45.0%	45.0%	37.6%	37.7%	37.7%	-7.4%	-7.3%	-7.3%
Nassau OTB	45.0%	45.0%	45.0%	36.9%	37.7%	37.7%	-8.1%	-7.3%	-7.3%
Resorts World NYC	43.0%	40.0%	40.0%	43.9%	43.2%	43.2%	0.9%	3.2%	3.2%
Saratoga	33.9%	40.3%	36.5%	36.0%	35.9%	35.9%	2.1%	-4.5%	-0.6%
Vernon	35.0%	29.5%	20.1%	35.0%	35.0%	35.0%	0.0%	5.5%	14.9%
Total VLTs	***44.0%***	***43.8%***	***43.2%***	***40.9%***	***40.4%***	***40.4%***	***-3.2%***	***-3.5%***	***-2.8%***
Del Lago	30.4%	29.7%	30.1%	36.7%	36.7%	36.7%	6.3%	7.0%	6.7%
Resorts World Catskills	26.7%	26.3%	26.4%	37.0%	37.6%	37.6%	10.2%	11.3%	11.2%
Rivers	33.9%	34.6%	35.3%	36.8%	37.0%	37.0%	2.9%	2.4%	1.7%
Tioga Downs	33.1%	33.0%	33.2%	35.0%	35.0%	35.0%	1.9%	2.0%	1.8%
Total Casinos	***30.7%***	***30.3%***	***30.7%***	***36.6%***	***36.9%***	***36.9%***	***5.9%***	***6.5%***	***6.2%***
Statewide Total	**41.2%**	**40.7%**	**40.3%**	**40.0%**	**39.6%**	**39.6%**	**-1.2%**	**-1.1%**	**-0.7%**

Source: New York State Gaming Commission, Spectrum Gaming Group. **Notes:** Analysis in this table is based on the graduated tax rates of 35 percent for GGR under $100 million, 40 percent for GGR between $100 and $250 million, 45 percent for GGR between $250 and $500 million, and 50 percent for GGR between $500 million and $1 billion. These rates are applied to GGRs of all VLTs and casinos, including GGRs from table games, poker tables, and sports wagering. Monticello is excluded as the facility was closed in April 2019.

Figure 163 illustrates the assessment of another alternative tax structure and rate analysis. In this scenario, GGRs of all VLT facilities and slot GGRs of all casinos would be based on the following structure:

- 40 percent for GGR of less than $100 million
- 45 percent for GGR of over $100 million but less than $250 million
- 50 percent for GGR of over $250 million but less than $500 million

- 55 percent for GGR of over $500 million

On the other hand, table games and sports wagering at casinos would still be taxed at 10 percent. None of the VLT facilities can offer any table games or sports wagering. Under this scenario, the effective tax rates would be lower for three of the nine VLTs as well as for Rivers Casino in FY 2021. The State would receive about $44.5 million more in tax revenues under the graduated tax rates in FY 2021.

Figure 163: Revenues under graduated tax rates on VLTs and slot machines, FY 2019-FY 2021

Facility	Current Tax Revenues ($M)			Graduated Tax Revenues ($M)			Revenue Difference ($M)		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	24.6	23.5	23.4	23.4	24.0	24.0	(1.2)	0.6	0.6
Empire City Yonkers	306.6	290.5	291.2	290.8	274.6	274.6	(15.8)	(15.9)	(16.6)
Finger Lakes	31.6	43.1	37.3	41.7	40.9	40.9	10.1	(2.2)	3.7
Hamburg	20.8	21.2	21.2	23.8	24.9	24.9	3.0	3.7	3.7
Jake's 58	94.1	98.4	98.4	89.1	93.4	93.4	(5.0)	(5.0)	(5.0)
Nassau OTB	73.8	98.0	98.0	68.8	93.0	93.0	(5.0)	(5.0)	(5.0)
Resorts World NYC	299.7	250.4	250.4	340.9	301.7	301.7	41.1	51.4	51.4
Saratoga	42.7	48.9	44.2	51.6	49.5	49.5	8.9	0.7	5.3
Vernon	10.0	8.4	5.7	11.4	11.3	11.3	1.4	3.0	5.6
Total VLTs	***903.9***	***882.3***	***869.7***	***941.5***	***913.5***	***913.5***	***37.6***	***31.2***	***43.8***
Del Lago	46.6	45.1	45.7	50.8	48.9	48.9	4.3	3.9	3.3
Resorts World Catskills	44.0	54.1	54.4	44.9	56.1	56.1	0.9	1.9	1.7
Rivers	53.3	57.9	59.0	48.3	52.9	52.9	(5.0)	(5.0)	(6.1)
Tioga Downs	26.3	26.6	26.8	28.4	28.7	28.7	2.0	2.1	1.9
Total Casinos	***170.2***	***183.7***	***185.8***	***172.5***	***186.6***	***186.6***	***2.3***	***2.9***	***0.7***
Statewide total	**1,074.1**	**1,066.0**	**1,055.5**	**1,114.0**	**1,100.1**	**1,100.1**	**39.9**	**34.0**	**44.5**

Facility	Current Effective Tax Rate			Average Tax Rates under Graduated Tax Structure			Rate Difference		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	42.0%	39.1%	39.0%	40.0%	40.0%	40.0%	-2.0%	0.9%	1.0%
Empire City Yonkers	50.6%	50.4%	50.5%	48.0%	47.6%	47.6%	-2.6%	-2.8%	-2.9%
Finger Lakes	30.4%	42.3%	36.5%	40.2%	40.1%	40.1%	9.8%	-2.2%	3.6%
Hamburg	35.0%	34.0%	34.0%	40.0%	40.0%	40.0%	5.0%	6.0%	6.0%
Jake's 58	45.0%	45.0%	45.0%	42.6%	42.7%	42.7%	-2.4%	-2.3%	-2.3%
Nassau OTB	45.0%	45.0%	45.0%	41.9%	42.7%	42.7%	-3.1%	-2.3%	-2.3%
Resorts World NYC	43.0%	40.0%	40.0%	48.9%	48.2%	48.2%	5.9%	8.2%	8.2%
Saratoga	33.9%	40.3%	36.5%	41.0%	40.9%	40.9%	7.1%	0.5%	4.4%
Vernon	35.0%	29.5%	20.1%	40.0%	40.0%	40.0%	5.0%	10.5%	19.9%
Total VLTs	***44.0%***	***43.8%***	***43.2%***	***45.9%***	***45.4%***	***45.4%***	***1.8%***	***1.5%***	***2.2%***
Del Lago	30.4%	29.7%	30.1%	43.9%	44.2%	44.2%	13.5%	14.5%	14.2%
Resorts World Catskills	26.7%	26.3%	26.4%	47.3%	48.5%	48.5%	20.6%	22.2%	22.1%
Rivers	33.9%	34.6%	35.3%	45.0%	45.0%	45.0%	11.0%	10.3%	9.7%
Tioga Downs	33.1%	33.0%	33.2%	41.7%	41.7%	41.7%	8.5%	8.7%	8.5%
Total Casinos	***30.7%***	***30.3%***	***30.7%***	***44.6%***	***45.2%***	***45.2%***	***13.9%***	***14.9%***	***14.5%***
Statewide Total	**41.2%**	**40.7%**	**40.3%**	**42.7%**	**42.0%**	**42.0%**	**1.5%**	**1.3%**	**1.7%**

Source: New York State Gaming Commission, Spectrum Gaming Group. **Notes:** Analysis in this table is based on the graduated tax rates of 40 percent for GGR under $100 million, 45 percent for GGR between $100 and $250 million, 50 percent for GGR between $250 and $500 million, and 55 percent for GGR above $500 million. These rates are applied to GGRs of all VLTs and GGRs of all slot machines at casino. Tax revenues from table games, poker tables, and sports wagering are calculated based on the current 10 percent tax rate. Monticello is excluded as the facility was closed in April 2019.

d. Modified Graduated Tax Alternative

Alternatively, facilities with less than $100 million GGR could request consideration of a flat rate of, say, 35 percent, facilities with less than $250 million (but more than $100 million) would be taxed at a flat rate of 40 percent, facilities with less than $500 million (but more than $250 million) would be taxed at a flat rate of 45 percent, facilities with less than $1 billion (but more than $500 million) would be taxed at a flat rate of 50 percent, and facilities with over $1 billion would be taxed at a flat rate of 55 percent.

Under this scenario, New York State would take in about $100.6 million more in tax revenues in FY 2021 (Figure 164). All four casinos, as well as five VLTs would pay more in FY 2021.

Figure 164: Revenues under tax rates based on GGR, FY 2019-FY 2021

Facility	Current Tax Revenues ($M)			Graduated Tax Revenues ($M)			Revenue Difference ($M)		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	24.6	23.5	23.4	20.5	21.0	21.0	(4.1)	(2.4)	(2.4)
Empire City Yonkers	306.6	290.5	291.2	303.0	288.3	288.3	(3.6)	(2.2)	(2.9)
Finger Lakes	31.6	43.1	37.3	41.5	40.8	40.8	9.9	(2.3)	3.6
Hamburg	20.8	21.2	21.2	20.8	21.8	21.8	(0.0)	0.6	0.6
Jake's 58	94.1	98.4	98.4	83.6	87.5	87.5	(10.5)	(10.9)	(10.9)
Nassau OTB	73.8	98.0	98.0	65.6	87.1	87.1	(8.2)	(10.9)	(10.9)
Resorts World NYC	299.7	250.4	250.4	348.5	312.9	312.9	48.8	62.6	62.6
Saratoga	42.7	48.9	44.2	50.3	48.4	48.4	7.6	(0.4)	4.2
Vernon	10.0	8.4	5.7	10.0	9.9	9.9	(0.0)	1.6	4.2
Total VLTs	***903.9***	***882.3***	***869.7***	***943.9***	***917.8***	***917.8***	***40.0***	***35.5***	***48.1***
Del Lago	46.6	45.1	45.7	61.2	60.8	60.8	14.6	15.7	15.1
Resorts World Catskills	44.0	54.1	54.4	65.8	82.4	82.4	21.9	28.3	28.0
Rivers	53.3	57.9	59.0	62.8	66.8	66.8	9.5	9.0	7.9
Tioga Downs	26.3	26.6	26.8	27.8	28.2	28.2	1.5	1.6	1.4
Total Casinos	***170.2***	***183.7***	***185.8***	***217.7***	***238.3***	***238.3***	***47.5***	***54.6***	***52.4***
Statewide total	**1,074.1**	**1,066.0**	**1,055.5**	**1,161.6**	**1,156.1**	**1,156.1**	**87.5**	**90.1**	**100.6**

Facility	Current Effective Tax Rate			Average Tax Rates under Graduated Tax Structure			Rate Difference		
	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021	FY 2019	FY 2020	FY 2021
Batavia	42.0%	39.1%	39.0%	35.0%	35.0%	35.0%	-7.0%	-4.1%	-4.0%
Empire City Yonkers	50.6%	50.4%	50.5%	50.0%	50.0%	50.0%	-0.6%	-0.4%	-0.5%
Finger Lakes	30.4%	42.3%	36.5%	40.0%	40.0%	40.0%	9.6%	-2.3%	3.5%
Hamburg	35.0%	34.0%	34.0%	35.0%	35.0%	35.0%	0.0%	1.0%	1.0%
Jake's 58	45.0%	45.0%	45.0%	40.0%	40.0%	40.0%	-5.0%	-5.0%	-5.0%
Nassau OTB	45.0%	45.0%	45.0%	40.0%	40.0%	40.0%	-5.0%	-5.0%	-5.0%
Resorts World NYC	43.0%	40.0%	40.0%	50.0%	50.0%	50.0%	7.0%	10.0%	10.0%
Saratoga	33.9%	40.3%	36.5%	40.0%	40.0%	40.0%	6.1%	-0.3%	3.5%
Vernon	35.0%	29.5%	20.1%	35.0%	35.0%	35.0%	0.0%	5.5%	14.9%
Total VLTs	***44.0%***	***43.8%***	***43.2%***	***46.0%***	***45.6%***	***45.6%***	***1.9%***	***1.8%***	***2.4%***
Del Lago	30.4%	29.7%	30.1%	40.0%	40.0%	40.0%	9.6%	10.3%	9.9%
Resorts World Catskills	26.7%	26.3%	26.4%	40.0%	40.0%	40.0%	13.3%	13.7%	13.6%
Rivers	33.9%	34.6%	35.3%	40.0%	40.0%	40.0%	6.1%	5.4%	4.7%
Tioga Downs	33.1%	33.0%	33.2%	35.0%	35.0%	35.0%	1.9%	2.0%	1.8%
Total Casinos	***30.7%***	***30.3%***	***30.7%***	***39.3%***	***39.3%***	***39.3%***	***8.6%***	***9.0%***	***8.7%***
Statewide Total	**41.2%**	**40.7%**	**40.3%**	**44.6%**	**44.2%**	**44.2%**	**3.4%**	**3.4%**	**3.8%**

Source: New York State Gaming Commission, Spectrum Gaming Group. **Notes:** Analysis in this table is based on flat tax rates that vary by GGR. Specifically, we applied 35 percent tax rate for GGR under $100 million, 40 percent for GGR between $100 and $250 million, 45 percent for GGR between $250 and $500 million, and 50 percent for GGR between $500 million and $1 billion. These rates are applied to GGRs of all VLTs and casinos, including GGRs from table games, poker tables, and sports wagering. Monticello is excluded as the facility was closed in April 2019.

The figures above illustrate the difficulty of having a tax rate structure that is beneficial to all facilities and to the State. To clarify, the figures above also imply that the operators would be paying the same tax rate both on slots and other types of games. That contrasts with the current rate structure, in which tables games and poker tables are taxed at a much lower rate (10 percent). While most VLT facilities would be financially better off under the illustrated graduated tax rates, clearly all four state casinos would

have a higher tax burden. The facilities that would pay more to New York State under such rates are already suffering financial duress; they would not view such efforts as extending fairness and parity, but such efforts would rather be viewed as threatening to their ongoing viability.

With that in mind, a statewide imposition could be viewed as both unfair and unpalatable, but this also illustrates how in certain instances an operator can petition for a revised tax structure, as long as such petitions make clear how such relief would offer policy benefits to the State. As noted in further detail below, such petitions would identify the particular benefits, such as increasing employment or promoting tourism, that would be built into their revised business plans. Such impacts would be quantified by the petitioner in their economic modeling, which would be reviewed by the State. [204]

e. Commercial Casino Tax Relief (15 Percent Return on Investment)

1) Current Situation

New York State selected Montreign Resort Casino (later to be renamed Resorts World Catskills) to be built in the Catskills Region (Region 1), Rivers Casino to be built in the Capital Region (Region 2), del Lago Resort and Casino to be built in Southern Tier Region (Region 5),[205] and Tioga Downs and Resort, also to be built in Southern Tier (Region 5).[206] The applicants were required to provide detailed revenue projections for direct State tax revenues from their proposed gaming facilities as well as projections for other direct, indirect, and induced revenues generated from the gaming facility for the State and the community.

Figure 165 shows the commercial casinos revenue projections for direct State tax revenues at their facility. The projections are for three different scenarios: average case, low case, and high case. Rivers projected 10 percent less tax revenues in the low case scenario than the average case, whereas Tioga and del Lago both projected 12.5 percent less tax revenues in the low case scenario. Rivers, Tioga Downs and del Lago projected 10.0 percent, 11.2 percent, and 9.5 percent more tax revenues in the high case scenario than their average cases, respectively. On the other hand, Resorts World Catskills projected strikingly less (53 percent) tax revenues in the low case scenario than in the average case, but projected only 16 percent more tax revenues in the high case scenario for the first three years.

[204] The economic impact of a hypothetical shift in a business model, based on tax relief, is included in this report as **Appendix K**.

[205] Gaming Facility Location Board, "Selection of the New York Gaming Facility Location Board," December 17, 2014. https://www.gaming.ny.gov/pdf/12.17.14.GFLBSelection.pdf

[206] Gaming Facility Location Board, "Selection of the New York Gaming Facility Location Board," October 14, 2015. https://www.gaming.ny.gov/pdf/10.14.15.GFLBSelection.pdf

Figure 165: Projected direct state tax revenues for commercial casinos

Casino	Forecast Case	Year 1	Year 2	Year 3	Year 4	Year 5
Rivers	Average	$74,493,672	$78,926,812	$82,059,565	$84,095,854	$86,183,050
Rivers	Low	$67,023,620	$71,008,557	$73,824,579	$75,654,994	$77,531,169
Rivers	High	$81,945,520	$86,825,771	$90,274,482	$92,516,144	$94,813,848
Resorts World Catskills	Average	$57,069,101	$63,022,601	$66,998,192	$69,033,849	$70,451,390
Resorts World Catskills	Low	$26,887,753	$29,672,135	$31,531,472	$32,767,930	$33,732,368
Resorts World Catskills	High	$66,427,062	$73,372,507	$78,010,491	$81,094,751	$83,500,473
Tioga Downs	Average	$21,589,340	$30,730,464	$31,359,745	$31,989,025	$32,460,986
Tioga Downs	Low	$18,891,436	$26,888,583	$27,437,824	$27,987,065	$28,398,996
Tioga Downs	High	$24,014,521	$34,189,449	$34,890,791	$35,592,134	$36,118,141
Del Lago	Average	$63,601,390	$74,641,194	$77,296,683	$80,047,985	$82,898,555
Del Lago	Low	$55,612,728	$65,242,768	$67,559,156	$69,959,121	$72,445,679
Del Lago	High	$69,609,316	$81,709,342	$84,619,856	$87,635,382	$90,759,711

Source: New York State Gaming Commission

Figure 166 shows actual vs forecasted tax revenues from commercial casinos for the first three years of operations. Rivers and del Lago were unable to meet tax revenue forecasts during the first three years of operations, whether compared to average case or low case forecasts. Tioga Downs was able to meet tax revenue forecasts during the first year of operation, but not during the second or third years of operations. Resorts World Catskills also failed to meet tax revenue forecasts during the first two years of operations under the average case scenario. Resorts World Catskills met tax revenue forecasts under low case scenario only because of the strikingly steep gap between its average and low case revenue forecasts.

Figure 166: Projected direct State tax revenues vs actual tax revenues for commercial casinos

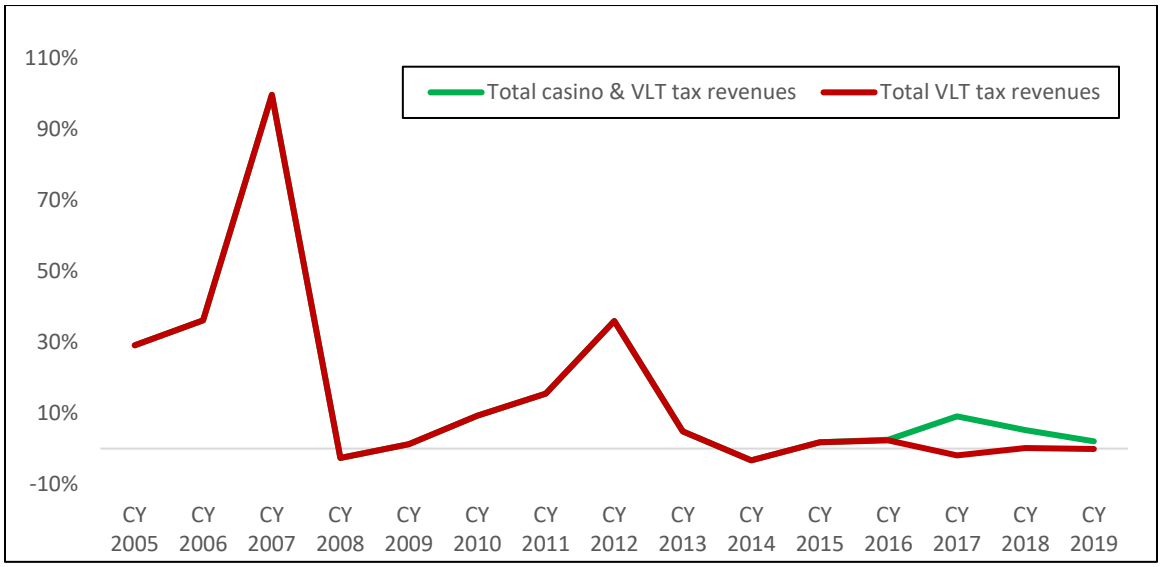
Casino	Year	Forecasts, Average Case	Forecasts, Low Case	Actual Collections	Actual vs. Average Case Forecasts	Actual vs. Low Case Forecasts
Rivers	Year 1	$74,493,672	$67,023,620	$45,324,716	-39%	-32%
	Year 2	$78,926,812	$71,008,557	$52,240,571	-34%	-26%
	Year 3	$82,059,565	$73,824,579	$59,453,414	-28%	-19%
Resorts World Catskills	Year 1	$57,069,101	$26,887,753	$40,729,305	-29%	51%
	Year 2	$63,022,601	$29,672,135	$55,950,607	-11%	89%
	Year 3	$66,998,192	$31,531,472	N/A		
Tioga Downs	Year 1	$21,589,340	$18,891,436	$22,651,753	5%	20%
	Year 2	$30,730,464	$26,888,583	$25,763,722	-16%	-4%
	Year 3	$31,359,745	$27,437,824	$27,251,656	-13%	-1%
Del Lago	Year 1	$63,601,390	$55,612,728	$43,667,771	-31%	-21%
	Year 2	$74,641,194	$65,242,768	$45,784,779	-39%	-30%
	Year 3	$77,296,683	$67,559,156	$47,204,814	-39%	-30%

Source: New York State Gaming Commission. **Notes:** Resorts World Catskills opened on February 2018, and therefore has not been in operation for three full years yet.

Despite the expansion of VLT facilities and legalization and opening of four commercial casinos in New York, year-over-year growth in inflation-adjusted tax revenues from VLT facilities and casinos has been weak in the most recent years, indicating that the market might be saturated.

Figure 167 shows the year-over-year real (inflation-adjusted) growth in tax revenues from VLT facilities (red line) vs. year-over-year growth in tax revenues from VLT facilities and casinos combined. There was a spike in calendar year 2017, mostly due to opening of the commercial casinos, but growth weakened substantially in calendar years 2018 and 2019.

Figure 167: Change in inflation-adjusted casino and VLT tax revenues in New York State



Source: New York State Gaming Commission

2) Tax Relief ROIC 15 Percent

One avenue of exploration was to seek a tax rate that would provide an acceptable return on investment for casino operators, thereby encouraging additional investment and development while being politically neutral.

In the absence of relevant data from New York operators, we examined other states in preparing our model. We selected Colorado, as that State offers the greatest detail on per-property operating data, making it an effective model for purposes of this analysis.

The Colorado Division of Gaming produces an annual *Fact Book and Abstract* that includes an aggregate balance sheet and an income statement by revenue tier. Colorado "Tier 6" casinos are those that report more than $13 million in annual GGR. There are 20 casinos in the State that meet this benchmark. Figure 168 below presents the Tier 6 income statement from 2018, the most recently available data.[207]

[207] Colorado Division of Gaming, *2018 Fact Book and Abstract*. https://www.colorado.gov/pacific/sites/default/files/DOG_2018_Fact%20Book%20and%20Abstract_Final_0.pdf

The EBITDA[208] margin is the percentage of cash retained by the operator from conducting operations before paying non-operating expenses. More efficient operators, or operators that are more lightly taxed, typically produce higher EBITDA margins.

Figure 168: Income statement from Colorado Tier 6 casinos (those with more than $13M in GGR)

	Avg. Casino	All 20 Casinos	Item % of GGR
GAMING DEPARTMENT REVENUE			
Blackjack Revenue	2,464,459	49,289,180	
Poker Revenue	1,315,745	26,314,900	
Craps Revenue	908,447	18,168,940	
Roulette Revenue	677,136	13,542,720	
Coin Operated Devices	32,890,253	657,805,060	**86.0%**
TOTAL GAMING REVENUE	**38,256,040**	**765,120,800**	**100.0%**
GAMING DEPARTMENT EXPENSES			
Give Away Items	4,562,797	91,255,940	**11.9%**
Combined State & Local Fee Rate on	**18.0%**	**18.0%**	
State Gaming Fees & Local Device Fees	6,876,333	137,526,660	**18.0%**
Payroll/Taxes/Benefits	3,464,403	69,288,060	**9.1%**
Other Dept. Expenses	1,528,616	30,572,320	**4.0%**
TOTAL DEPTARTMENTAL EXPENSES	16,432,149	328,642,980	**43.0%**
GAMING DEPTARTMENT INCOME	**21,823,891**	**436,477,820**	**57.0%**
GENERAL & ADMINISTRATIVE			
Advertising	466,971	9,339,420	**1.2%**
Bad Debt Expense	6,352	127,040	**0.0%**
Busing Expense	143,185	2,863,700	**0.4%**
Insurance	260,783	5,215,660	**0.7%**
Local Impact Fees Property & Other	472,150	9,443,000	**1.2%**
Management Fees	606,015	12,120,300	**1.6%**
Related Party Expense	321,036	6,420,720	**0.8%**
Parking Expense	49,905	998,100	**0.1%**
Payroll/Taxes/Benefit	3,049,257	60,985,140	**8.0%**
Prof. Fees (Legal & Accounting)	127,671	2,553,420	**0.3%**
Rent on Premises	63,475	1,269,500	**0.2%**
Utilities & Phone	797,513	15,950,260	**2.1%**
Other G&A Expenses	1,702,782	34,055,640	**4.5%**
TOTAL G&A EXPENSES	8,067,096	161,341,920	**21.1%**
Estimated EBITDA	**13,756,795**	**275,135,900**	**36.0%**
Investment (From Balance Sheet)	74,157,256	1,483,145,120	
ROIC (EBITDA/Investment)	**18.6%**	**18.6%**	
$ Investment /$ of GGR	$1.94	$1.94	

Source: Colorado Division of Gaming

[208] EBITDA (earnings before interest, taxes, depreciation and amortization) is an industry standard measure of the cash generated by operations.

Gaming taxes in Colorado are graduated, but top out at a relatively low level of GGR.

Figure 169: Colorado gaming tax rates

GGR Level	Tax Rate
$0 - $2 M	0.25%
$2 - $5 M	2.00%
$5 - $8 M	9.00%
$8 - $10 M	11.00%
$10 - $13 M	16.00%
$13 M+	20.00%

Source: Colorado Division of Gaming

Casinos are high-fixed-cost businesses. Profitability does not commence until fixed costs are covered, which means that a certain level of revenue can be highly profitable, assuming fixed costs have already been covered. In the Colorado example, marketing, payroll, administrative and other expenses for the 20 highest-grossing casinos consume $597.9 million. Until the 20 casinos collectively earn $600 million to cover those costs, the industry is essentially at breakeven. A graduated tax structure as offered in Colorado allows the operator to keep more of the first dollar to cover fixed and variable operating expenses and delivers the State more of the last dollar after operating costs have been met.

We can apply the expense ratios from the 20 large Colorado casinos to the Upstate New York casinos, and the actual taxes paid by the New York properties to develop an estimate of the EBITDA and return on invested capital ("ROIC") at each commercial casino, and across the four commercial casinos as a whole. Our analysis excludes revenues and expenses from amenities such as food and beverage, hotel rooms, entertainment or other facilities, but importantly captures the administrative costs of the operation. Our assumption is that amenity departments operate at breakeven for the properties and serve to draw guests to the more profitable side of the business, the casino floor. Due in part to the low tax rate, the EBITDA margin is 36 percent across all the 20 casinos on Tier 6. The estimated ROIC using EBITDA as a measure of return is 18.6 percent. Most operators and analysts in the gaming industry would call this an attractive rate of return.

Below are the results of Spectrum's analysis. For simplicity, we have FY 2020 GGR figures.

Figure 170: Colorado casino expense ratios applied to Upstate New York commercial casinos

For FY 2019-20	Estimated Upstate New York Casino Income Statement					% of GGR
	Del Lago	Tioga	Rivers	RW Catskills	All Upstate	
GAMING DEPARTMENT REVENUE						
Table Games	$35,631,000	$10,605,883	$40,411,994	$84,202,885	$170,851,762	
Poker Games	2,710,287	645,167	4,748,804	4,492,126	12,596,384	
Other gaming	2,920,022	662,956	4,328,308	1,735,411	9,646,697	
Slots	110,716,319	68,762,006	117,587,303	115,604,533	412,670,161	
TOTAL GGR	**$151,977,628**	**$80,676,012**	**$167,076,409**	**$206,034,955**	**$605,765,004**	**100.0%**
GAMING DEPARTMENT EXPENSES						
Giveaway Items	$18,126,368	$9,622,226	$19,927,199	$24,561,857	$72,237,651	
Combined State & Local Fee Rate on GGR						
State Gaming Tax	45,091,169	26,633,343	57,863,197	54,128,818	183,716,527	**30.3%**
Payroll/Taxes/Benefits	13,762,840	7,305,885	15,130,160	18,649,125	54,848,010	
Other Dept. Expenses	6,072,647	3,223,612	6,675,957	8,228,647	24,200,864	
TOTAL DEPT. EXPENSES	83,053,024	46,785,066	99,596,513	105,568,448	335,003,052	
GAMING DEPT. INCOME	**$68,924,604**	**$33,890,946**	**$67,479,896**	**$100,366,507**	**$270,661,952**	**44.7%**
GENERAL & ADMINISTRATIVE EXPENSES						
Advertising	$1,855,110	$984,769	$2,039,412	$2,513,738	$7,393,028	
Bad Debt Expense	25,234	13,395	27,741	34,193	100,564	
Busing Expense	568,823	301,955	625,335	770,775	2,266,888	
Insurance	1,035,998	549,951	1,138,923	1,403,813	4,128,685	
Local Property & Other Taxes	1,875,684	995,691	2,062,031	2,541,617	7,475,022	
Management Fees	2,407,482	1,277,991	2,646,662	3,262,221	9,594,356	
Related Party Expense	1,275,362	677,015	1,402,067	1,728,159	5,082,603	
Parking Expense	198,255	105,242	217,951	268,642	790,090	
Payroll/Taxes/Benefit	12,113,613	6,430,407	13,317,084	16,414,365	48,275,468	
Prof. Fees (Legal, Accounting)	507,191	269,238	557,580	687,262	2,021,272	
Rent on Premises	252,164	133,859	277,216	341,690	1,004,929	
Utilities & Phone	3,168,235	1,681,830	3,482,995	4,293,069	12,626,129	
Other G&A Expenses	6,764,547	3,590,901	7,436,596	9,166,195	26,958,239	
TOTAL G&A EXPENSES	$32,047,697	$17,012,243	$35,231,594	$43,425,740	$127,717,274	
Est. GAMING DEPT. EBITDA	**$36,876,907**	**$16,878,703**	**$32,248,302**	**$56,940,767**	**$142,944,679**	**23.6%**
Investment	$425,000,000	$200,000,000	$330,000,000	$1,250,000,000	$2,205,000,000	
ROIC (EBITDA/Investment)	8.7%	8.4%	9.8%	4.6%	6.5%	
$Investment /$of GGR	$2.80	$2.48	$1.98	$6.07	$3.64	
Investment to Achieve 15% ROIC	$245,846,048	$112,524,685	$214,988,678	$379,605,114	$952,964,526	
Over Investment	$179,153,952	$87,475,315	$115,011,322	$870,394,886	$1,252,035,474	

Source: Colorado Division of Gaming, New York State Gaming Commission, New York Division of Minority and Women's Business Development,[209] *Albany Business Review*,[210] Spectrum Gaming Group

[209] New York Division of Minority and Women's Business Development, "New York Casino Projects Frequently Asked Questions," January 2016. https://www.ny.gov/sites/ny.gov/files/atoms/files/CasinoProject_FAQ_Jan2016.pdf

[210] Robin K. Cooper, "Competition heats up as Upstate New York casino opens," Albany Business Review, December 2, 2016. https://www.bizjournals.com/albany/news/2016/12/02/competition-heats-up-as-Upstate-new-york-casino.html

Note that the effective tax rate in Colorado is 18 percent, compared to the 30.3 percent across the four commercial casinos in New York. This is the only change in the expense ratios. As a result, the EBITDA margin in New York is 23.6 percent compared to 36 percent in Colorado.

For purposes of this analysis, we examined the ratio of GGR to invested capital. On this basis, the New York casinos appear to be vastly over-invested, as measured by the calculated ROIC. New York's four Upstate casinos invested an estimated $2.2 billion to generate $605 million in GGR, a ratio of $3.64 of investment per $1 of GGR. That is almost twice the investment ratio in Colorado's largest casinos – $1.94 per dollar of GGR.

Significant variations exist between properties in New York. Rivers invested an estimated $1.98 per dollar of GGR, about the same as the Colorado properties. Resorts World Catskills invested more than $6 per dollar of GGR. While we believe our analysis is illustrative, it is also imperfect. Some investment at Tioga Downs, for example, was made years before it became a commercial casino.

The source of the overbuilding in Upstate New York may be due to several factors, such as:

- Market studies with inflated revenue projections that were built on false assumptions or expectations.
- Unanticipated reactions of casino competitors to the threat from new entrants.
- A perceived need to develop a large property with significant economic impacts to win the license bid.

Whatever the cause, the Upstate casinos appear to have allocated too much capital to chase too few gaming dollars in a relatively high-tax environment.

Relying on these estimates of invested capital and EBITDA, our analysis sought to determine a tax rate that would result in what Spectrum and gaming operators would deem as a reasonable/acceptable level of ROIC, 15 percent ("reasonable/acceptable" essentially meaning that if it was well-expected that this would be the return, the project would be approved; anything lower may not have been deemed warranted). The example, Figure 171 below examines what tax rate would allow the four commercial casinos to collectively achieve a 15 percent ROIC.

Figure 171: Estimated tax rate necessary to reach 15% ROIC on Upstate casinos

For FY 2019-20	Upstate	Upstate to Achieve 15% ROIC
GAMING DEPARTMENT REVENUE		
Table Games	$170,851,762	$170,851,762
Poker Games	12,596,384	12,596,384
Other gaming	9,646,697	9,646,697
Slots	412,670,161	412,570,161
TOTAL GGR	**$605,765,004**	**$605,665,004**
GAMING DEPARTMENT EXPENSES		
Giveaway Items	$72,249,578	$72,237,651
Combined State & Local Fee Rate on GGR		
State Gaming Tax	183,716,527	-
Payroll/Taxes/Benefits	54,857,066	54,848,010
Other Dept. Expenses	24,204,860	24,200,864
TOTAL DEPTARTMENTAL EXPENSES	335,028,030	151,286,525
GAMING DEPTARTMENT INCOME	**$270,736,974**	**$454,378,479**
GENERAL & ADMINISTRATIVE EXPENSES		
Advertising	$7,394,249	$7,393,028
Bad Debt Expense	100,581	100,564
Busing Expense	2,267,262	2,266,888
Insurance	4,129,367	4,128,685
Local Property & Other Taxes	7,476,256	7,475,022
Management Fees	9,595,940	9,594,356
Related Party Expense	5,083,442	5,082,603
Parking Expense	790,220	790,090
Payroll/Taxes/Benefit	48,283,439	48,275,468
Prof. Fees (Legal & Accounting)	2,021,606	2,021,272
Rent on Premises	1,005,094	1,004,929
Utilities & Phone	12,628,214	12,626,129
Other G&A Expenses	26,962,690	26,958,239
TOTAL G&A EXPENSES	$127,738,361	$127,717,274
Est. GAMING DEPT. EBITDA	**$142,998,613**	**$326,661,206**
Investment*	$2,205,000,000	$2,205,000,000
ROIC (EBITDA/Investment)	6.5%	14.8%
Ratio of $ Investment to $ of GGR	$3.64	$3.64

Source: Colorado Division of Gaming, New York State Gaming Commission, New York Division of Minority and Women's Business Development, *Albany Business Review*, Spectrum Gaming Group

As shown, even if the New York casino tax rate were 0 percent, the casinos would not achieve the target 15 percent ROIC due to the extreme over-investment in the properties.

This analysis makes clear that examining returns on investment can be a starting point in determining a fair tax structure, but relying on that measure to develop standard rates among properties can lead to disastrous declines in tax revenue.

3) Impact of Alternative Tax Rates on Competitive Dynamics and State Tax Revenues

In theory, tax rates are not a determining factor for competitive dynamics when the playing field is level. However, tax incentives often prove to be attractive for operators, particularly in terms of capital investment. The potential modification of current tax rates under various scenarios clearly indicate the challenge of proposing a tax structure that would be financially attractive and beneficial to all existing VLT facilities and casinos, as well as to the State. Part of the obstacles for achieving a desirable tax structure that is attractive to all parties is the current environment and geographical distribution of the VLT facilities and casino facilities. Because of the relatively close proximity of the VLT facilities, commercial casinos, and tribal casinos within their respective regions, these facilities inevitably compete for the same pool of consumers. Changing tax rates in isolation, absent broader public policy goals, might achieve little more than shifting market share.

Another obstacle is that, under the current tax structure, VLT facilities and casinos pay different tax rates that are arbitrary by definition. This is particularly an issue for commercial casinos as slot machines at Tioga and del Lago are taxed at 37 percent, at Rivers at 45 percent, and at Resorts World Catskills at 39 percent. An additional complication is that table games, poker tables and sports wagering at all four commercial casinos are taxed at a much lower rate of 10 percent. Therefore, in theory casinos could decide on the mix of gaming options to minimize their tax liability.

Currently, there is wide variation in terms of the mix of gaming options at the four state commercial casinos. For example, in fiscal year 2020, table games and poker tables represented 43 percent of GGR at Resorts World Catskills but only 14 percent of GGR at Tioga Downs. That means that 43 percent of total GGR at Resorts World casino was taxed at a 10 percent rate. By contrast, only 14 percent of total GGR at Tioga Downs was taxed at 10 percent tax rate. Therefore, there is wide variation in effective tax rates across the four casinos, with Resorts World Catskills having the lowest effective tax rate of 26.3 percent and Rivers Casino having the highest effective tax rate of 34.6 percent (Figure 172). That means any alternative tax structure and rate scenario would not be financially beneficial to Resorts World Catskills unless the alternative effective tax rate is below 26 percent, which is highly unlikely.

Figure 172: Casino GGR and current tax rates, FY 2017-FY 2020

	Tioga Downs	Del Lago	Rivers	RW Catskills	Total Casinos
Total GGR and Effective Tax Rate					
Effective tax rate, FY 2020	**33.0%**	**29.7%**	**34.6%**	**26.3%**	**30.3%**
FY 2017	$22,912,615	$26,148,861	$24,669,309		**$73,730,785**
FY 2018	$70,379,472	$145,585,479	$140,937,296	$21,424,150	**$378,326,397**
FY 2019	$79,492,200	$152,971,875	$157,108,379	$164,591,654	**$554,164,109**
FY 2020	$80,676,013	$151,977,628	$167,076,409	$206,034,974	**$605,765,024**
Slots & ETGs GGR and Tax Rate					
Effective tax rate, FY 2020	**37% tax**	**37% tax**	**45% tax**	**39% tax**	**39% tax**
FY 2017	$19,306,586	$19,142,287	$16,203,170		**$54,652,043**
FY 2018	$60,215,830	$106,399,931	$90,996,023	$11,992,927	**$269,604,711**
FY 2019	$68,138,907	$115,773,876	$107,475,959	$94,903,622	**$386,292,365**
FY 2020	$68,762,006	$110,716,319	$117,587,303	$115,604,553	**$412,670,182**
Table/Poker GGR and Tax Rate					
Effective tax rate, FY 2020	**10% tax**	**10% tax**	**10% tax**	**10% tax**	**10% tax**
FY 2017	$3,606,029	$7,006,575	$8,466,139		**$19,078,743**
FY 2018	$10,163,641	$39,185,548	$49,941,273	$9,431,224	**$108,721,686**
FY 2019	$11,353,294	$37,197,999	$49,632,420	$69,688,032	**$167,871,745**
FY 2020	$11,251,050	$38,341,287	$45,160,798	$88,695,011	**$183,448,145**
Sports Wagering and Tax Rate					
Effective tax rate, FY 2020	**10%**	**10%**	**10%**	**10%**	**10%**
FY 2017					
FY 2018					
FY 2019					
FY 2020	$662,956	$2,920,022	$4,328,308	$1,735,411	$9,646,696
Slots & ETGs GGR as Share of Total GGR					
FY 2017	84%	73%	66%		**74%**
FY 2018	86%	73%	65%	56%	**71%**
FY 2019	86%	76%	68%	58%	**70%**
FY 2020	85%	73%	70%	56%	**68%**
Table Games/Poker Tables GGR as Share of Total GGR					
FY 2017	16%	27%	34%		**26%**
FY 2018	14%	27%	35%	44%	**29%**
FY 2019	14%	24%	32%	42%	**30%**
FY 2020	14%	25%	27%	43%	**30%**
Sports Wagering as Share of Total GGR					
FY 2017					
FY 2018					
FY 2019					
FY 2020	1%	2%	3%	1%	**2%**

Source: New York State Gaming Commission, Spectrum Gaming Group

Analysis of the various tax structure and rate mix scenarios indicate that there would be winners and losers as a result of any tax structure and rate modification, partly because of the reality of the current tax rates and locations. Therefore, any tax structure and rate modification proposals need to be examined carefully to avoid any potential future turmoil among the operators.

The need to address this effectively harkens back to one of our core recommendations: The responsibility of justifying any tax rate rests with the licensee, requiring the meeting of certain obligations, including:

- Ensuring that modifying any property's tax rate does not simply create new levels of perceived unfairness, thus resulting in a chain reaction of operators petitioning for further tax relief that would do little more than reduce state tax revenue without any concomitant advancement of public policy. This means operators need to consider how granting their desired relief would affect their competitors.
- Demonstrating how any desired tax relief would advance public policy, preferably through demonstrating how an operator would have the ability to refine its business model by growing the market, rather than by shifting market share.

Our analysis recognizes that the sustainability of an operation as a going concern may be the primary justification for seeking tax relief. Still, even under that scenario, the operators would bear the burden of proof of demonstrating how relief can avoid a worst-case scenario, thus ensuring a more competitive market.

4) Spectrum Recommendation: Seeking Fairness through Petition Process

Spectrum's analysis leads to the recommendation that the most effective means of ensuring that future tax policy considerations and changes are based on economic principles is to suggest that operators can petition the State for relief. Commercial casino and VLT operators that were raising questions about the complex taxation process prior to the COVID-19 pandemic are far more concerned today and can be expected to turn to the State for relief.

Spectrum believes a petition process would adhere to the following three principles for a sound tax policy.

1. **Equity or Fairness:** Similarly situated taxpayers and businesses should be taxed similarly. Equity is usually discussed in terms of horizonal and vertical equity. Horizontal equity applies that taxpayers with equal abilities to pay should pay the same amount of tax. Vertical equity applies that taxpayers with the greater ability to pay should pay more tax. Vertical equity is measured in three terms: regressive tax systems, flat tax rate systems, and progressive tax systems.

   Having a flat rate across all commercial casinos, VLT facilities, and Indian casinos would theoretically violate both horizontal and vertical equity. Moreover, it is generally agreed that operators in the populous Downstate markets would possess a greater ability to pay higher tax rates. One way to ensure equity is to place the burden on operators to suggest rates that would be affordable, would allow for greater investment and would create the optimal level of revenue for the public sector.

2. **Neutrality:** Businesses and taxpayers should not make economic decisions based solely upon tax consequences. The primary purpose of a tax is to raise revenues for provision of government services without influencing business decisions.

   With respect to gaming tax policy, those principles remain valid but have been rarely enacted, whether in New York elsewhere. There is no question that the tax rate is a determining factor in making economic decisions. Revisions to that policy should be tied

to the ability of an operator to pursue the most efficient business model that would be workable in a particular market.

The four commercial casinos currently operating in New York provided revenue and economic development projections based on the known tax rates. Higher or lower tax rates will not necessarily have an impact on their business success, but that does not mean the rates are perfect as they stand. Indeed, each operator has a responsibility to demonstrate how tax rates can be adapted to help ensure success.

3. **Revenue Adequacy:** An adequate tax system should raise enough revenues to sustain the desired level of public services. Tax systems should have appropriate levels of predictability, stability and reliability.

   Revenue projections have been falling short for commercial casinos, and revenue growth for both commercial casinos and VLT facilities has been volatile. Therefore, both commercial casinos and VLT facilities should revisit their business models and determine how tax policy can enhance a revised business model to ensure those levels of reliability, stability and predictability.

Of course, the definition of tax fairness in New York gaming varies, depending on the viewpoint of the definer. The only common ground in this debate is that the present tax structure needs to be adjusted, but the direction of such adjustments and the level of adjusting is quite contentious. Indeed, most proposed solutions create new dilemmas to be resolved.

For example, our research makes clear that the concept of fairness extends to multiple playing fields. In the competitive playing field in Western New York, "fairness" can mean that competitors in the same market, or in overlapping markets, share the same tax burden.

On a statewide basis, according to one theory, it could also mean that facilities in more profitable markets such as the New York City area pay taxes at a higher rate, because they can expect greater volume to overcome such high rates.

The counterpoint to that theory is that a commercial casino in that densely populated metropolitan area cannot achieve its optimal public policy goals unless the operator is allowed to build an integrated resort that is sufficiently attractive and iconic to capture the full breadth and depth of that market. That, in turn, requires capital investment at a level that would not be justified under a high tax burden.

However, that would foster another form of discontent. Should Downstate casinos in a demographically rich market pay a lower rate than Upstate casinos that struggle to survive in less appealing environs?

One proposed answer to that would be: lower the tax rate for Upstate casinos to levels at or below what a new Downstate commercial property would pay. Because a New York City commercial casino would generate enough tax revenue to eclipse whatever would come from Upstate, the fiscal effects would be negligible, according to that theory.

That theory, however, does not account for the potential political ramifications. If lowering an Upstate casino's tax burden would be perceived as shortchanging local governments or education funding, it would create significant political opposition.

With that in mind, our analysis leads to the recommendation that tax rates for existing properties should only be adjusted if the operator can demonstrate to regulators that such an adjustment would advance public policy.

Spectrum recognizes that such a policy must be considered carefully. For example, as explained earlier in this report, past projections by operators were not achieved. That raises a two key questions:

- Can operators who have missed the mark in the past be relied on to put forth more accurate projections going forward?
- Should the State be held accountable for poor investment decisions by gaming operators?

Spectrum recommends a detailed process that would govern such a policy through the promulgation of regulations. A process by which operators petition the State for relief can take into account some of the aforementioned lessons. For example, the notion of a graduated tax rate can be encouraged – or required – within the petition process to help ensure that the State fully shares in – and benefits from – future growth.

Petitions would be examined individually, based on the totality of circumstances. The licensee would have to specify in detail the reasons for requesting the tax adjustment and provide all necessary supporting documentation. In all cases, the burden would rest upon the licensee to demonstrate by a preponderance of the evidence that granting the relief requested is in furtherance of a legitimate public interest, which could include the ability to remain a going concern.

The licensee would have the option of requesting tax relief on a permanent or temporary basis, according to the reasons given for the requested tax reduction. For example, as a result of the current COVID-19 pandemic, the requested tax rate reduction may be for a temporary period to allow sufficient time for a specified recovery period.

The licensee would be required to demonstrate that the reason for the requested relief is due to external causes beyond the licensee's control, and is not predicated on unsuccessful decisions undertaken by management that adversely impacted operational performance. Accordingly, an exceedingly high debt burden, by itself, should not automatically be considered sufficient grounds for granting tax relief. In such instances, operators would need to demonstrate that such debt levels are a result of external factors that affected performances.

The licensee must demonstrate that, upon the granting of the relief requested, it will be able to fully satisfy all license criteria, including financial stability. Conversely, the licensee should be required to demonstrate that, in the absence of a tax adjustment, it would be unable to sustain ongoing financial stability, remain competitive, and/or remain a going concern over a specified period. In support of the petition, the licensee should be required to submit a report from an independent auditor, certified in the State of New York, attesting to the fact that the licensee requires the requested tax relief to remain a going concern, if that is the basis for the relief requested.

The licensee should be required to provide a revised business model to be implemented in the event the tax relief is approved, including financial projections for a three- year period and any anticipated capital expenditures for a similar three- year period.

In this regard, the licensee must demonstrate that the tax reduction would not be used to service and enhance business operations outside of the State of New York or for the payment toward any debt obligations of affiliated companies, but would be utilized exclusively for the benefit of its casino gaming operations and facility in the State of New York. The licensee must also demonstrate that the requested tax relief would not negatively impact upon competition in its designated region. Achieving that goal would require operators to demonstrate that they are targeting a broader demographic audience and additional spending, rather than cannibalizing their commercial competition.

That is a particularly critical issue. The State would be rightfully concerned that granting relief to one petitioner may result in cascading petitions from other licensees in response. Each petitioner should bear the burden of addressing that potential risk, and other operators that would be potentially affected by the granting of tax relief would have the ability to respond to the petition.

In deciding the matter, the New York State Gaming Commission – either through its staff resources or by relying on the work of an independent third party – would evaluate all relevant circumstances, including:

- The ability of the licensee to satisfy the license criterion of financial stability absent the tax rate reduction;
- A complete examination of all financial projections, as well as gaming revenues generated for the prior annual period;
- The licensee's intended use of the funds resulting from a tax adjustment;
- The inability of the operator to remain competitive under the current tax structure;
- Positions advanced by other gaming operators in the State in response to the petition;
- The impact on the competitive landscape;
- Other economic factors such as employment and the potential impact upon other businesses in the region; and
- The public interest to be served by a tax adjustment, including the impact upon the State in the event the operator is unable to remain financially viable.

As noted, the decision should be based on the totality of circumstances. The Gaming Commission would have the discretion to impose any conditions upon the approval of tax relief to ensure that the public interest is well served.

5. Tax Policy Conclusions

With respect to tax policy, our findings note:

- The burden of proof in establishing a fair, effective tax policy for each property rests with the operators. Operators that seek tax parity through a lower rate should demonstrate to the State how that additional capital will help advance both the operator's and the State's goals, including growing revenue through multiple fiscal streams while increasing employment, among other benefits to the state and local region.

- One common goal among all gaming operators in New York is developing a tax policy that is equitable. That is hardly a new goal, but its pursuit has become more acute recently due to the devastating effects of the COVID-19 pandemic, which has forced all facilities in New York and elsewhere in the United States to close.
- During the period of closure itself, the issue of tax parity is moot, because no revenue is being generated and no taxes are being paid. In the post-pandemic environment, however, operators – many of which were struggling prior to the closure – will seek tax relief, and some level of relief will be justified and necessary to help the industry recover.

Our core findings with respect to tax policy are:

- Tax parity remains an important goal, but parity is not necessarily defined as allowing all operators to function at the lowest common rate, because not all operators will operate under the same business model or have the same levels of capital investment, nor will they all operate in the same competitive environment.
- A goal of identifying a single statewide rate that all operators and other stakeholders, including State government itself, will view as fair and effective is not achievable. Rather, the goal should be to establish rational, defensible tax rates for operators that may differ by region but are designed to optimize returns, and have been determined through sound, transparent analyses.
- Tribal payments to the State – based on 25 percent of slot revenue, with no revenue share from table games – will likely always be lower than any rate paid by VLT facilities or commercial casinos. With that in mind, there never will be full parity in the state under any circumstances. The 25 percent tax should be considered a floor for all slots and VLT facilities, as it is highly unlikely that any tribal operation would agree to a greater revenue share for the State than commercial operations would be paying.

The criteria that regulators would apply in determining whether an applicant has met its burden of proof in seeking tax relief will largely be project-specific, based on the relevant facts and circumstances that are put forward in an application. Those seeking relief would not only have to address the impact of such relief on their own properties, but on the competitive landscape in general: Would the granting of relief have a ripple effect that would prompt others to respond, and perhaps seek further relief? If so, what would be the fiscal and economic impacts to the state and region?

Still, there would be criteria that are universal in their applicability, such as ensuring that the analysis as presented is transparent, comprehensive, and reliant on realistic assumptions. At the same time, regulators would need to consider whether a particular operator is seeking relief for poor management decisions or for being over-leveraged or other causation factors that could be considered self-inflicted. The core question to be addressed and answered is: Would tax relief have a salutary economic effect on the state, as well as on the operator? As noted earlier, decisions may have to be made that trade economic growth for tax revenue.

Gaming policy in New York and elsewhere is established on a principle that is often unrecognized but very real: the state and its regions are effectively partners with the operators. Policies that encourage investment, employment and fiscal benefits work best when both the operators and the state benefit.

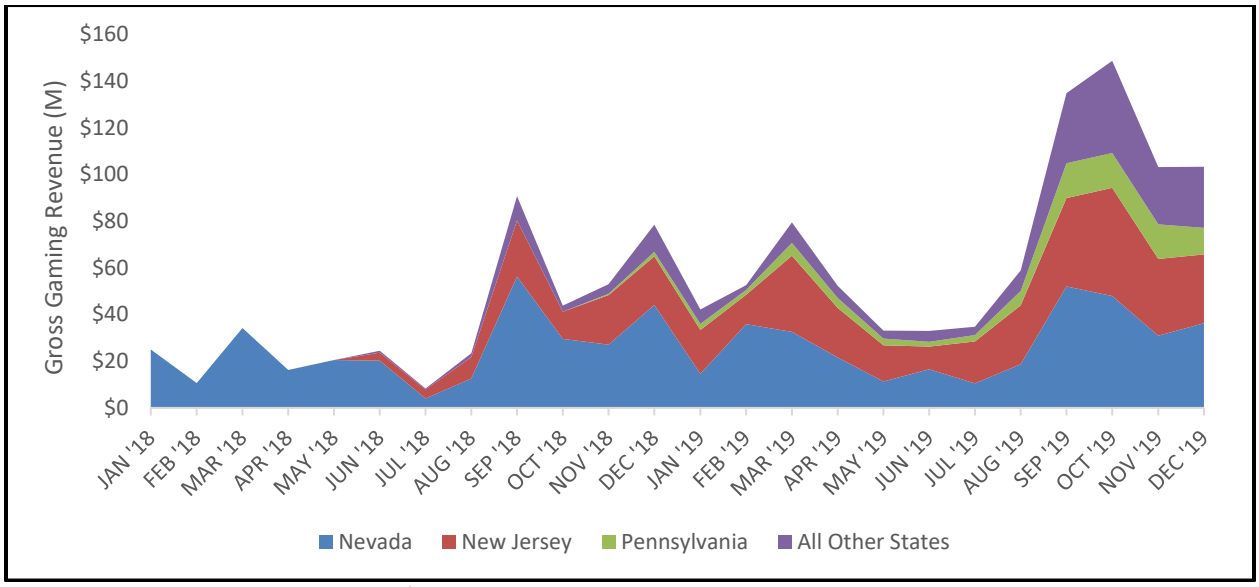
Decisions made for each region – recognizing the stark economic and demographic differences between regions – should be established through adherence to a single, statewide principle: What is the tax policy that offers the optimal public policy benefit?

J. Sports Wagering and Online Gaming

1. Retail Sports Wagering

On May 14, 2018, the United States Supreme Court struck down the Professional and Amateur Sports Act ("PASPA"), a federal law that banned sports wagering in most states. This decision enables states to decide whether to legalize sports wagering. As of this writing, 18 states have launched sports wagering, and Spectrum estimates that at least three more states that have approved sports wagering will activate sports wagering within the next 12 months. (Nevada already had sports wagering, as will be discussed later in this report). For perspective, Figure 173 shows the growth in national sports wagering GGR by month for 2018 and 2019.

Figure 173: Sports wagering GGR growth, 2018-2019



Source: Management Science Associates/Spectrumetrix. **Note:** All Other States includes DE, IA, IN, MS, NY, RI and WV.

Among recently launched sports wagering states, Delaware and New Jersey were the first, commencing in June 2018. Mississippi was the next state to activate, followed by West Virginia, Rhode Island, and Pennsylvania. Several additional states activated one or more forms of sports wagering in 2019, including New York, Iowa and Indiana. Each state operates with a different business model and tax rate. We view adult population size, household income, gaming tax rate and number of local pro sports teams as key influencing characteristics to estimate the potential size of the sports wagering industry in each state. As Figure 174 illustrates, gaming tax rates in active states range from as low as 6.75 percent to as high as 61 percent.

Figure 174: Summary of demographics, regulations and tax rates in newly active states

State	Adult Pop. (M)	Household		Start Date		Tax Rate		LTM Results[1]			GGR/Adult[1]	
		Income	Modality	Retail	Digital	Retail	Digital	Handle	GGR	Hold %	Actual	HHI Adj.
Low-Tax-Rate States												
NJ	7.0	$76,475	Retail & Digital	Jun-18	Aug-18	8.5%	13%	$4,912	$338	6.9%	**$48**	**$39**
IN	5.1	$52,182	Retail & Digital	Sep-19	Oct-19	9.5%	9.5%	$790	$65	8.3%	**$26**	**$31**
MS	2.3	$42,009	Retail Only	Aug-18	NA	12%		$386	$46	11.8%	**$20**	**$29**
IA	2.4	$56,570	Retail & Digital	Aug-19	Aug-19	6.75%	6.75%	$319	$23	7.2%	**$19**	**$21**
WV	1.4	$44,061	Retail & Digital	Sep-18	Jan-19	10%	10%	$275	$21	7.7%	**$15**	**$21**
NY	15.7	$65,323	Retail Only	Jul-19	NA	10%		NA	$3	NA	**$0.4**	**$0.4**
High-Tax-Rate States												
RI	0.9	$61,043	Retail Only	Nov-18	Sep-19	51%	51%	$254	$21	8.2%	**$23**	**$24**
DE	0.8	$63,036	Retail Only	Jun-18	NA	61%		$100	$14	14.4%	**$18**	**$18**
PA	10.0	$56,951	Retail & Digital	Nov-18	May-19	36%	36%	$2,115	$151	7.2%	**$15**	**$16**
							Median	$353	$23	7.7%	$19	$21
							Mean	$1,144	$76	8.8%	$21	$22

Source: State regulatory agencies, U.S. Census. **Notes:** [1] States with 12 months of data. LTM for states with more than 12 months data, all others annualized. HHI = Household income. Adjustment to HHI uses U.S. HHI as an index.

We note that varying tax rates across states can have significant influence on sports wagering volumes. Sports wagering operators in high-tax-rate jurisdictions are less likely to offer attractive promotions to players, whereas low-tax-rate environments do allow for more aggressive promotional activity. Although difficult to quantify, we believe tax rates have a degree of influence on overall wagering volume, especially when the tax rate exceeds 20 percent.

Retail sports wagering is already active at all four commercial casinos in New York. Rivers and Tioga Downs started accepting bets in July 2019, and del Lago and Resorts World Catskills commenced in August 2019. Through February 2020, the total New York retail sports wagering GGR generated was $9.5 million (generating nearly $1 million in State tax revenue), and annualizing actual results suggests the four casinos would generate about $14 million ($1.4 million in State tax revenue) during the first year of operations if not for the COVID-19-caused cessation of gaming. The state's monthly sports wagering GGR is illustrated in Figure 175 below.

Figure 175: New York commercial casino sports wagering GGR, July 2019-February 2020

(Millions)	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Total	Tax Revenue	GGR Annualized[1]	Tax Revenue Annualized
Del Lago	$0.0	$0.2	$0.8	$0.6	$0.2	$0.3	$0.6	$0.1	$2.9	$0.3	$4.2	$0.4
RW Catskills	$0.0	$0.1	$0.4	$0.5	$0.5	$0.1	$0.4	($0.1)	$1.7	$0.2	$2.6	$0.3
Rivers	$0.3	$0.4	$0.9	$1.0	$0.5	$0.3	$0.8	($0.0)	$4.2	$0.4	$6.2	$0.6
Tioga Downs	$0.1	$0.1	$0.2	$0.2	$0.1	$0.1	$0.2	($0.1)	$0.7	$0.1	$1.0	$0.1
Total	**$0.3**	**$0.8**	**$2.3**	**$2.2**	**$1.3**	**$0.8**	**$1.9**	**($0.2)**	**$9.5**	**$1.0**	**$14.0**	**$1.4**

Source: New York State Gaming Commission. [1] Annualization based on seasonality observed in New Jersey.

a. Forecast

This section analyzes the potential size of the sports wagering market in New York. Our analysis and assumptions substantially rely on benchmarking New York's demographics against what is observed in other mature markets globally, which is fully analyzed in **Appendix G**. We analyzed retail sports wagering under two scenarios in New York, as follows:

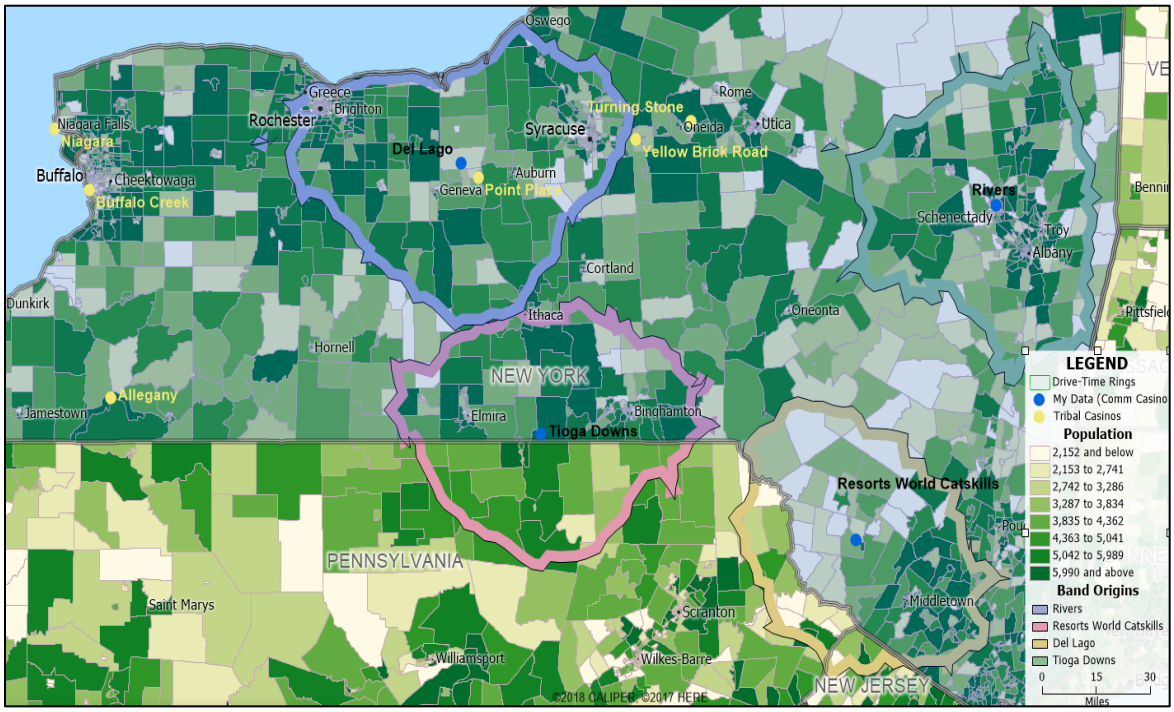
1. **Scenario 1:** The present law, in which sports wagering is allowed only at New York State's four commercial casinos: del Lago, Resorts World Catskills, Rivers Schenectady, and Tioga Downs. We also estimated retail sports wagering at Indian casinos.
2. **Scenario 2:** Retail potential across VLT facilities as well as OTB venues, in addition to the retail sports wagering already authorized at the four commercial casinos and Indian casinos.

For all scenarios we assume a 10 percent tax rate on GGR.

b. Scenario 1: Current Law, Retail-Only Sports Wagering at Commercial Casinos and Indian Casinos

To estimate retail sports wagering at New York's four commercial casinos, we applied the income and population demographics around a 60-minute drive-time radius of each casino to determine the primary catchment areas. Figure 176 illustrates where each casino is situated, including the Indian casinos. The Tioga Downs and Resorts World Catskills primary catchment areas partially include Pennsylvania and New Jersey, respectively, which means there is competition for sports wagering within those markets. Del Lago competes with several Indian casinos within its primary market area. Rivers operates with no sports wagering competition within its primary market catchment area.

Figure 176: 60-minute drive-time and population map for New York's commercial casinos



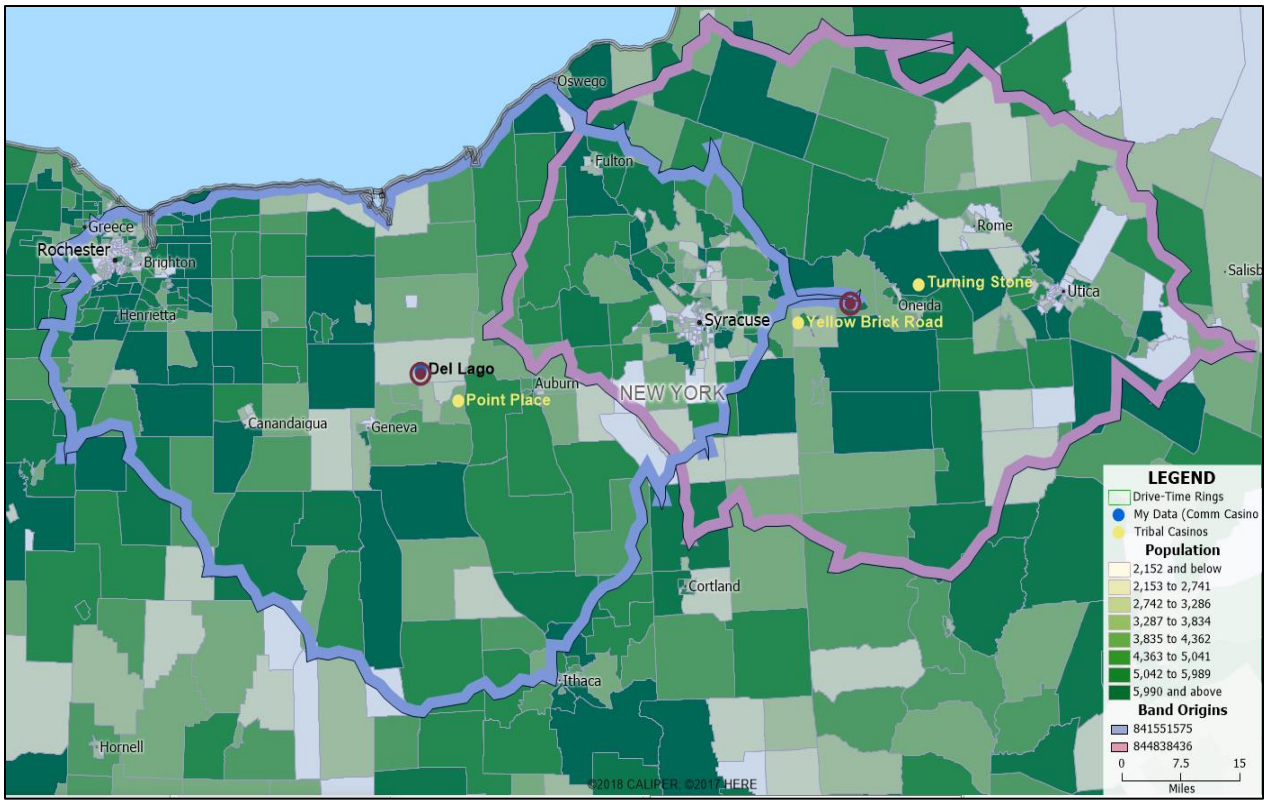
Source: Maptitude, Spectrum Gaming Group

We estimated the GGR per adult (or "spend") on sports wagering within the 60-minute drive-times, according to the following methodology (for the complete methodology, see **Appendix G**):

- As a starting point we assume GGR per adult across total United States is between $50 and $70 per adult, assuming full sports wagering.
- We adjusted the total U.S. estimate for New York's median household income to arrive at a slightly higher GGR/adult of $53 to $74.
- Next, we assume based on the European results that one-third of GGR per adult will be generated from retail sports wagering, which equates to $18 to $25 of GGR per adult in a retail-only environment.
- We then adjusted that assumption by household income ("HHI") in the market area and multiplied the spend by the number of adults in-market to arrive at estimated GGR at each property.
- We made adjustments to account for competition at Resorts World Catskills and Tioga Downs. For these two properties we reduced our GGR estimates by 33 percent to account for the presence of digital wagering in part of each of their respective addressable markets.

For del Lago estimates, we had to account for the significant tribal competition within the 60-minute drive-time market area. The overlapping markets for del Lago and adjacent Indian casinos are illustrated in the map in Figure 177 below.

Figure 177: Overlapping market areas for del Lago and Indian Competition

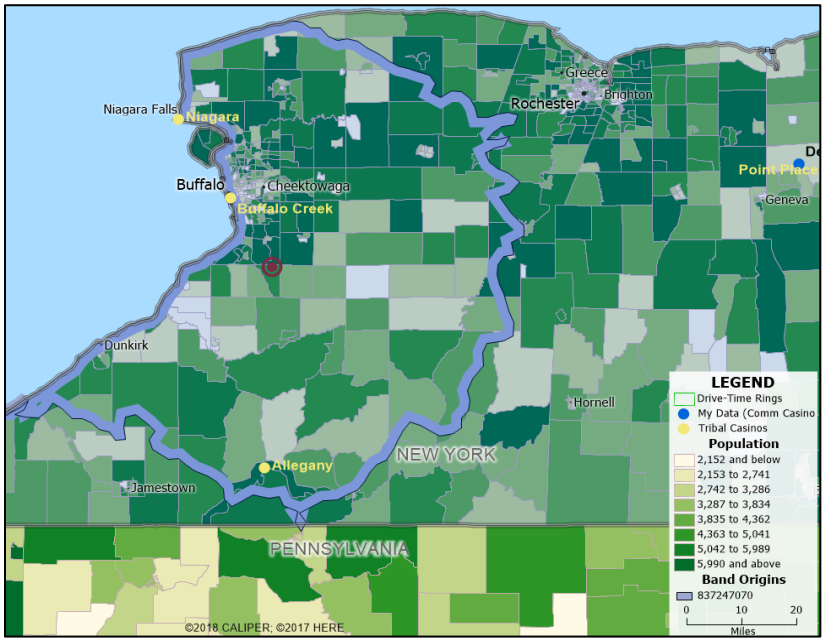


Source: Maptitude, Spectrum Gaming Group

To account for the competition within this market area, we reduced our del Lago estimate by 33 percent. This is in part due to competition from Point Place within the addressable market as well as the overlap that exists around Syracuse, where Turning Stone and Yellow Brick Road casinos are as convenient an option as del Lago. The overlap represents about 400,000 adults with a median household income of roughly $59,000 and is worth between $2 million and $3 million of retail sports wagering GGR.

To quantify GGR for the Seneca region, which has three Indian casinos, we created a drive-time ring that essentially covers the entire addressable market in the western part of Upstate New York. This map is illustrated in Figure 178 below.

Figure 178: Seneca region casinos



Source: Maptitude, Spectrum Gaming Group

Our methodology suggests that all four New York commercial casinos combined could generate between $35 million and $48 million of sports wagering GGR at stabilization. Our model suggests the following:

- Del Lago and Rivers will generate roughly 75 percent of GGR, given the substantially higher number of adults in each of their respective markets.
- Resorts World Catskills will generate $5 million to $7 million of GGR, supported by a wealthier local demographic.
- Tioga Downs will generate $3.7 million to $5.1 million of GGR.

Our modeled estimates for Indian casinos suggest they could generate between $32 million to $45 million of GGR. The results of our analysis are illustrated in Figure 179 below, which shows sports wagering GGR at stabilization – approximately three to five years after launch.

Figure 179: Retail sports wagering estimates at commercial and Indian casinos

	Population		Adults/	Median	GGR/Adult			Retail GGR (M)			Tax Rev. (M)	
Facility	**Total**	**Adults**	**Total (%)**	**HH Income**	**Low**	**High**		**Low**	**High**		**Low**	**High**
Commercial Casinos												
Del Lago	1,484,832	1,164,661	78%	$56,677	$15	$21		$11.7	$16.3		$1.2	$1.6
Rivers Schenectady	1,034,329	823,410	80%	$64,109	$17	$24		$14.1	$19.7		$1.4	$2.0
Resorts World Catskills	549,377	417,657	76%	$67,561	$18	$25		$5.0	$7.0		$0.5	$0.7
Tioga Downs	508,151	405,821	80%	$51,405	$14	$19		$3.7	$5.1		$0.4	$0.5
Subtotal Commercial Casinos								**$34.5**	**$48.1**		**$3.4**	**$4.8**
Indian Casinos												
Akwesasne	95,642	77,192	81%	$46,836	$13	$18		$1.0	$1.4			
Point Place	1,484,832	1,164,661	78%	$56,677	$15	$21		$5.8	$8.1			
Turning Stone & Yellow Brick	900,583	705,114	78%	$55,813	$15	$21		$9.5	$13.3			
Seneca Region	1,353,237	1,073,577	79%	$54,328	$15	$20		$15.6	$21.8			
Subtotal Indian Casinos								**$31.9**	**$44.6**			

Source: Maptitude, Spectrum Gaming Group

While our methodology, including adjustments, suggests that all four commercial casinos combined could generate between $35 million and $48 million of sports wagering GGR at stabilization, we believe that the lower end of our estimate is most likely because retail casino revenue at the Upstate commercial casinos generally has been underwhelming, suggesting this region might not have as high a propensity to wager on sports as other regions.

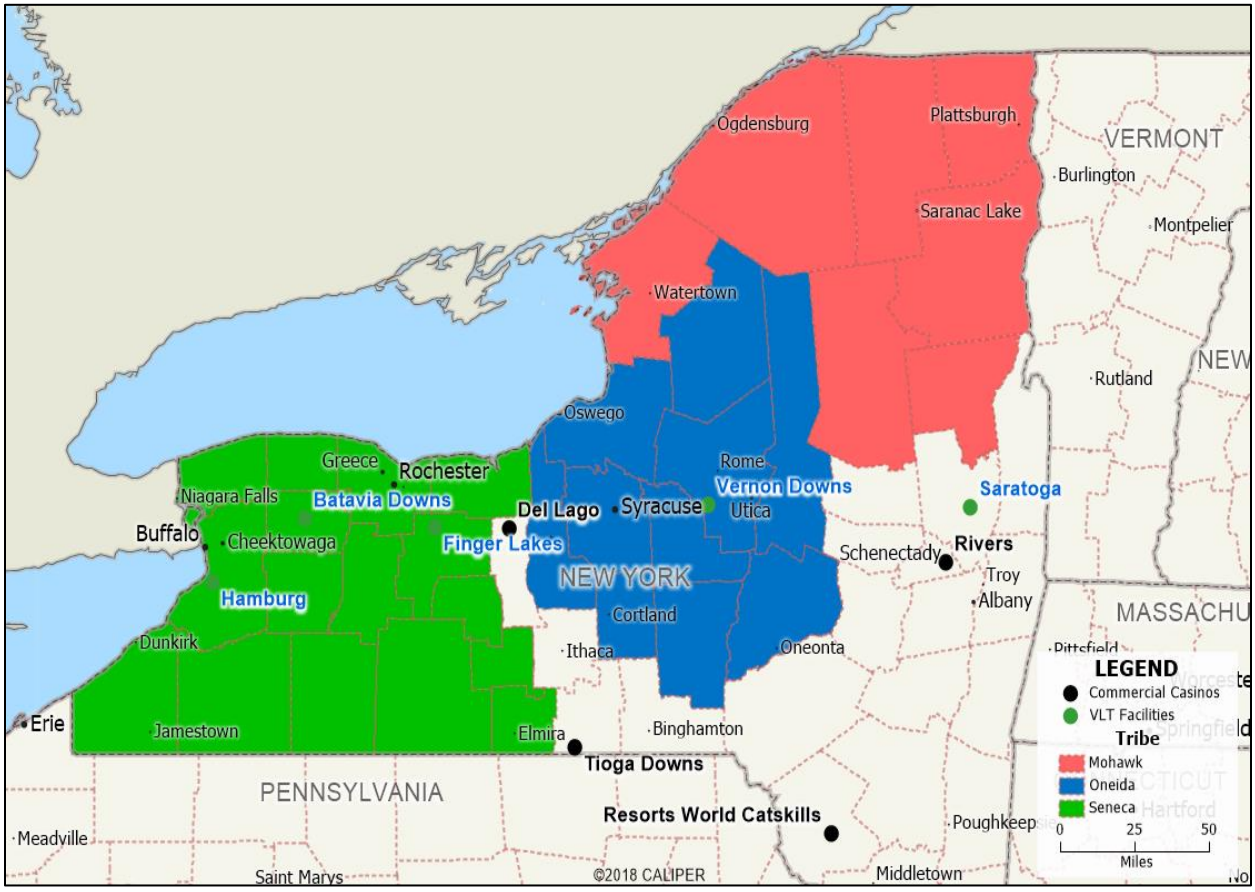
c. Scenario 2: Retail-Only Sports Wagering at VLT Facilities and OTBs

The next step in our analysis is estimating the GGR impact that could be generated if retail sports wagering were authorized at New York's eight VLT facilities and at OTBs, in addition to the four commercial casinos and seven Indian casinos. We note that the expansion of retail sports wagering at VLT facilities would adversely impact our estimates at certain commercial facilities and Indian facilities, but that OTBs would only capture the market not served by casinos or VLT facilities.

1) Sports Wagering at VLT Facilities

For this analysis, we analyzed the VLT gaming facilities in Upstate separately from the Downstate facilities. Five VLT facilities are located Upstate, and four of those are located within Indian gaming exclusivity zones. All Indian gaming facilities – operated by the Seneca, Oneida and Saint Regis Mohawk nations – are also located in Upstate New York. Figure 180 depicts the five Upstate VLT facilities in the context of the tribes' gaming exclusivity zones.

Figure 180: Map of New York VLT facilities and Indian gaming exclusivity zones



Source: Maptitude, Spectrum Gaming Group

The Oneida gaming compact with the State of New York does not allow for competition in its exclusivity zone, so Vernon Downs would be excluded from participating in sports wagering in this analysis. We estimated the retail sports wagering at VLT facilities by analyzing the following regions separately:

- Saratoga Region: Saratoga (VLT) and Rivers (commercial)
- Seneca Region: Batavia Downs, Finger Lakes, and Hamburg VLT facilities
- Downstate Region: Resorts World New York City, Empire City, and Jake's 58 VLT facilities

Saratoga Region: Saratoga is the only Upstate VLT facility that does not reside within an Indian gaming exclusivity zone. However, Saratoga does directly compete with Rivers casino, which is only 23 miles south. To quantify the GGR potential for Saratoga and Rivers we tabulated the cumulative addressable market for these facilities within a 75-minute drive time, which acknowledges the higher degree of penetration enabled by both facilities offering sports wagering. Figure 181 illustrates the total market area we estimate will be served by Rivers and Saratoga for retail sports wagering.

Figure 181: Map of Saratoga and Rivers Casino addressable market (75-minute drive time)

Source: Maptitude, Spectrum Gaming Group

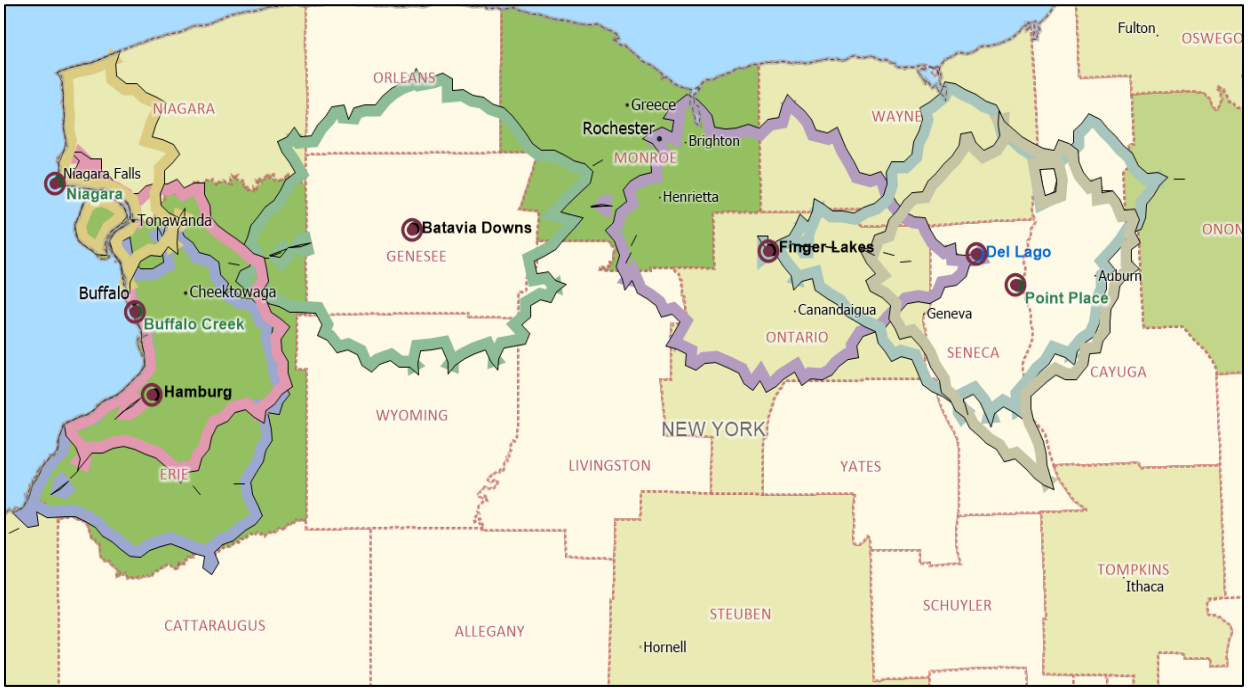
Next, we assumed based on geography and demography that Saratoga and Rivers would each generate 50 percent market share of the addressable market for sports wagering. Generally, we would assume that Rivers is likely to generate a greater market share for gaming than Saratoga, namely because it is a full-scale casino (slots and tables). However, for retail sports wagering our equal market share assumption is based on the presumption that the facilities provide essentially the same sports wagering experience to patrons.

Seneca Region: We reviewed the location of the remaining three Upstate VLT facilities to determine the size of each location's addressable market. These locations reside within Indian gaming exclusivity zones that, in turn, host Indian casinos that are currently offering retail sports wagering. We assumed that each VLT facility's addressable market is within a 30-minute drive-time radius. We chose a 30-minute drive-time radius to minimize overlap between VLT facilities, Indian casinos, and del Lago,

which is also proximate to the Seneca region and therefore will compete with these facilities for sports wagering.

Figure 182 shows the 30-minute drive-time radius for each of the three remaining Upstate VLT facilities and the degree to which each intersects with the existing Indian casinos and del Lago. In this illustration, Batavia Downs will have little competition within its market area. Hamburg will compete with Seneca Buffalo Creek and to a lesser degree Seneca Niagara. Finger Lakes will compete with del Lago and Point Place Casino. Based on the results of this map illustration, we assume Batavia Downs will generate 100 percent of its primary drive-time market.

Figure 182: Map of potential retail sports wagering market in Seneca Region (30-minute drive time)



Source: Maptitude, Spectrum Gaming Group

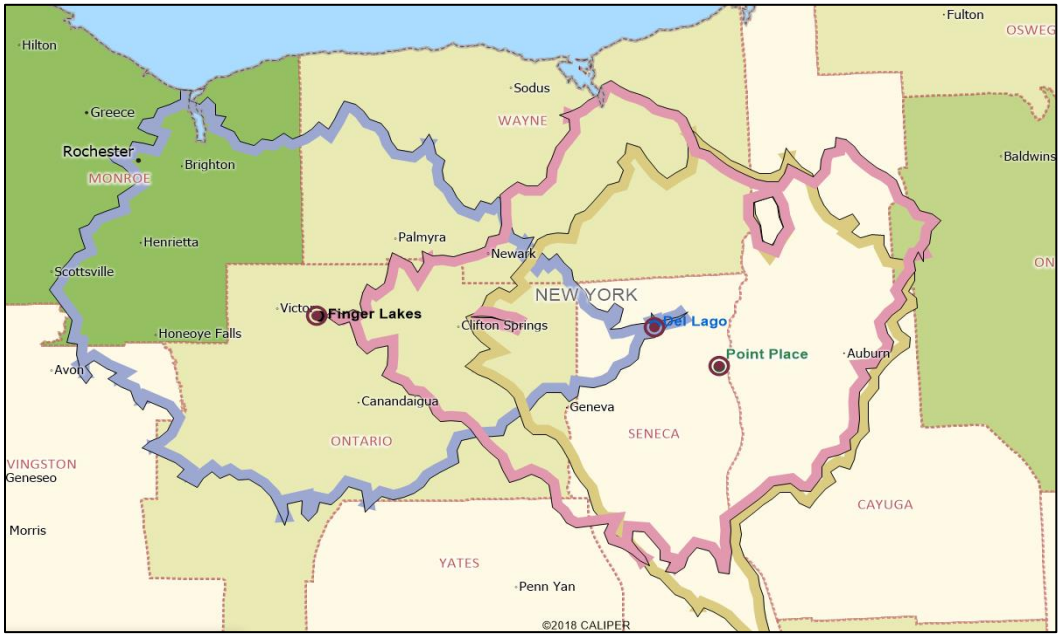
To analyze potential GGR more granularly at Hamburg and competing facilities, we analyzed the specific 30-minute drive-time markets for each facility, as shown in Figure 183 below. There is a small overlap between the Seneca Niagara and Buffalo Creek casinos, so we reduced our Niagara estimate by 15 percent to minimize double counting. There is a more substantial overlap between Hamburg and Buffalo Creek, which required a more substantial reduction – 33 percent – to each market size.

Figure 183: 30-minute drive-time for Hamburg VLT and Seneca Niagara and Seneca Buffalo Creek

Source: Maptitude, Spectrum Gaming Group

To analyze potential GGR more granularly at Finger Lakes and competing facilities, we analyzed the specific drive-time market covering Finger Lakes, del Lago and Point Place, depicted in Figure 184 below. For these markets there is substantial overlap between Point Place and del Lago, and smaller overlap between del Lago and Finger Lakes. For this analysis we adjusted the Finger Lakes estimate down by one-third. Del Lago and Point Place have significant overlap in their market areas, and the market is tiny for each facility pursuant to our underlying assumptions: Each 30-minute drive-time market has a population of between 100,000 and 150,000. Due to the already tiny size of these markets we did not adjust our estimates.

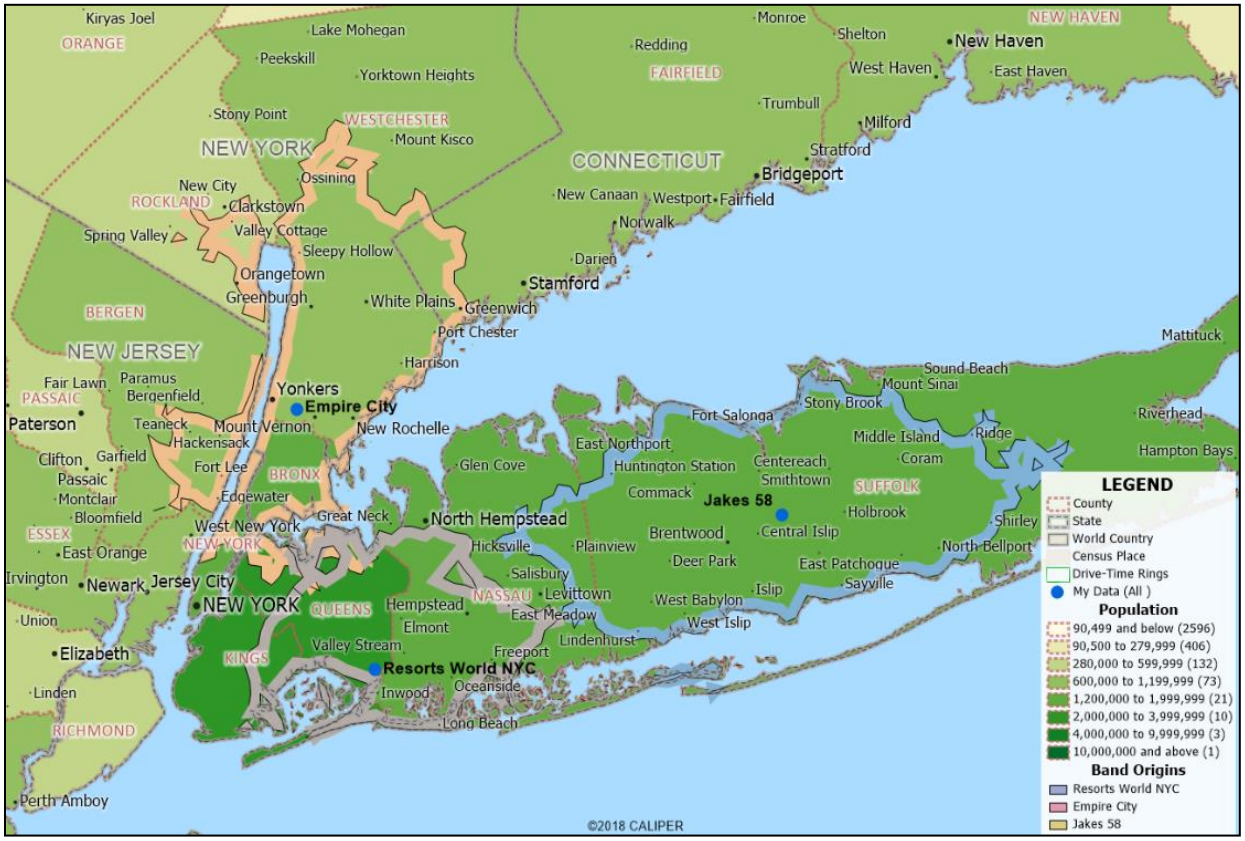
Figure 184: 30-minute drive time for Finger Lakes, del Lago and Point Place



Source: Maptitude, Spectrum Gaming Group

Downstate Region: For the three Downstate VLT facilities – Empire City Casino, Resorts World New York City ("RWNYC"), and Jake's 58 – we applied a 30-minute drive time to isolate each facility's addressable market. By limiting the drive time to 30 minutes, we eliminated almost all the overlap between the properties, and we limited inclusion of New Jersey residents, who can already bet on sports via digital channels. The addressable market analysis illustration is shown in Figure 185 below.

Figure 185: Map of addressable sports wagering market for Downstate VLT facilities



Source: Maptitude, Spectrum Gaming Group

For all VLT facilities, we applied a similar methodology to our analysis of retail sports wagering at commercial casinos (GGR/adult multiplied by adult population multiplied by market share). Our analysis suggests that across all eight VLT facilities, retail sports wagering could generate between $142 million and $198 million. We project that 85 percent of this GGR would be generated by the three Downstate facilities because of the dense population and high-income demographic in that market area. We expect Upstate VLT facilities will generate $21 million to $29 million of retail sports wagering GGR. As a result of the additional competition from VLT facilities, we expect commercial casino sports wagering GGR to decrease from between $35 million to $48 million to between $18 million and $26 million. Similarly, sports wagering GGR generated by Indian facilities will also decline, to $18 million to $25 million from $32 million to $45 million. The results of our modeling and GGR estimates are included in Figure 186.

Figure 186: Retail sports wagering GGR estimate – commercial casinos and VLT facilities at stabilization

		Median	GGR/Adult (M)		GGR (M)		Tax Rev. (M)	
Facility	Adults	HH Income	Low	High	Low	High	Low	High
Saratoga	969,140	$62,598	$17	$23	$8.1	$11.3	$0.8	$1.1
Seneca Region								
Hamburg	502,138	$51,814	$14	$19	$4.6	$6.4	$0.5	$0.6
Batavia Downs	102,013	$56,773	$15	$21	$1.6	$2.2	$0.2	$0.2
Finger Lakes	390,573	$60,747	$16	$23	$6.4	$8.9	$0.6	$0.9
Downstate VLT Facilities								
Empire City	3,111,620	$65,113	$17	$24	$54.2	$75.7	$5.4	$7.6
Resorts World NYC	2,165,569	$70,504	$19	$26	$40.9	$57.1	$4.1	$5.7
Jakes 58	1,012,110	$97,345	$26	$36	$26.4	$36.8	$2.6	$3.7
Commercial Casinos								
Del Lago	117,176	$49,136	$13	$18	$1.5	$2.2	$0.2	$0.2
Rivers	969,140	$62,598	$17	$23	$8.1	$11.3	$0.8	$1.1
Resorts World-Catskills	417,657	$67,561	$18	$25	$5.0	$7.0	$0.5	$0.7
Tioga Downs	405,821	$51,405	$14	$19	$3.7	$5.1	$0.4	$0.5
Indian Casinos								
Point Place (NA)	88,590	$49,189	$16	$23	$1.4	$2.0		
Buffalo Creek	756,388	$55,196	$14	$19	$6.9	$9.7		
Niagara	225,180	$51,011	$14	$19	$2.7	$3.7		
Turning Stone/YBR	346,016	$53,867	$14	$20	$5.0	$7.0		
Akwesasne Mohawk	77,192	$46,836	$13	$18	$1.0	$1.4		
Seneca Allegany	75,242	$42,514	$11	$16	$0.9	$1.2		
Totals								
Downstate VLT					$122	$170	$12	$17
Upstate VLT					$21	$29	$2	$3
Total VLT's					$142	$198	$14	$20
Commercial Casinos					$18	$26	$2	$3
Indian Casinos					$18	$25		
Total					**$178**	**$249**	**$16**	**$22**

Source: Spectrum Gaming Group

2) Sports Wagering at OTB venues

Retail sports wagering at existing off-track betting ("OTB") venues would provide a greater degree of convenience, relative to traveling to a gaming facility, for residents to place sports wagers. Off-track wagering was established in New York in 1971 as a convenient option for race fans who could not always make it to the racetrack. OTB in New York is administered by five separate corporations that oversee a total of 177 locations. The 2018 racing handle across all these locations was $506 million.

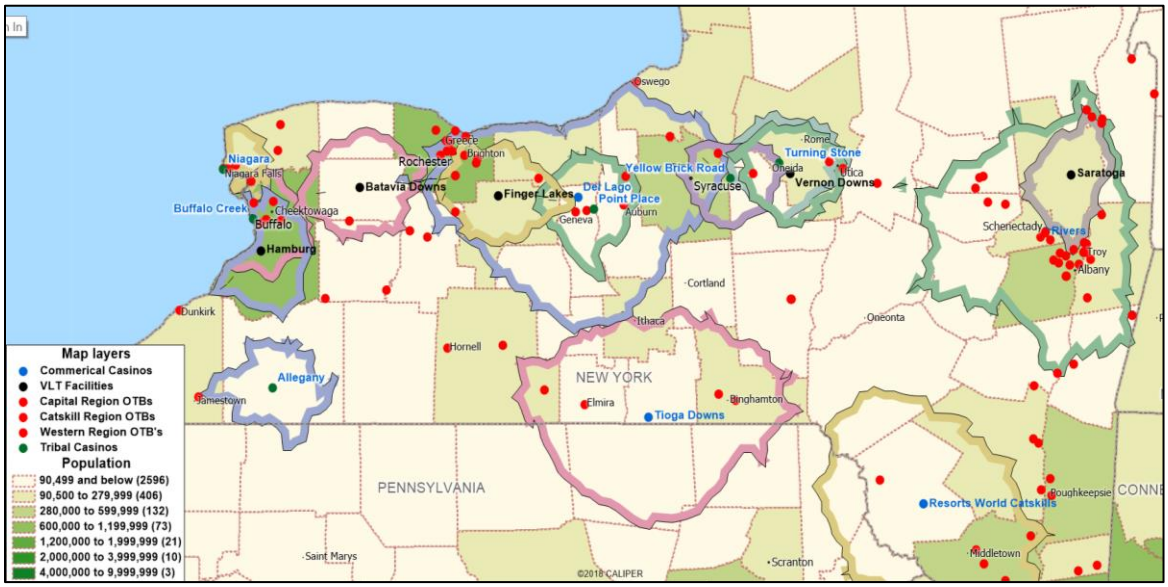
Figure 187: In-state handle and number of locations for New York OTBs

Region	Number of Locations	2018 Handle (In-State)	Proximate Gaming Facility
Capital OTB	47	$144M	Rivers and Saratoga
Catskill OTB	23	$59M	Resorts World Catskills
Nassau OTB	18	$150M	Resorts World NYC
Suffolk OTB	46	$84M	Jake's 58
Western OTB	43	$69M	Batavia Downs
Total	**177**	**$506M**	

Source: New York State Gaming Commission. **Note:** Includes EZ Bet/Qwik Bet Locations

To analyze the potential impact that retail sports wagering at OTB venues could have on GGR, we reviewed the OTB venues relative to the existing VLT facilities, commercial casinos, and Indian casinos. Next, we observed the number of OTB facilities that are in counties that are not within the addressable market of an existing retail sportsbook. We first analyzed the Upstate market, as shown in Figure 188. The OTBs illustrated below are in the Capital, Catskill, and Western regions.

Figure 188: Map of Upstate with casinos, VLT facilities and OTBs

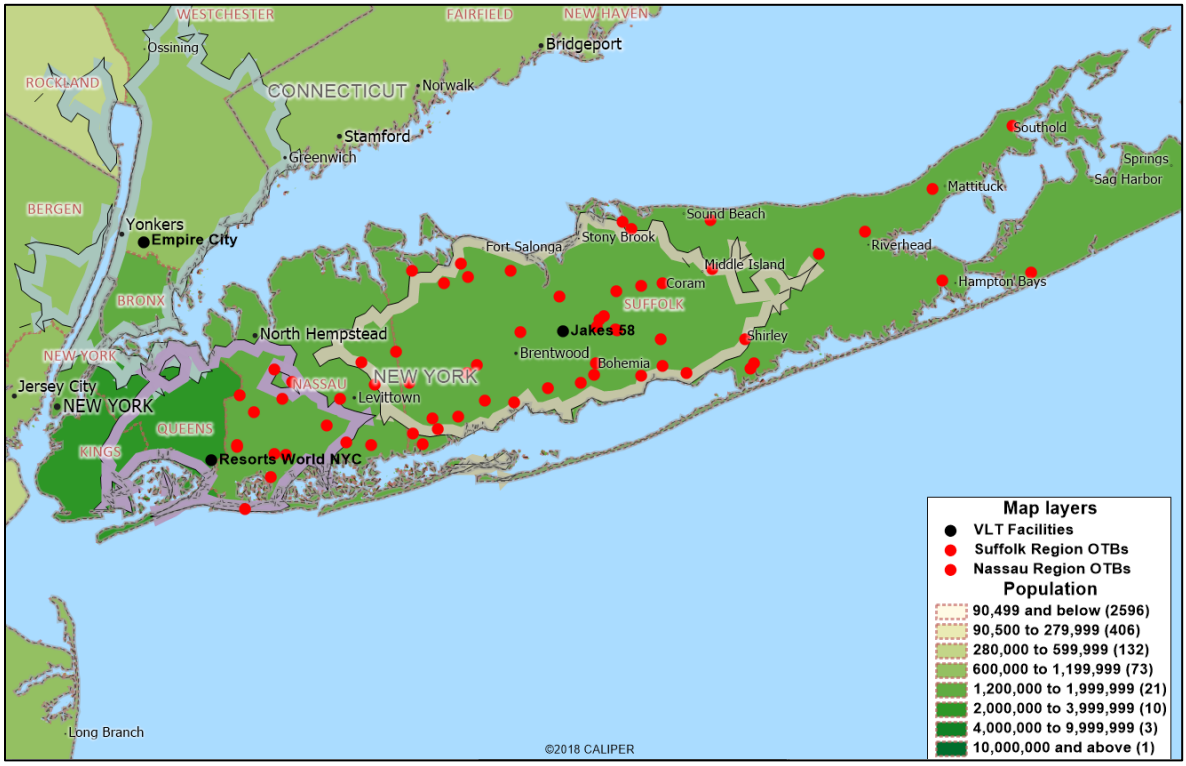


Source: Maptitude, Spectrum Gaming Group. **Note:** In legend, number of population tracts in each range denoted in parentheses.

Based on our analysis, we estimate there are about 750,000 adults spread across 10 Upstate counties who are not currently served by a VLT facility, commercial casino or Indian casino (defined as not living within a 30-minute drive of the gaming facility) but are served by at least one OTB facility. Our modeling suggests potential upside of $14 million to $19 million of incremental sports wagering GGR in Upstate generated by OTB facilities in Year 3 to Year 5 (at stabilization).

We applied a similar analysis for Downstate where we analyzed the placement of OTBs across Long Island (Suffolk and Nassau counties) to estimate the potential for sports wagering GGR, specifically focusing on locations that are not served by the three VLT facilities (Empire City, RWNYC, and Jake's 58). As illustrated in Figure 189, the region served by Empire City does not have any OTB venues, but there are about a dozen OTBs within RWNYC's addressable market and a substantial number of OTBs in Jake's 58's addressable market.

Figure 189: Map of Suffolk and Nassau OTB venues



Source: Maptitude, Spectrum Gaming Group. **Note:** In legend, number of population tracts in each range denoted in parentheses.

If sports wagering were authorized at OTB venues, we estimate there are approximately 720,000 additional Downstate adults who do not reside within the addressable market of a VLT facility and therefore would be served by an OTB facility. Most of these adults would be within the area of eastern Suffolk County and around North Hempstead in Nassau County. Applying an annual spend per adult ranging from $29 to $39 (higher GGR per adult than Upstate after adjusting for the much higher median household income of $90,000+) suggests incremental GGR of $21 million to $28 million from this market. Figure 190 below illustrates the results of our OTB analysis and our estimate that $34 million to $47 million of additional upside can be captured by OTBs outside the addressable market of the state's casinos and VLT facilities.

Figure 190: Forecasted sports wagering GGR by OTB region, at stabilization

OTB Region	Estimated Population	Spend/Adult		GGR		Tax Revenue	
		Low	High	Low	High	Low	High
Western	248,511	$18	$25	$4,473,194	$6,129,933	$0.4	$0.6
Catskill	425,252	$18	$25	$7,654,529	$10,489,539	$0.8	$1.0
Capital	79,273	$18	$25	$1,426,910	$1,955,396	$0.1	$0.2
Subtotal - Upstate OTBs	***753,035***			***$13,554,634***	***$18,574,868***	***$1.4***	***$1.9***
Suffolk & Nassau (Downstate)	719,238	$29	$39	$20,515,128	$28,256,686	$2.0	$2.8
Total	**1,472,274**			**$34,069,762**	**$46,831,554**	**$3.4**	**$4.7**

Source: Spectrum Gaming Group

d. Summary Across All Retail-Only Scenarios and Tax Revenue Estimates

Figure 191 summarizes our projections for retail sports wagering in New York. We estimate that retail sports wagering alone could generate $212 million to $296 million in GGR. This is mainly because this projection includes the substantial and wealthy Downstate population in the New York City metropolitan area. Assuming a 10 percent tax rate, our GGR projections are expected to yield approximately $19 million to $28 million of annual tax revenue from retail sports wagering.

Figure 191: Estimate of sports wagering, tax revenue across retail channels, at stabilization

(Millions)	GGR		Tax Revenue	
	Low	High	Low	High
Scenario 1				
Retail - Commercial	$34	$48	$3	$5
Retail - Indian	$32	$45		
Total Scenario 1	**$66**	**$93**	**$3**	**$5**
Scenario 2: Expanded Retail				
Commercial	$18	$26	$2	$3
Indian	$18	$25		
VLT Facilities	$142	$198	$14	$20
OTB Facilities	$34	$47	$3	$5
Total Scenario 2	**$212**	**$296**	**$19**	**$28**

Source: Spectrum Gaming Group

2. Online Gambling: Sports Wagering, Casino, Poker, Lottery

a. Digital Sports Wagering Forecast

Spectrum estimates that combined retail and digital sports wagering across the entire state of New York would generate between $816 million and $1.14 billion in annual GGR. This estimate is based on the annual per-adult GGR estimate across the United States of $50 to $70, adjusted for household income and population in each state. For New York State, $50 to $70 translates to $53 to $74 per adult. Multiplying GGR per adult by the state's adult population yields $816 million to $1.14 billion in GGR annually, at stabilization (a point that could be reached within three to five years, as illustrated later in figures 195 and 196). Our statewide estimate is illustrated in Figure 192 below.

Figure 192: Estimate for full-scale sports wagering GGR in New York at stabilization

	Total Pop. (M)	Adult Pop. (M)	Median HHI	GGR/Adult		Full Scale GGR (M)	
				Low	High	Low	High
United States	327.2	255.0	$61,937	$50	$70	$12,750	$17,850
New York State	19.5	15.5	$65,323	$53	$74	$816	$1,143

Source: U.S. Census Bureau, Spectrum Gaming Group. **Note:** HHI = household income

To quantify the degree to which the presence of digital wagering will impact our retail estimates, we assumed that digital wagering in New York could achieve the same percentage of overall sports wagering GGR observed in New Jersey – roughly 82 percent. Applying that assumption to our statewide New York estimates suggests that digital GGR could be $669 million to $937 million, while retail GGR would be reduced to between $147 million and $206 million.

Spectrum estimates that most of the decline in retail GGR caused by the addition of digital wagering would be felt at the Downstate VLTs and at OTB facilities. While it is difficult to estimate the degree to which GGR at Downstate gaming facilities and OTBs will decline, the convenience of digital wagering carries much greater importance due to the massive population that resides Downstate. With that demographic base in place, growth in digital wagering would far eclipse any decline in retail GGR.

Although Spectrum's statewide estimate is wide-ranging, we believe New York will skew closer to the higher end of the range, $1.1 billion, for the following reasons:

1. The presence of a substantial number of home teams with representation from the core four U.S. sports, including three NFL teams and two NBA teams; this will attract casual bettors and non-gamblers who could have an interest in wagering on the home team.
2. Significant tourist and out-of-state commuter population that is likely to place bets while in New York.
    - Incremental wagering volume could be generated from tourists and out-of-state visitors (especially fans attending sporting events, etc.). For 2018, New York City tourism generated 13.6 million international visitors and 51.5 million domestic visitors.[211]
    - According to one study, Manhattan's population more than doubles, to roughly 4 million from 1.6 million, during the work week due to commuters.[212] A 2013 study estimated that about 1 million commuters are coming from Brooklyn, Queens and the Bronx. Most of the remaining 600,000 come from Westchester and Long Island, and a portion come from New Jersey, Pennsylvania and Connecticut.[213] Out-of-state residents from New Jersey, Pennsylvania and Connecticut are likely to participate in some wagering activity while in New York.

1) Quantifying the Impact of Indian Digital Sports Wagering

To estimate the State tax revenue that could be generated via digital wagering, we analyzed the potential revenue if the state's three Indian gaming operators were to offer digital wagering under two scenarios:

- **Scenario A** assumes that the Saint Regis Mohawk and Seneca tribes can offer digital sports wagering only within their respective exclusivity zones and commercial operators can also compete with tribal entities in these locations. However, for the Oneida region, which currently has exclusivity within the tribal region, we assume it maintains its monopoly status within that region (no commercial operators can compete within the Oneida region).

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[211] NYC & Company 2018-2019 Annual Report. https://indd.adobe.com/view/fcc4cd9f-7386-4b52-a39b-c401266a137f

[212] Mitchell L. Moss and Carson Qing, "The Dynamic Population of Manhattan," Rudin Center for Transportation Policy and Management, March, 2012. https://wagner.nyu.edu/files/rudincenter/dynamic_pop_manhattan.pdf

[213] U.S. Census Bureau press release, "Census Bureau Reports 1.6 Million Workers Commute into Manhattan Each Day," March 5, 2013. https://www.census.gov/newsroom/press-releases/2013/cb13-r17.html

- **Scenario B** assumes that Saint Regis Mohawk and Seneca tribes can offer digital wagering both within their region and statewide and that the Oneida tribe can offer digital wagering state-wide while also retaining monopoly status within its tribal region.

The monopoly status for the Oneida tribe (no competition within its region) and the restriction for Mohawk and Seneca to be able to offer digital wagering only within their regions (first scenario) can be enabled via geofencing technology.[214]

To quantify the potential digital GGR under each scenario, we first estimated the size of the total market in each tribal region. Next, we made market share assumptions for each tribal operator in each tribal region. For the Oneida Nation we assume a 100 percent market share within their region and for the Saint Regis Mohawk and Seneca nations we assume 50 percent market share within their region. (As noted above, the Saint Regis Mohawk and Seneca nations will be competing with commercial operators). Although we believe it will be difficult for tribal operators to compete with "pure-play" digital operators (discussed in the next paragraph), our 50 percent market share assumption is based on the premise that the tribal casinos have large customer databases within their respective regions and will leverage that database to generate meaningful market share. These assumptions suggest the first scenario yields tribal digital GGR of $58 million to $81 million.

For Scenario B, under which each tribal operator would be allowed to offer digital sports wagering statewide, we assume each tribal operator will generate incremental GGR, although we believe it will be modest.

The Indian casinos in New York have signed with non-traditional sports wagering partners: Caesars (Oneida), Stars Group (Saint Regis Mohawk) and Kambi (Seneca). The commercial operators have partnerships with DraftKings (del Lago), FanDuel (Tioga Downs), Bet365 (Resorts World) and Rush Street Interactive (Rivers). The highest-grossing brands in New Jersey are FanDuel and DraftKings, both of which have strong brands, large databases of sports players via their daily fantasy sports product, and both of which have a willingness and ability to invest significant capital to grow market share.

The results in New Jersey offer a clear story as to which companies are likely to outperform and gain market share in digital sports wagering. For the 12-month period ended February 2020 (pre-COVID-19), the digital sites under the Meadowlands (FanDuel and PointsBet), Resorts Digital (DraftKings, FOX Bet) and Monmouth Park (William Hill, Playsugarhouse.com, theScore Bet) licensees were responsible for generating 89 percent of statewide digital sports wagering GGR. We note that these brands and others including Bet365 are exclusively focused on sports wagering and in some cases iGaming. Additionally, many of these companies are publicly held entities whose equity valuations are based on revenue growth and market share metrics in each state they have operations. This "pure play" digital gaming operators' business model is to invest significant capital to generate and retain that market share. Therefore, in New

[214] Geofencing technology is employed when players are at or near jurisdictional borders to ensure they are within the legal boundary. For example, it is used in New Jersey to ensure that all internet-based wagers occur within the state's borders. A similar technology could be employed in New York to ensure only tribal sites are used for digital wagering within tribal designated lands.

Jersey we are seeing the pure play operators significantly outperform tenured casino operators such as Borgata, Caesars, and Golden Nugget.

Tribal sports wagering operators will have an advantage in that they would be exempt from paying gaming taxes. This means it is possible they could offer more attractive wagering odds, bonusing and other promotions, which would provide a competitive advantage over commercial operators. However, we still do not believe these advantages will be enough to generate meaningful market share. Based on the relative value of their land-based operations as compared to potential revenue from digital wagering, we do not believe Indian operators will invest the capital and resources to compete with the pure-play digital gaming companies that are likely to invest substantially.

In Scenario A, Spectrum's $58 million to $81 million GGR estimate will account for 8.6 percent of digital wagering market share statewide. In Scenario B, we assumed the tribal operators will generate between 12 percent and 14 percent market share statewide (a 40 percent to 60 percent increase in market share over Scenario A), for total digital GGR of $80 million to $131 million. The results of our analysis under both scenarios is illustrated in Figure 193.

Figure 193: Potential digital sports wagering GGR for New York tribal gaming operators[215]

	Monopoly	Median	Adult	Total Digital GGR (1)		Scenario A GGR		Scenario B GGR	
Tribe	Status?	HHI	Pop. (M)	Low	High	Low	High	Low	High
Mohawk	No	$45,949	0.3	$7	$10	$4	$5	$18	$32
Oneida	Yes	$46,419	1.0	$25	$35	$25	$35	$43	$67
Seneca	No	$47,521	2.2	$58	$82	$29	$41	$18	$32
Totals			**3.5**	**$91**	**$127**	**$58**	**$81**	**$80**	**$131**

Source: Spectrum Gaming Group. (1) Represents the total potential digital GGR within the respective exclusivity zone based on adult population and income

2) Estimating State Tax Revenue from Sports Wagering

Our estimate of tax revenue potential for New York State assumes that sports wagering will be taxed at a 10 percent gaming tax rate (the current sports wagering tax rate at the state's commercial casinos). This estimate excludes GGR generated by Indian-operated casinos, which is not subject to tax or a revenue-sharing agreement. Our estimates across all three sports wagering scenarios is shown in Figure 194.

[215] Under scenario #2 we assumed Oneida would generate 1/3rd of incremental GGR and Mohawk and Seneca nation would generate the remaining 2/3rds of incremental GGR. Of the 2/3rd incremental GGR we assumed Seneca and Mohawk would each generate 50%.

Figure 194: Sports wagering GGR and State tax revenue estimates at stabilization

($Millions)	GGR		Tax Revenue	
	Low	High	Low	High
Scenario 1				
Retail - Commercial	$35	$48	$4	$5
Retail - Indian	$32	$45		
Total - Scenario 1	**$67**	**$93**	**$4**	**$5**
Scenario 2: Expanded Retail				
Commercial	$18	$26	$2	$3
Indian	$18	$25		
VLT Facilities	$142	$198	$14	$20
OTB Facilities	$34	$47	$3	$5
Total - Scenario 2	**$212**	**$295**	**$19**	**$27**
Scenario 3A - Restricted Tribal (1)				
Expanded Retail (Non-Indian)	$129	$181	$13	$18
Retail – Indian	$18	$25		
Digital – Oneida	$25	$35		
Digital - Seneca & Mohawk	$33	$46		
Digital (Non-Indian)	$611	$856	$61	$86
Total - Scenario 3A	**$816**	**$1,143**	**$74**	**$104**
Scenario 3B - State-wide Tribal (1)				
Expanded Retail (Non-Indian)	$129	$181	$13	$18
Retail – Indian	$18	$25		
Digital – Oneida	$43	$67		
Digital - Seneca & Mohawk	$37	$64		
Digital (Non-Indian)	$589	$806	$59	$81
Total - Scenario 3B	**$816**	**$1,143**	**$72**	**$99**

(1) Most of the digital wagering impact will be on downstate VLT facilities and OTB's; this illustration shows 100% of decline will be on non-Indian expanded retail.

Source: Spectrum Gaming Group

3) Predicting Ramp-Up Times for New Sports Wagering Markets

Spectrum's projections for sports wagering assume a multi-year ramp-up period of growth to reach a stabilized state. We reviewed a sampling of other new gaming businesses across global markets to illustrate this point. On average, these markets grew at a 20 percent compound annual growth rate ("CAGR") for five years. Our expectations for New York and other U.S. states that adopt sports wagering is that there will be significant growth during the first two to three years with modest growth in Year 4 and Year 5, at which point the market will have stabilized.

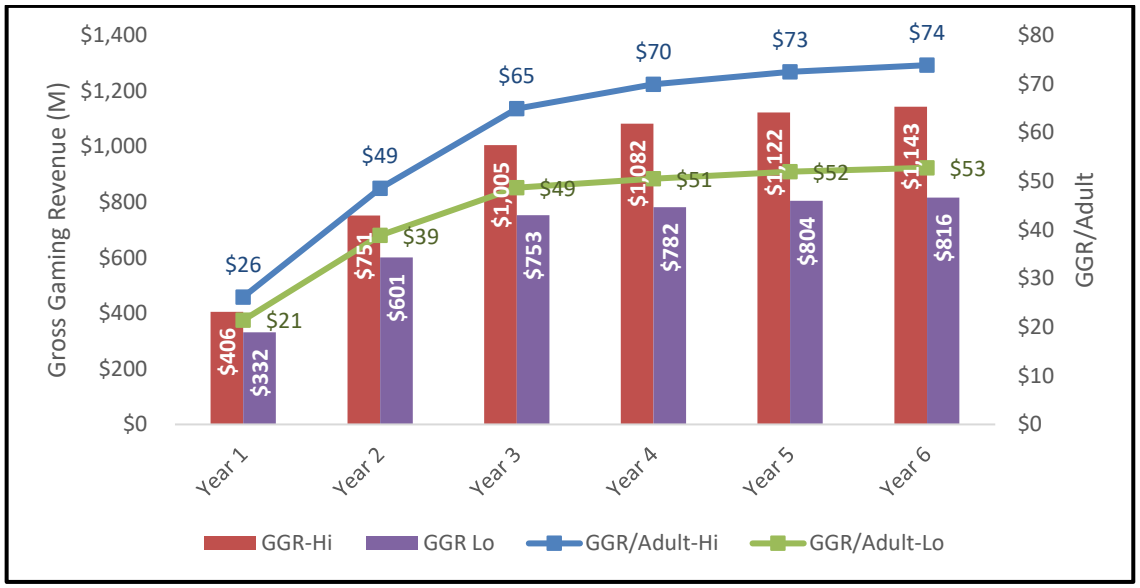
Figure 195: Growth of new forms of gaming in select jurisdictions

(Millions)	2010	2011	2012	2013	2014	2015	2016	2017	2018	5Y CAGR
Nevada Mobile	$151	$141	$170	$203	$227	$232	$219	$249	$268	9.0%
Australia Mobile	$506	$590	$686	$763	$850	$1,036	$1,290	$1,320	$1,366	15.4%
United Kingdom Mobile	$676	$829	$999	$1,225	$1,371	$1,707	$1,830	$2,061	$2,302	20.3%
New Jersey iGaming					$123	$149	$197	$254	$299	19.4%
Illinois Distributed Gaming				$301	$659	$914	$1,108	$1,302	$1,500	37.9%
									Average	**20.4%**
									Median	**19.4%**

Source: State regulatory agencies, H2 Gambling Capital, Spectrum Gaming Group

Figure 196 illustrates a potential ramp-up for New York if it were to authorize full-scale sports wagering. Our low-case scenario assumes a five-year CAGR of 20 percent, and our high-case scenario suggests a 23 percent CAGR.

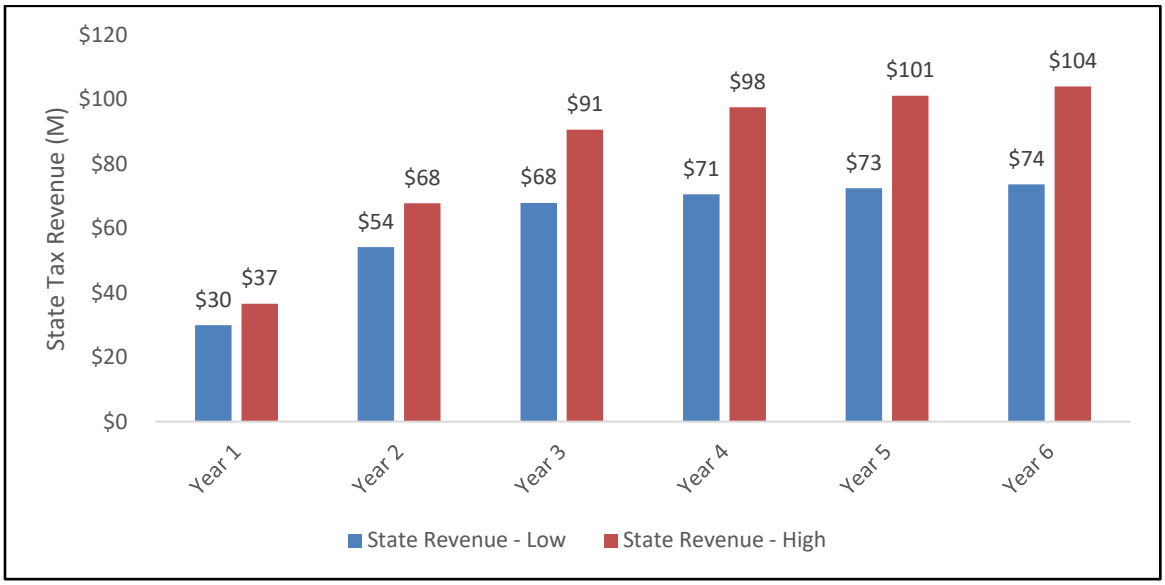
Figure 196: Illustration of New York sports wagering GGR ramp-up to stabilization



Source: Spectrum Gaming Group

Figure 197 illustrates the potential state tax revenue estimate during the ramp-up to stabilization.

Figure 197: State Tax Revenue Estimates during ramp-up period (assumes retail plus digital)



Source: Spectrum Gaming Group

b. iPoker Forecast

Because New Jersey is the only mature market for internet poker ("iPoker"), we used its results to benchmark GGR potential in New York. Other U.S. states are either too new to garner significant insight (Pennsylvania and West Virginia) or have a restricted product offering and/or high tax rate, which hinders market growth (Delaware and Nevada). We assumed in our modeling that New York would adopt similar regulations as in New Jersey, including a 10 percent tax rate and multiple skins.

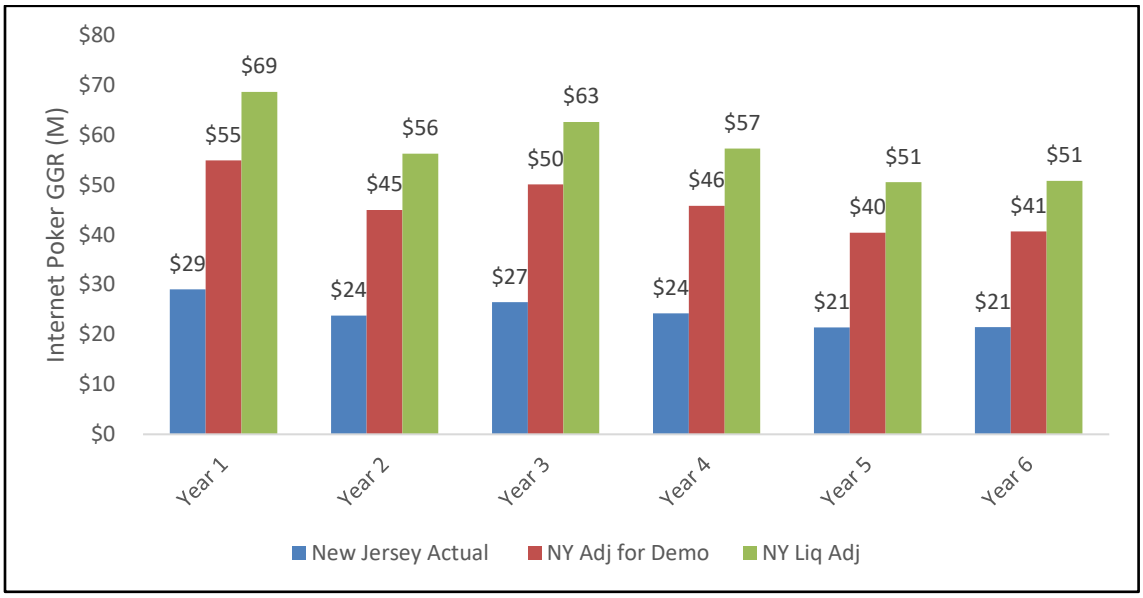
When estimating revenue size of iPoker, it is important to provide context in terms of the recent trends in the poker industry. Globally, poker is experiencing a decline in popularity, and relative to internet casino games, poker is much smaller. The decline in poker is perhaps best illustrated by reviewing the financial statements for The Stars Group, which owns the most well know digital poker brand, PokerStars. In 2019, PokerStars generated $781 million in GGR from poker, which was a decline of 12 percent from the $868 million in GGR generated for 2018. According to H2 Gambling Capital, the global iPoker market was $2.7 billion of GGR in 2019, which is down 22% from the peak of $3.4B generated in 2010 (pre-Black Friday). The $2.7B global estimate for 2019 suggests that PokerStars market share is ~30 percent making it a viable barometer to gauge the overall industry trend.

To quantify revenue potential for iPoker in New York, Spectrum made the following adjustments:

- Adjusted the population and income demographics for New Jersey ($76,475 household income ["HHI"], 7 million adults) for the demographics in New York ($65,323 HHI and 15.5 million adults).
- Adjusted New York's poker GGR to account for additional liquidity that could be enabled due to large population of potential players in New York (larger liquidity pool than New Jersey)

Figure 198 below illustrates the actual iPoker results in New Jersey and the adjusted results for New York's population and household income.

Figure 198: Projected New York iPoker GGR



Source: Spectrum Gaming Group. **Notes:** Adjustments made for New York's demography and for premium for shared liquidity with other states..

In this chart we also included an additional scenario in which we adjusted New York's iPoker revenue to account for additional liquidity that could be enabled due the large population of potential players in New York. Poker requires large liquidity pools – i.e., many players participating or waiting to participate in the games – to drive volume. Currently Nevada, Delaware and New Jersey have a shared liquidity agreement. (Pennsylvania, the newest iGaming state, does not participate in the multistate poker pool.) This means that the populations across all three states can participate in the same poker tournaments.

Shared liquidity generates more participation and, in turn, larger prize pools. Additionally, shared liquidity among states that are in different time zones also makes iPoker more attractive to players, providing more opportunities for games at what would otherwise be slower time slots.

If New York's adult population were to be included in this shared liquidity agreement, that would provide a boost to the overall success of the iPoker business. As other states come online (such as Michigan), we expect they will adopt shared liquidity with existing iGaming states. The full impact of shared liquidity agreements across multiple states for poker is unknown, as there is only one significant participating state currently – neighboring New Jersey. New Jersey generated $21 million in poker GGR from 7 million adults in 2019. Adding New York's 15.5 million adults in a shared liquidity program with New Jersey could lead to a meaningful increase of poker "rake" (i.e., the house commission) for operators. We estimate a 25 percent incremental impact to New York's potential iPoker GGR. This suggests annual GGR from iPoker could be between $50 million and $70 million, with a midpoint of $60 million.

1) Impact on our Estimates Assuming Tribal Competition

Under the assumption that Indian sites could offer iPoker within each exclusivity zone, annual tribal revenue from iPoker could be roughly $3 million in GGR, or 5 percent of the statewide $60 million

GGR market. This estimate is based on the population size and income within the relevant exclusivity zones. We do not believe there would be significant competition for iPoker within these regions.

If Indian operators were able to offer iPoker statewide, we estimate that could generate a substantial share of revenue. We believe the partnership between the Saint Regis Mohawk Tribe and The Stars Group, as well as the partnership between the Oneida Nation and Caesars bode very well for tribal prospects around iPoker. In New Jersey, The Stars Group and Caesars dominate the market, generating 74 percent of iPoker GGR for the 12-month period ended February 2020. MGM-owned Borgata generates the remaining 26 percent of GGR. For purposes of this analysis we assume tribal operators could capture between 50 percent to 75 percent of this market, or $30 million to $45 million of GGR.

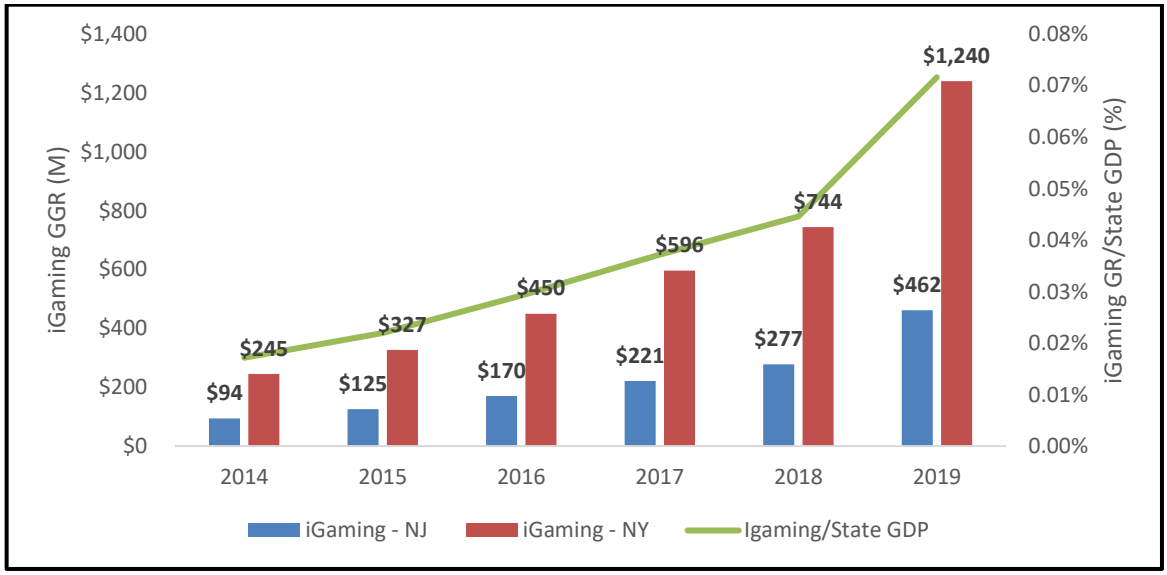
2) Tax Revenue Estimates for iPoker

If Indian-operated iPoker is available statewide, taxable GGR could be $15 million to $30 million and generate between $1.5 million and $3 million of tax revenue.

3. Internet Casino Gaming Forecast

To forecast internet casino gaming ("iGaming") we reviewed and analyzed the results for New Jersey, estimated GGR as a percentage of state GDP and applied the same percentage to New York's state GDP to estimate GGR. We chose this methodology mainly because from 2014-2019 there were a several factors and "noise" in the New Jersey gaming market, impacting iGaming GGR. On the land-based side, in 2014 four casinos closed, in 2016 another casino closed and in 2018 two of the five were rebranded and re-opened (Ocean, formerly Revel, and Hard Rock, formerly Trump Taj Mahal). On the digital side, sports wagering commenced in August of 2018 and had a substantial impact on iGaming GGR during the end of 2018 into 2019. For purposes of this analysis we did not use 2019 as a benchmark for New York, however the data is included in Figure 199. Our methodology suggests that after five years New York could generate ~$750 million of iGaming GGR.

Figure 199: Projected iGaming revenue based on State GDP



Source: Spectrum Gaming Group

1) Impact on Our Projections Assuming Native American Competition

To quantify iGaming market share for Indian operators we multiplied spend per adult by the adult population, adjusted for household income, that resides in the three Indian exclusivity zones. We estimate there are 3.5 million adults with a median household income of ~$47,000 within the Indian regions. This would suggest that the Indian portion of iGaming GGR could reach approximately $250 million or 33% market share. We note this estimate closely matches the 30 percent market share generated by Indian retail casinos. We believe this is reasonable because if Indian gaming operators intend to operate Indian gaming sites, they will most likely achieve the best return on investment by marketing to their existing land-based players. For purposes of this analysis we will use $250 million of GGR, for 33 percent market share, generated by Indian operated iGaming.

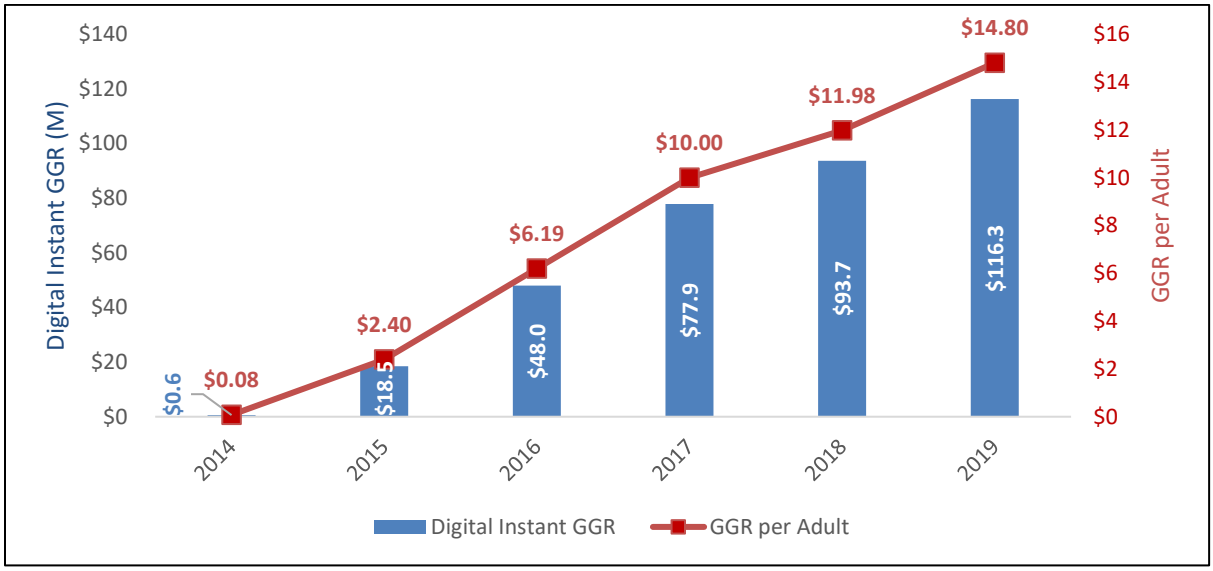
2) Tax Revenue Estimates for Internet Gaming

Our estimate for taxable iGaming GGR is $500 million, which would generate $50 million of State tax revenue.

4. iLottery Forecast

To quantify the potential GGR that could be generated if the New York Lottery were to authorize internet games known as digital instants, Spectrum used Michigan's iLottery results as benchmarks. Michigan was the first state to authorize iLottery and by all accounts is the most successful. For 2019, the Michigan Lottery generated $116 million of digital-instant GGR, which equates to $15 of GGR per adult. Below we illustrate the growth in GGR and spend per adult in Michigan since 2014.

Figure 200: Michigan Lottery digital instant GGR and GGR per adult, 2014-2019



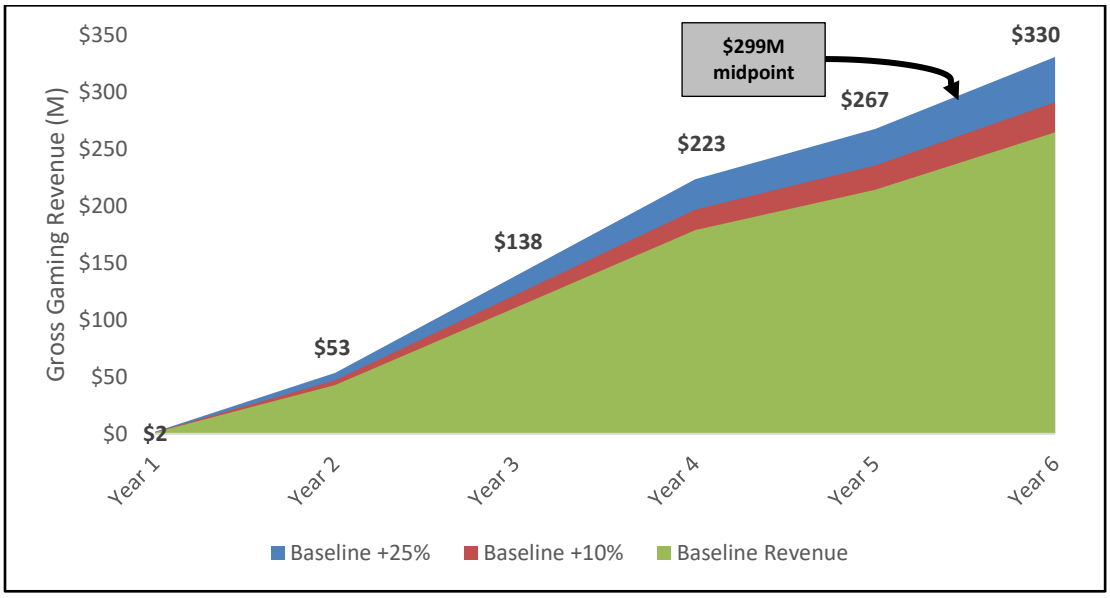
Source: Michigan Lottery, Spectrum Gaming Group

Spectrum believes New York could grow into a large and profitable iLottery market. New York generates the highest lottery sales in the United States – $10.3 billion in 2019.[216] Although Michigan has been the most successful iLottery state to date, a demographic comparison suggests New York could significantly outperform Michigan. Michigan has 7.9 million adults compared with 15.5 million in New York, and median household income in Michigan is $56,697 compared with $65,323 in New York.[217]

To estimate New York's projected GGR from digital instants, we used Michigan's actual results and adjusted for New York's population and income. Our methodology suggests that New York could generate more than double the GGR generated in Michigan in 2019 (that state's sixth year), ranging from $250 million to $300 million, as illustrated in Figure 201 below.

Our projections include a baseline estimate, which is benchmarked according to Michigan's actual results and yields $264 million in GGR in the sixth year of operations. To account for potentially higher spend in New York, we assumed spend per adult could be 10 percent to 25 percent higher than in Michigan, resulting in higher GGR. The results of our analysis are illustrated in Figure 201, which shows Year 5 and Year 6 estimates of $267 million to $330 million, a midpoint estimate of $299 million.

Figure 201: Forecasted New York digital instant GGR, years 1 through 6



Source: Spectrum Gaming Group

As a check on our projections, we compared lottery and iLottery spend as a percentage of state GDP in Michigan and estimated what the expected spend would be in New York. In 2019, Michigan residents spent 0.81 percent of GDP on lottery and 0.025 percent of GDP on iLottery digital instants. New York residents spent 0.6 percent of state GDP on lottery – about 27 percent less than in Michigan. Applying the same reduction to spend as a percentage of GDP on iLottery in New York suggests that New Yorkers

[216] New York Lottery, "Financial Reports." https://nylottery.ny.gov/news-and-finance/financial-reports (accessed July 9, 2020)

[217] U.S. Census Bureau.

will spend 0.018 percent of GDP on iLottery instants tickets, or $313 million. The $313 million estimate is in line with our $299 million midpoint estimate benchmarking off Michigan. For purposes of this analysis, we suggest the New York Lottery could generate $300 million of iLottery revenue.

Figure 202: iGaming spend as percentage of state gross domestic product, Michigan vs. New York

State	State GDP (M)	Lottery Revenue ($M)	Lottery/GDP %	iLottery/GDP (%)	iLottery GGR (M)
Michigan	$468,390	$3,781	0.81%	0.025% (Actual)	$116 (Actual)
New York	$1,740,745	$10,200	0.59%	0.018% (Projected)	$313 (Projected)

Source: U.S. Department of Labor, New Jersey Division of Gaming Enforcement, Spectrum Gaming Group

1) Impacts from Tribal Competition and to State Retail Lottery

If Indian operators were to offer iLottery digital instant games statewide, we estimate they would have a 30 percent share of the statewide iLottery market, pursuant to our similar analysis for calculating market share for iGaming in the prior section. A 30 percent market share suggests tribal revenue could yield $90 million of GGR. Across states that recently chose to offer iLottery, revenue from retail lottery did not decline. Although it is difficult to determine whether the introduction of iLottery curtailed growth of retail lottery, there is little evidence to suggest material negative impacts or cannibalization. Results for other states are shown in Figure 203 below. We have no reason to believe iLottery would cannibalize retail lottery in New York.

Figure 203: States' iLottery GGR (except Georgia and Pennsylvania, where sales are provided), selected states, 2013-2019

($M)	2013	2014	2015	2016	2017	2018	2019	3-Year CAGR
Michigan								
Digital Instants		1	19	48	78	94	116	34%
All Other Games	2,476	2,595	2,754	3,059	3,258	3,498	3,781	7%
Georgia								
Digital Instant Sales				5	11	22	41	102%
All Other Game Sales			4,195	4,551	4,518	4,576	4,735	1%
Kentucky								
Digital Instants				0	1	2	4	236%
All Other Games				984	986	1,033	1,126	5%
New Hampshire								
Digital Instants							5	NA
All Other Games		276	283	309	304	338	386	8%
Pennsylvania								
Digital Instants						20		
All Other Games						4,200	4,503	

Source: State lotteries. **Notes:** CAGR = compound annual growth rate. Pennsylvania did not report sales from digital instants in 2019; data are for illustrative purposes.

2) Tax Revenue Estimates from iLottery

Spectrum estimates taxable GGR for iLottery would be approximately $209 million. At a 10 percent tax rate, State tax revenue would be $21 million.

K. Overview of Pari-Mutuel Racing in New York

New York horse racing has a long and rich history and is a significant part of the entire national horse racing industry. Noted New York racing law expert Bennett Liebman put this in perspective, quoting a New York Times story from 1908: "From the beginning of the sport in there, away back in 1665, Long Island has never been without a track for organized racing."[218] As chronicled by Liebman, the first horse racing in this country reportedly was in New York:

> The Newmarket Course – Site of the first racing in America, this was located on the Hempstead Plain (or Salisbury Plain) in Nassau County. The area did not have many trees making it possible to have a site for horse racing. As soon as the British took over the New York colony, they began racing. The general belief is that the racecourse was located near the Garden City Hotel site at Stewart Avenue and Hilton Avenue in Garden City.[219]

The Standardbred horse racing industry (harness racing) goes back a long way in New York State as well. Goshen Historic Track was established in 1838 and is the oldest active trotting track in the world.[220]

Other New York tracks still in operation that also boast a storied past include Saratoga Race Course (opened in 1863),[221] Yonkers Raceway (founded in 1899 as Empire City Race Track),[222] Aqueduct Racetrack (opened in 1894), and Belmont Park (opened in 1905).[223]

Understanding the historical background and legislative history of New York racing – as well as the OTB history – is critical to the analysis of the market fundamentals and the understanding of the distribution schedules. Currently there are five OTB corporations, seven harness racetracks and four Thoroughbred racetracks. Three of the Thoroughbred racetracks are operated by NYRA and the fourth is Finger Lakes.

For the State to benefit from the pari-mutuel industry, the industry must be financially sound. Absent the racing subsidies discussed later in this report, the New York Racing Association ("NYRA") would likely be the only racing entity existing in the state, given the market fundamentals. Absent the subsidies, NYRA would be financially unable to:

- Provide the tier-one racing product it currently offers

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[218] Bennett Liebman "There used to be a New York Racetrack There: But Where Was It?" Albany Law School, November 20, 2009. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1510317

[219] Ibid.

[220] Goshen Historic Track. "Goshen Historic Track History." http://goshenhistorictrack.com/track-history/ (accessed January 16, 2020)

[221] Andrew Ross, "The Best 12 Horse Race Tracks in New York," May 5, 2017. https://www.legitgamblingsites.com/blog/the-best-12-horse-race-tracks-in-new-york/

[222] Empire City Casino website. https://www.empirecitycasino.com/racing/ (accessed January 22, 2020)

[223] "Origins of the New York City Horse Racing Scene," City Guide News Desk, December 2019. https://www.cityguideny.com/article/horse-racing-nyc

- Run anywhere near as many race days
- Compete as well nationally in the large and growing simulcast market

In addition, the Thoroughbred horse breeding industry supporting NYRA would be equally devastated. The New York foal crop, as a percentage of the national foal crop, increased from 5.7 percent in 2009 to 7.8 percent in 2018. Many breeders would have closed operations in New York or moved out of state if not for the VLT racing support payments. Likewise, the number of horse owners and trainers would be significantly reduced, as would the expenditures that are associated with their horses.

Consider that the economic impact of the New York horse racing sector to the state economy is $3.08 billion,[224] a benefit so large that it eclipses all other rationales for racing, including the benefit from the pari-mutuel tax on wagering handle. A vast infrastructure is needed to support the industry. Racehorses require substantial expenditures on breeding, training, insurance, veterinarians, agricultural products and feed, caretakers, farriers, jockey/driver fees and many other ancillary services that all provide taxes and other economic value to a state. Those costs and the expense of running a racetrack make producing the horse racing product expensive.

To this point, the written legislative intent of several of New York Racing, Pari-Mutuel and Breeding Laws is to support the goal of economic development. For example, the simulcasting law, legislative intent N.Y. PML §1000 states:

> The legislature finds that the racing, breeding, and pari-mutuel wagering industry is an important sector of the agricultural economy of this state, provides substantial revenue for state and local governments, and employs tens of thousands of state residents.[225]

Reviewing the national trends and the changing competitive market forces and comparing the New York horse racing market to the national trends provide a necessary basis to fully understand and examine the New York horse racing industry, OTBs, revenue models and live racing components.

Competition for wagering dollars has grown and continues to grow both in New York and in nearby competing markets. Total wagering at New York Tracks and OTBs has declined in recent years, while total U.S. handle has increased. (See figures 206 through 208.)

New York handle statewide declined 35.4 percent from 2010 to 2018 while the national handle only declined 1.6 percent. Of course, New York City OTB closed in 2010, but from 2011 to 2018 New York handle declined 16.5 percent while national handle increased 4.85 percent (see Figure 208).

[224] "Economic Impact of The Horse Industry in New York," the American Horse Council Foundation, 2018.

[225] New York Racing, Pari-Mutuel and Breeding Law §1000. https://www.nysenate.gov/legislation/laws/PML/1000 (accessed April 13, 2020)

1. Legislative History

New York pari-mutuel wagering was legalized in 1939,[226] and, except for some small charity bingo operations, it operated with a quasi-monopoly on gambling until the New York State Lottery was legalized in 1966. In 1970, the New York State Legislature authorized off-track betting, and New York City Off-Track Betting Corporation began operation in 1971.[227]

The legislative intent of the regional system of OTBs established in 1970 "was to raise reasonable revenue for government, curb illegal bookmaking, and conduct off-track betting compatible with the horse racing and breeding industries of the state."[228] Starting in 1974, OTBs were permitted to collect surcharges on winning wagers with a municipality's authorization.[229]

Federal legislation – the Interstate Horse Racing Act of 1978 – had a significant impact on off-track wagering, including establishing requirements for interstate simulcasting. "The Interstate Horse Racing Act of 1978, amended in 2000 to include telephone and other electronic forms of wagering in states where that type of betting is legal, provides an explicit exemption for horse racing to conduct interstate wagering."[230]

From the 1980s through the first decade of this century, numerous laws amending and adding to New York's Racing, Pari-Mutuel Wagering and Breeding Law ("New York Pari-Mutuel Law") changed the competitive environment for the New York OTBs and racetracks. This is well documented in the report "Task Force on the Future of Off-Track Betting in New York State, January 13, 2010"[231] and in New York State's 2013-2014 Executive Budget, Economic and Revenue Outlook.[232]

The changes included:

- Teletheaters
- Prohibitions on time of day simulcast

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[226] Bennett Liebman, "75 Years of Pari-Mutuel Wagering in New York," Horse Racing and Gambling Blog, April 23, 2015

[227] Office of the New York State Comptroller, "Research Brief – Are Off-Track Betting Corporations Nearing the Finish Line," September 2015. https://www.osc.state.ny.us/localgov/pubs/research/otb0915.pdf

[228] New York State, "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010, p. 20. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

[229] Ibid. p. 20.

[230] Ray Paulick, "Waldrop: Online Betting on Horse Racing Still Legal Despite Justice Department Reversal on Wire Act," *The Paulick Report*, January 15, 2019. https://www.paulickreport.com/news/ray-s-paddock/waldrop-online-betting-on-horse-racing-still-legal-despite-justice-department-reversal-on-wire-act/

[231] New York State, "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010. p. 20-22. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

[232] New York State, "2013-2014 Executive Budget, Economic and Revenue Outlook," p. 342-344. https://www.budget.ny.gov/pubs/archive/fy1314archive/eBudget1314/economicRevenueOutlook/economicRevenueOutlook.pdf

- In-home simulcasting
- Broader simulcasting permitted for both tracks and OTBs
- The Racing and Wagering Board was authorized to resolve disputes of the rates OTBs pay to tracks
- Numerous re-allotments of wagering shares, takeout changes, and tax rate changes
- Combination of New York wagers with wagers made in other states or countries and simulcast re-allocations leading to "proration" based on old separate pool wagering laws that were created in the 1970s
- Dark day payments for OTBs paid to regional harness tracks
- Video lottery terminals at some tracks
- Unlimited simulcasting for OTBs and hold-harmless payments (or maintenance-of-effort payments)
- Establishing regulatory fees to pay for regulation
- Expansion of account wagering to include internet wagering
- Elimination of capital acquisition surcharge and other surcharges for OTBs
- Creation of the task force on the future of off-track betting

During the past decade, legislative changes continued to evolve and some of the changes add further complexity to the revenue-distribution schedules for the State and industry stakeholders. The New York State FY 2016 Economic & Revenue Outlook report[233] and the New York State FY 2019 Economic & Revenue Outlook report[234] provide a summary of those changes, which include:

- Establishing the Gaming Commission
- Video lottery facilities with up to 1,000 terminals at Nassau County and Suffolk County OTBs
- Resort gaming facilities
- Electronic table games that include an element of skill can be offered at certain racinos
- Additional compensation for the Finger Lakes facility
- Re-privatization of the NYRA
- 5 percent market origin fee for out-of-state advanced deposit wagering ("ADW")
- Horsemen and racetrack modification of equine drug testing requirements
- Financial relief to Vernon Downs

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[233] "FY 2016 Economic & Revenue Outlook," Andrew M. Cuomo, Governor, p. 298-299. https://www.budget.ny.gov/pubs/archive/fy1516archive/eBudget1516/economicRevenueOutlook/economicRevenueOutlook.pdf

[234] "FY 2019 Economic & Revenue Outlook," Andrew M. Cuomo, Governor, Robert F. Mujica Jr., Budget Director, p. 311. https://www.budget.ny.gov/pubs/archive/fy19/exec/fy19ero/economicRevenueOutlook.pdf

- Eliminating the video lottery hold-harmless transfer provision235

The complex and massive amount of legislative changes to the Racing, Pari-Mutuel Wagering and Breeding Law resulted from a number of catalysts that include – but are not limited to – dramatic changes to the competitive environment of the industry, technological changes, outdated laws, political forces and complex stakeholder interests.

2. New York OTB History

New York was the first state other than Nevada to establish legal off-track wagering. When the OTBs in New York were established, the only legal betting options were horse racing, bingo, and the lottery. The precise structure of the New York off-track betting model, with a government-run system, has not been emulated elsewhere in the industry.

When the New York OTBs were legalized, the commingling of pari-mutuel pools between tote systems was not possible. Separate pools were created for wagers made at each of the OTBs, and a New York takeout rate was used for such wagers. The laws were based on the OTBs having their own takeout rules and distributions due to the technology of the day and the separate pool wagering.

Several significant market forces and trends discussed in other sections of this report vastly changed the simulcasting and off-track wagering markets. The existing law maintains the original separate pool takeout and prorates the amount OTBs retain based on New York OTB takeout compared to each host track's takeout. This has created a complicated system compared to the industry standard of dividing revenue realized from net takeout (host takeout minus the host fee/royalty for importing the signal) of the commingled pool.

As outlined in the prior legislative section, the wagering permitted at the OTBs expanded over time from only being permitted to take races at New York tracks to being able to take any host track's signal. Wagering on New York tracks as a percentage of the total wagered at OTBs declined from 95.58 percent in 1988 to 38.42 percent (30.16 percent on NYRA and 8.26 percent all other tracks) in 2008.[236] The trend has continued, and as of 2018 only 34 percent of all OTB wagers were on races held at New York tracks.[237]

3. Economic Impact

The significant economic impact of the horse racing business has been well documented. According to a 2017 national economic impact study (see **Appendix S**) for the methodology used for this study) of the horse industry, the "racing sector supports more than 241,000 direct jobs and adds $15.6

[235] "FY 2020 Economic & Revenue Outlook," Andrew M. Cuomo, Governor, Robert F. Mujica Jr., Budget Director, p. 302. https://www.budget.ny.gov/pubs/archive/fy20/exec/ero/fy20ero.pdf

[236] New York State, "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010, p. 14, 24. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

[237] New York State Gaming Commission, 2018 OTB Handle and Additional Information. https://www.gaming.ny.gov/about/index.php?ID=3

billion in direct value to the national economy. These direct impacts drive a further $21 billion in added value to the economy and create more than 231,000 jobs from indirect and induced effects."[238]

As noted, the New York racing sector alone has a total economic impact to the state economy of $3.08 billion.[239] According to another study in 2012, "breeders, trainers, and owners of racehorses account for 64 percent of direct impact and 52 percent of jobs among the entire racing sector. New York's 11 major racetracks generate the second highest proportion of economic impact, at 23 percent of the total. OTB corporations account for 10 percent of direct impact."[240] According to yet another study, the total economic impact of the New York harness racing industry was $795 million in 2013.[241]

Horse racing's supply chain – including the breeding farms, horses and horse owners, and industry employees – links the flow of all information, products, materials, and funds involved in different stages of creating and selling the racing product to the end-user. According to the New York 2012 State Equine Industry Economic Impact Study, the first two sectors on the supply chain in Figure 204 (suppliers and content providers), account for 87 percent of the direct economic impact of the industry for the state. The OTBs accounted for 10 percent of the direct impact.

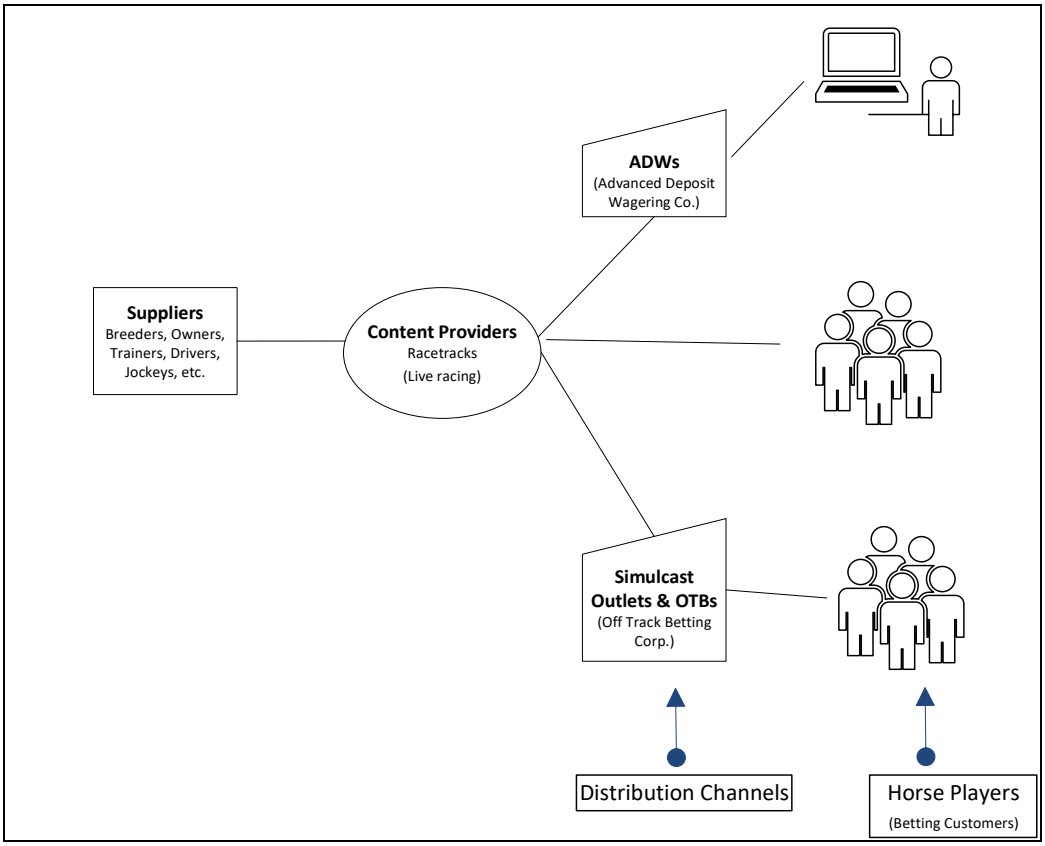
[238] The American Horse Council Foundation, "National Economic Impact of The U.S. Horse Industry," 2018. https://jonshorses.files.wordpress.com/2018/11/8dce3-nationaleconomicimpactoftheu-s-horseindustry_americanhorsecouncil.pdf

[239] The American Horse Council Foundation, "Economic Impact of The Horse Industry in New York," 2018.

[240] New York Thoroughbred Breeders, Inc. "New York State Equine Industry Economic Impact Study," 2012. https://www.nytbreeders.org/pdf/EquineStudy.pdf

[241] "New York Harness Horse Industry, Economic Impact – A Study of Past, Current and Future Potential," June 2014.

Figure 204: Illustration of New York horse racing supply chain



Source: Spectrum Gaming Group

4. National Trends and Competitive Market Forces & Fundamentals

The economic trends in the horse racing industry in New York and elsewhere over the past half-century have been driven by several factors, including political, economic, competitive, social, and technological changes. The following sections examine some of those changes.

The 1970s

The establishment of New York OTB was the first major change away from the live racing experience.

Important negative impacts on horse racing began in the 1970s, but the true effects were masked by a few unique events. The decade had three Triple Crown winners in a short span of time, which kept horse racing in the spotlight. Racetracks were still considered a good investment, and several tracks were built (most notable to this study was the Meadowlands Racetrack in New Jersey, just across the river from New York City).

Off-track betting in Connecticut began in 1976, and it was initially run by the Connecticut Division of Special Revenue. Connecticut's off-track betting was sold in 1993 to Autotote Enterprises Inc.[242] Atlantic City's casinos began to open in 1978.

The 1980s

During the 1980s, some racetracks began to lobby state legislatures for tax relief as the downward economic trends became clearer. At the same time, other business models were experimented with to expand market penetration and distribution. This decade introduced the first version of account wagering, with telephone operators taking wagers in some jurisdictions.

Intertrack and interstate wagering also began during the 1980s. Many tracks, with the approval of state legislatures and regulatory bodies (including those in Louisiana, Illinois, Pennsylvania, and California) looked to off-track betting or satellite wagering facilities (OTBs) to expand their distribution.

The federal Indian Gaming Regulatory Act ("IGRA"), passed in 1988, was not directly related to the horse racing industry, but it had a significant influence over the next several decades on the competitive environment. The national expansion of casino-style gaming resulting from this legislation is well documented.

The 1990s

In the 1990s, horse racing market forces arguably experienced more change than during any previous decade, and that level of change cannot be gleaned by simply examining horse wagering handle (the total amount wagered on pari-mutuel races). The changes that occurred in the 1990s fueled further changes over the next 30 years that have collectively altered the market fundamentals of brick-and-mortar wagering facilities such as racetracks and OTBs.

Because of these changes, pari-mutuel handle grew (Thoroughbred handle increased 52.6 percent from 1990 to 2000)[243] while profit margins on significant portions of that handle were considerably less, as the growth was exclusively attributed to increased distribution from simulcasting. At the same time, the expenses of distribution and third-party technology companies increased costs for racetracks. By the mid-1990s, horse and greyhound simulcast wagering used more satellite time than major league sports.

Full-card simulcasting – the telecast of live audio and visual signals of a full day/night of races (as opposed to a single race) for the purpose of pari-mutuel wagering – proliferated during this decade, and full-card commingling of wagering pools also expanded rapidly as more states expanded distribution channels by approving off-track betting, and New York joined other states in legalizing phone wagering.

Casinos and racinos became legal in many jurisdictions during this decade. The rapid expansion of gaming had a significant negative impact on horse racing's competitive environment, but because of the large increase in distribution channels, the impact was not clearly visible.

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[242] Connecticut Department of Consumer Protection, "Legalized Gambling." https://portal.ct.gov/DCP/Gaming-Division/Gaming/Legalized-Gambling (accessed January 24, 2020)

[243] The Jockey Club, "The 2019 Fact Book." http://www.jockeyclub.com/Default.asp?section=Resources&area=11

Another major industry development that began in the later part of the 1990s was racetrack and racing company consolidation. Magna Entertainment Corporation (now The Stronach Group), Penn National Gaming and Churchill Downs began buying racetracks and racing companies, which changed market fundamentals. The conglomerate organizations increased their power as content suppliers and dramatically increased prices (host fees, or the royalty for importing a racing signal for simulcast wagering purposes) of their content.

The 2000s

The number of racinos and the amount of gross gaming revenue ("GGR") continued to grow dramatically in this decade. For example, while overall GGR across the United States declined in tandem with the economic collapse of 2008, the growth in the number of states legalizing gaming at racetracks and the activity at racinos continued to expand. In 2009, *Harnesslink* noted: "Year-over-year revenues at racinos – or casinos based at Thoroughbred, Harness, Quarter Horse, and/or Greyhound tracks – grew 17.2 percent to $6.19 billion (in 2008), and more than tripling 2002, when $2 billion in revenues were recorded."[244]

However, that was not the story for racing revenue. The 2000s exposed, more dramatically, the effects of many of the changes that took place in the previous decades. The wagering growth of the 1990s ended. Thoroughbred handle peaked at $15.18 billion in 2003 and by 2014 had returned to near 1995's level of about $10.5 billion.[245] Despite the decline in handle and racing revenue, purses grew due to the infusion of GGR in the racino states.

More states approved internet account wagering, following a 2000 amendment to the Interstate Horse Racing Act of 1978.

Growth of account wagering and internet wagering, along with the practice of rebating to patrons, started in the 1990s and rapidly accelerated during the 2000s. As an example, the Oregon Hub, where most of the large account wagering providers process pari-mutuel wagers, due to favorable tax rates, saw wagering handle for multi-jurisdictional simulcast wagering licensees grow from $19 million in 2000 to $4.2 billion in 2018.[246]

The growth of casinos and racinos continued to negatively impact the pari-mutuel handle.

The 2010s

The most recent decade will be more closely examined throughout this report, and we will compare the New York State pari-mutuel market fundamentals to national trends.

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[244] "Racinos bucking the USA casino trend," *Harnesslink*, May 21, 2009. http://www.harnesslink.com/News/Racinos-bucking-the-USA-casino-trend-72361

[245] The Jockey Club, "The 2019 Fact Book." http://www.jockeyclub.com/Default.asp?section=Resources&area=11

[246] Oregon Racing Commission. "Oregon Racing Commission Quarterly Hub Handle reports." https://www.oregon.gov/Racing/docs/Hub_Data/2019/2019_September__hub_handle.pdf (accessed January 24, 2020)

5. Other Market Fundamentals

Several other market fundamentals have had an impact on the pari-mutuel industry both in New York and nationally. Public policy regarding gambling issues has not only changed, but it has created difficult jurisdictional decisions on the allocation of revenues, which affect the stakeholders.

The 2007-2009 recession added an additional negative force on discretionary income and spending on all gambling products. For the horse racing segment, the recession – coupled with the large expansion of gambling alternatives in the market – was a material blow.

As illustrated in the historical review, the product distributors of live racing content have garnered the lion's share of the market over time, without having to incur the large capital expenses that racetracks and horsemen must meet in producing the live horse racing content. The OTBs have no expenses associated with producing live racing (except for the statutory payments required), and the ADWs have even less, given there are few employees and no need for an actual facility.

Factors leading to the rising host fee costs that negatively affected the racetracks' and OTBs' expenses include:

- The imbalance of expenses
- The competitive advantage that ADWs had in rebating patrons
- The growth of conglomerate race organizations (Stronach, Churchill, and Penn National Gaming)

The increase in host fee expense for the OTBs is well documented in all of the New York State Comptroller reports of 2014 and 2015.[247] However, because of the power of buyers that the New York OTBs represent, their host fees are still lower in comparison to what some tracks are charged for the same race signal. For example, several New York harness tracks have not formed an alliance and are not part of a conglomerate and therefore lack buying power, so they pay higher host fees than New York OTBs.

The ADWs that have no bricks and mortar, little infrastructure and do not contribute to live racing beyond the host fees and/or source market fees they pay to obtain content, have much larger margins on the wagers made, and can therefore rebate significant portions of the wagers made to lure patrons and stimulate churn (winning wagers bet back into pari-mutuel pools) of the wagering dollars.[248]

The growth of computer-assisted wagering ("CAW"), also referred to as computer-robotic wagering ("CRW") has also profoundly impacted all brick-and-mortar wagering sites. Models have been built with algorithms that process large volumes of historical data and identify inefficiencies in the wagering market; computers automatically place wagers to exploit these inefficiencies, a situation that is analogous to some computerized day-trading systems that buy and sell stocks.

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[247] Office of the New York State Comptroller, "Financial Condition of New York State Regional Off-Track Betting Corporations," September 2015, p. 10. https://www.osc.state.ny.us/localgov/audits/swr/2015/OTB/global.pdf

[248] New York State, "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010. p. 25. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

The success of CRW wagering systems, combined with the rebates they received for volume wagering, created negative settlements for many wagering sites, as the commingling of pari-mutuel pools requires settlements as a result of the wagers being made in different geographical locations. When one location has more winning wagers placed than another, the losing dollars from the one site "pay" for the winning wagers elsewhere and can prove costly for the site with more losing wagers. This shifting of winning dollars to the ADWs that host the CRW wagers means those dollars will not be available to be churned in the local market, which has a net negative impact on the volume wagered at brick-and-mortar facilities.

Other global technology advances have propelled ADW growth and the shift of wagering away from brick-and-mortar locations. The technological advances of the past two decades facilitate better video streaming of the races on computers and phones. This allows patrons easy access to video from anywhere at any time and, historically, access to video has had a significant positive effect on pari-mutuel wagering growth. Improved technology also made the provision of critical handicapping data to patrons more user-friendly. Technological advances will continue to enhance the internet-wagering and mobile-wagering experience for the patron who chooses this method of pari-mutuel wagering at the expense of the on-track or OTB experience.

The social environment and associated consumer behaviors and tastes have also impacted the pari-mutuel industry. One recent factor that is a serious threat is growing concern about animal welfare. Changing attitudes towards the use of animals in sport have resulted in protests of horse racing.

National media, including *The New York Times*, CNN, *The Washington Post* and the *Los Angeles Times* have put the spotlight on Thoroughbred racing. During 2019, the horse racing industry faced negative publicity throughout the year involving a series of fatal injuries to racehorses, including many in California. The horse racing industry had experienced four years of positive handle growth from 2014 to 2018 (it increased 6.7 percent over that period) and perhaps the negative publicity was a contributing factor as handle declined 2 percent from 2018 to 2019.[249] Part of the reason for the 2019 decline was the loss of 24 race days in California "either in the name of safety or not having enough horses to race four days a week"[250] that generate significant handle across the country. Their cancellations and races with shorter fields had a negative effect across all simulcast locations.

More recently, horse racing was challenged with additional alarming news. On March 9, 2020, the U.S. Attorney's Office in the Southern District of New York released indictments of more than two dozen trainers, veterinarians, suppliers, and distributors in a scheme of doping and misbranding of drugs. The

[249] The Jockey Club, "The 2019 Fact Book." http://www.jockeyclub.com/Default.asp?section=Resources&area=11

[250] John Cherwa, "Santa Anita's tragic racing season ends Sunday amid an uncertain future," *Los Angeles Times*, June 23, 2019. https://www.latimes.com/sports/more/la-sp-santa-anita-closing-day-20190623-story.html

allegations include both Standardbred and Thoroughbred horsemen. New York was one of several jurisdictions where the defendants raced horses.[251]

Such attitudinal changes regarding animals present challenges for the horse racing industry as it tries to foster its longstanding social license (generally defined as "a level of acceptance or approval by local communities and stakeholders of organizations and their operations or societal acceptance, tolerance and consent to an activity that is generally considered to be outside the norm").[252]

The high cost of doing business in New York and other labor issues present yet another challenge for the New York horse racing industry. The minimum wage in New York has increased in recent years at a higher rate compared to the minimum wage in states that compete with New York for horses.

Most other states have competitive advantages in attracting horsemen because the costs are lower in those jurisdictions. Tracks like Oaklawn Park in Arkansas and the Kentucky tracks are attracting racing stables because the purses are competitive with New York, but the costs of training are lower. This impacts the handle because field size is a significant factor affecting wagering on horse races. With the high costs of doing business, horsemen have other choices regarding where to compete, thus reducing the horse population for the New York races.

Through our recent work and research in Kentucky working on another project, Spectrum spoke with a number of horsemen who told us they elected to either stay in Kentucky or send fewer horses to New York because the purses in both states were similar, yet the cost of doing business in New York was considerably higher.

As an example, the New York Thoroughbred Horsemen's Association ("NYTHA") provided us actual expense data from a mid-sized stable operation. The data included the expenses for each year, from 2010 to 2018, Figure 205 shows the change in expenses from 2010 to 2018.

Figure 205: NYRA trainer expenses, per day, per horse

Year	Wage	Feed	Tack	Office	Work. Comp.	Stall Rent	Annual Total	Day Rate	Profit
2010	$48.38	$19.05	$2.23	$1.75	$2.71	$1.73	$75.85	$95.00	**$19.15**
2018	$59.78	$20.70	$3.01	$2.12	$8.21	$0.75	$95.32	$100.00	**$4.68**
Pct. Chg.	**28%**	**11%**	**9%**	**21%**	**159%**	**-44%**	**28%**	**5%**	**-77%**

Source: New York Thoroughbred Horsemen's Association. **Note:** Daily wage does not include bonuses to employees; stall rent does not include Saratoga Harness rent, only the Spring and Fall Training rent; Workman's Compensation includes payroll, Jockey Injury Compensation Fund, and NYRA surcharge, as well as NYRA premium.

This negative impact on the supply of horses is a factor in analyzing and determining an optimal number of races and race days. As a result, the challenges in attracting horses from other jurisdictions to

[251] Tom Winter and David K. Li, "Horse racing trainers and veterinarians charged in international doping scandal," NBCNews.com, March 9, 2020. https://www.nbcnews.com/news/us-news/horse-racing-trainers-veterinarians-charged-nationwide-doping-scandal-n1153126

[252] "What is the Social License?" https://socialicense.com/definition.html (accessed April 24, 2020)

race in New York for extended periods of time adds a further drag to the industry's economic impact in New York.

6. Comparing New York Trends to National Trends

The competitive environment for New York horse racing has been greatly affected by the industry trends that have taken place nationally. Two major trends are:

- The expansion of other forms gaming in New York (and nearby out-of-state locations)
- The dramatic shift in where and how pari-mutuel wagers are placed.

a. Wagering Data

Examining the trend in pari-mutuel handle – and how New York compares to those trends – offers insights into the shifts in where and how wagers are placed, as well as into other important catalysts affecting market fundamentals.

Figure 206: Total wagered at New York tracks compared to national handle, 2010-2018, and percentage change in handle from 2011 to 2018 subsequent to the New York City OTB closure

Year	Total Wagered on Thoroughbreds at New York Tracks	Total Wagered on Standardbreds at New York Tracks	Total Wagered at New York Tracks	U.S. Thoroughbred Handle	U.S. Standardbred Handle*	Total U.S. Handle
2010	$502,366,240	$67,228,239	$569,594,479	$11,419,000,000	$1,429,159,969	$12,848,159,969
2011	$759,522,948	$81,928,301	$841,451,249	$10,770,000,000	$1,288,714,638	$12,058,714,638
2012	$791,184,403	$79,826,773	$871,011,176	$10,882,000,000	$1,512,192,007	$12,394,192,007
2013	$772,315,978	$77,060,173	$849,376,151	$10,877,000,000	$1,604,039,996	$12,481,039,996
2014	$877,939,447	$72,736,277	$950,675,724	$10,552,000,000	$1,497,004,583	$12,049,004,583
2015	$816,388,151	$67,965,167	$884,353,318	$10,675,000,000	$1,512,300,328	$12,187,300,328
2016	$768,258,085	$61,556,313	$829,814,398	$10,744,000,000	$1,446,796,214	$12,190,796,214
2017	$776,629,494	$57,966,679	$834,596,173	$10,909,000,000	$1,383,189,222	$12,292,189,222
2018	$757,579,953	$56,596,401	$814,176,354	$11,267,000,000	$1,376,360,696	$12,643,360,696
Pct. Chg. 2011-18	**-0.26%**	**-30.92%**	**-3.24%**	**4.61%**	**6.80%**	**4.85%**

Source: New York State Gaming Commission, The Jockey Club Fact Sheet, United States Trotting Association, United Tote. ***Note:** Includes U.S. and Canadian common and separate pool wagers on races contested in the United States. New York City OTB closed in 2010.

The amount of U.S. pari-mutuel handle wagered on-track on live races fell below $1 billion in 2018. The amount wagered on-track on live races has steadily declined, from 15.9 percent in 2000, to 10.5 percent in 2010 and 8.9 percent in 2018, with the remainder wagered away from the host racetrack.[253]

The December 2010 closure of OTB facilities in New York City resulted in a 30 percent decline in wagering business in the city. Those adults who primarily used cash for wagers were "less technologically

[253] The Jockey Club, "The 2019 Fact Book." http://www.jockeyclub.com/Default.asp?section=Resources&area=11

savvy, and did not migrate to online account wagering," said Raymond Casey, who was President and CEO of New York City Off-Track Betting at the time.[254]

Because New York City OTB closed and a portion of that handle migrated to the tracks and ADWs, it is best to compare the handle trend from 2011 to 2018. The closure of New York City OTB also had a negative impact on the national handle in 2010-2011. Handle at New York racetracks on Thoroughbred races has remained relatively stable while total handle nationally has increased 4.6 percent. Handle at New York racetracks on Standardbred races has not fared well, with an almost 31 percent decline.

If we assume NYRA continued to gain on-track handle in 2012 due to the New York City OTB closure and we compare the New York Thoroughbred handle trend from 2012 to 2018, instead of a 0.26 percent decline the decline is 4.25 percent, still considerably better than Standardbred handle decline of 29.1 percent during the same period. Finger Lakes Gaming & Racetrack, harness tracks and OTBs all had significant declines.

Overall handle at New York racetracks declined 3.24 percent from 2011 to 2018, while the national total handle for both breeds has increased by 4.85 percent.

Figure 207: New York OTBs handle versus national handle, 2010-2018 and percentage change in handle from 2011 to 2018 after the New York City OTB closure

Year	New York OTBs Thoroughbred Handle	New York OTBs Standardbred Handle	New York OTBs Total Handle	U.S. Thoroughbred Handle	U.S. Standardbred Handle*	Total U.S. Handle
2010	$1,232,124,659	$242,599,951	$1,474,724,610	$11,419,000,000	$1,429,159,969	$12,848,159,969
2011	$607,884,198	$132,897,050	$740,781,248	$10,770,000,000	$1,288,714,638	$12,058,714,638
2012	$572,884,198	$126,143,125	$699,027,323	$10,882,000,000	$1,512,192,007	$12,394,192,007
2013	$540,552,517	$123,700,744	$664,253,261	$10,877,000,000	$1,604,039,996	$12,481,039,996
2014	$511,057,971	$104,986,109	$616,044,080	$10,552,000,000	$1,497,004,583	$12,049,004,583
2015	$492,237,710	$103,255,187	$595,492,897	$10,675,000,000	$1,512,300,328	$12,187,300,328
2016	$467,184,379	$91,075,831	$558,260,210	$10,744,000,000	$1,446,796,214	$12,190,796,214
2017	$446,126,653	$84,110,911	$530,237,564	$10,909,000,000	$1,383,189,222	$12,292,189,222
2018	$429,460,171	$77,526,389	$506,986,560	$11,267,000,000	$1,376,360,696	$12,643,360,696
Pct. Chg. 2011-18	**-29.35%**	**-41.66%**	**-31.56%**	**4.61%**	**6.80%**	**4.85%**

Source: New York State Gaming Commission, The Jockey Club Fact Sheet, United States Trotting Association, United Tote. ***Note:** Includes U.S. and Canadian common and separate pool wagers on races contested in the United States. New York City OTB closed in 2010.

Again, it should be noted that much of the decline in handle from 2010 to 2011 was due to New York City OTB's closure in December 2010. The New York OTBs have not fared well compared to national trends. New York's OTB handle continues to steadily decline, as noted in a study by the 2010 New York Task Force on the Off-Track Betting in New York State and the 2015 State Comptroller's Financial Condition of New York State Regional Off-Track Betting Corporations report. While New York's on-track handle declined about 3 percent during the past seven years, OTB handle has declined more than 31 percent.

[254] Spectrum interview with Raymond Casey, February 24, 2020.

Moreover, while the data is not separated in this chart, Finger Lakes and the harness tracks also experienced significant declines.

When benchmarked against the national handle trend, the New York OTBs are finding it hard to compete in the changing market.

Figure 208: New York, national and Oregon Hub handle, 2010-2018 and percentage change in handle from 2011 to 2018 after the New York City OTB closure

Year	Total New York Handle Statewide - All Breeds	Total U.S. Handle - All Breeds	New York Percent of Total Handle	Total ADW Handle - Oregon Hub	Oregon Hub Percent of Total Handle
2010	$2,044,319,089	$12,848,159,969	15.91%	$1,448,791,377	11.28%
2011	$1,582,232,497	$12,058,714,638	13.12%	$1,844,927,705	15.30%
2012	$1,570,038,499	$12,394,192,007	12.67%	$2,211,317,676	17.84%
2013	$1,513,629,412	$12,481,039,996	12.13%	$2,440,867,884	19.56%
2014	$1,566,719,804*	$12,049,004,583	13.00%	$2,656,970,984	22.05%
2015	$1,479,846,215*	$12,187,300,328	12.14%	$2,862,939,882	23.49%
2016	$1,388,074,608*	$12,190,796,214	11.39%	$3,095,668,039	25.39%
2017	$1,364,833,737*	$12,292,189,222	11.10%	$3,865,856,894	31.45%
2018	$1,321,162,914*	$12,643,360,696	10.45%	$4,216,834,582	33.35%
Pct. Chg. 2011-2018	**-16.50%**	**4.85%**		**128.56%**	

Source: New York State Gaming Commission, The Jockey Club Fact Sheet, United States Trotting Association. Oregon Hub handle from Oregon Racing Commission Quarterly Hub Handle reports, Oregon Racing Commission. ***Note:** 2014-2018 New York handle does not include the New York multi-jurisdictional ADW handle. New York City OTB closed in 2010.

The total New York State handle (excluding New York multi-jurisdictional ADW handle) declined 16.5 percent compared to the 4.85 percent gain in national handle in seven years from 2011 to 2018. While the total New York handle declined 15.7 percent from 2014 to 2018, during that same period the New York multi-jurisdictional ADW handle increased 120.3 percent (from $153.6 million to $338.4 million). The shift in handle to ADWs is a market fundamental that has a noteworthy impact.

The New York OTBs account for a significant portion of the decline in New York handle the past seven years. Finger Lakes and the harness tracks also have experienced significant declines, contributing to the overall numbers.

However, New York handle accounted for 16 percent, 13 percent, and 10.5 percent, respectively, of total handle in the years 2010, 2011 and 2018. Therefore, New York trends will have an impact on the total national trends. If we examine the U.S. figures without New York handle, the national handle increased 6 percent from 2011 to 2018 and decreased 6 percent from 2010 to 2018 (this is due to New York City's OTB closure; New York handle decreased 35.4 percent from 2010 to 2018). The New York handle does not include the Oregon Hub data of NYRA Bets and other Oregon ADW providers, which make comparisons more complex. It should also be noted that national handle for Thoroughbreds declined 2 percent in 2019, harness handle increased in 2019, and the New York statewide handle figures for 2019 have not been reported yet.

During the same seven years, the Oregon Hub handle increased 129 percent, and from 2010 to 2018 it increased 191 percent. The Oregon Racing Commission licenses "Multi-Jurisdictional Simulcasting and Interactive Wagering totalizator Hubs" for account wagering. The license fee and tax rate are low, so many of the major ADWs operate out of the Oregon Hub.[255] Because of this, the handle data for the hub represents a large percentage of all ADW handle. The data illustrate a major market fundamental that has affected the entire pari-mutuel wagering market. In the case of New York OTBs, this shift in handle toward ADWs had a significant negative impact on OTB handle.

This shift in handle has fueled a significant decline at the OTBs. The market fundamental changes discussed, coupled with the significant shift in wagering from bricks and mortar to ADWs, indicates that the OTB model and on-track experience is less attractive.

Oregon Hub ADW handle reached $4.36 billion in 2019, up 3.5 percent from 2018 and accounting for 35 percent of combined U.S. Thoroughbred and harness handle. All account wagering, including handle from hubs based outside of Oregon, could easily comprise 40 percent to 50 percent of total U.S. handle.

OTBs, like most that operate ADWs, have seen their ADW handle as the only positive trend, but it is clearly not enough to offset other declines.

b. Breeding and Racing Data

The New York Standardbred breeding industry does not benchmark well when compared to national trends over the past decade despite the increase in purses from VLTs since 2003. The number of stallions, mares and foals registered in New York, while not large numbers, are down 24 percent to 31 percent. The declines in the national Standardbred production have been much smaller.

Figure 209: Standardbred breeding data – stallions and mares, 2010-2019

	National		New York	
Breeding Season	No. Stallions at Stud	No. Mares Bred	No. Stallions at Stud	No. Mares Bred
2010	745	11,822	61	1,629
2011	675	11,239	57	1,653
2012	672	10,963	54	1,418
2013	656	10,814	51	1,461
2014	635	10,486	57	1,688
2015	648	10,010	43	1,354
2016	666	10,321	42	1,278
2017	716	11,027	44	1,206
2018	768	11,701	40	1,251
2019	668	11,827	42	1,188
Pct. Chg. 2010-2019	**-10.3%**	**0.0%**	**-31.1%**	**-27.1%**

Source: United States Trotting Association

[255] Oregon Racing Commission, "Chapter 462, Division 220, Multi-Jurisdictional Simulcasting and Interactive Wagering Totalizator Hub." https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=252480 (accessed January 26, 2020)

Figure 210: Standardbred breeding data – registered foals, 2011-2019

	National	New York
Foaling Year	No. Registered Foals	No. Registered Foals
2011	6,841	980
2012	6,703	1,009
2013	6,404	857
2014	6,450	979
2015	6,302	1,050
2016	6,070	845
2017	6,216	797
2018	6,462	729
2019	6,775	745
Pct. Chg. 2011-2019	**-1.0%**	**-24.0%**

Source: United States Trotting Association

Figure 211: National and New York Standardbred racing data – race days, races, starters and starts, 2010-2019

	National				New York			
Year	Race Days	Number of Pari-Mutuel Purse Races	Starters	Starts	Race Days	Number of Pari-Mutuel Purse Races	Starters	Starts
2010	4,222	49,989	24,025	388,427	963	11,539	7,476	88,840
2011	4,129	48,346	22,840	374,047	975	11,482	7,448	88,833
2012	4,006	46,848	21,804	364,480	948	11,394	7,151	88,115
2013	4,027	46,913	21,649	364,180	950	11,377	7,346	87,934
2014	3,857	44,375	20,287	342,575	961	10,538	6,713	80,138
2015	3,906	44,692	19,622	343,830	954	10,589	6,355	80,132
2016	3,835	43,488	18,934	336,068	952	10,168	6,101	76,501
2017	3,774	41,931	18,022	320,802	939	9,792	6,006	73,375
2018	3,622	40,304	17,165	306,878	894	9,236	5,513	68,506
2019	3,595	40,449	16,851	308,090	905	9,243	5,406	68,098
Pct. Chg. 2010-2019	**-14.9%**	**-19.1%**	**-29.9%**	**-20.7%**	**-6.0%**	**-19.9%**	**-27.7%**	**-23.3%**

Source: United States Trotting Association

New York Standardbred racing data is down significantly. When comparing New York's trend to the national trend of number of races, race days, and starters, the declines are similar. Notably, the 9,243 harness purse races run in New York represent almost 23 percent of all the harness purse races run in the United States. The utilization of the New York harness horses is much less than the national trend. New York harness horses made an average of 12.7 starts, while nationally the average was 18.2 starts.

Figure 212: National, New York Standardbred racing data: purses, handle, average purse, 2010-2019

	National			New York		
Year	Gross Purses Paid	Total Handle[1]	Avg. Purse	Gross Purses Paid	Total Handle	Avg. Purse
2010	$431,420,310	$1,429,159,969	$8,630	$118,661,646	$522,823,015[2]	$10,040
2011	$422,979,537	$1,288,714,638	$8,749	$121,881,839	$353,715,901[2]	$10,615
2012	$406,619,582	$1,512,192,007	$8,680	$117,518,439	$374,032,884	$10,314
2013	$422,409,699	$1,604,039,996	$9,004	$120,668,714	$383,616,463	$10,606
2014	$408,981,024	$1,497,004,583	$9,216	$105,786,759	$310,355,200	$10,039
2015	$424,555,242	$1,512,300,328	$9,500	$116,985,005	$326,244,503	$11,048
2016	$423,038,193	$1,446,796,214	$9,728	$108,391,183	$301,511,641	$10,660
2017	$435,104,465	$1,383,189,222	$10,377	$120,742,307	$290,094,303	$12,331
2018	$432,086,536	$1,376,360,696	$10,721	$109,483,025	$329,913,134	$11,854
2019	$442,748,880	$1,424,886,558	$10,946	$112,681,835	$326,288,727[3]	$12,191
Pct. Chg. 2011-2019	**4.7%**	**10.6%**	**25.1%**	**-7.5%**	**-7.8%**	**14.8%**

Source: United States Trotting Association, New York State Gaming Commission, United Tote. **Notes**: [1]The USTA data includes U.S. and Canadian common and separate pool wagers on races contested in the United States. While every effort has been made to provide accurate information, the USTA is not responsible for errors or omissions. [2]New York Total Standardbred data for 2010 was sourced from NYSGC and 2019 was from USTA. It should be also noted that the data for 2010 and 2011 from USTA was dramatically different than that reported by the NYSGC. USTA data for 2010 and 2011 was: $383.8 million and $430.9 million respectively. [3]For 2019 the NYSGC figures were not available so the USTA numbers were used. For 2012 to 2018 the data from the USTA and NYSGC were not materially different. Note: New York City OTB closed in 2010.

Total New York Standardbred handle and purses declined from 2011-2019, while the national trends for handle and purses were positive. The decline in handle on New York harness races is concerning.

Spectrum received conflicting handle data from two sources for 2010 and 2011. Figure 212 used the New York State Gaming Commission data. Note that New York City OTB closed in 2010. New York harness handle declined 7.8 percent from 2011 to 2019, rather than the 24.2 percent decline that would result if 2010 is used as the first year of the comparison.

However, the New York harness pari-mutuel handle also comprises almost 23 percent of national handle, which mirrors what we observed for the number of races shown in Figure 211.

New York harness purses represent more than 25 percent of national harness purses.

While the New York harness racing and breeding industry overall has fared worse than the trends nationally, New York harness racing remains a significant portion of all harness racing in the United States.

Figure 213: National and New York Thoroughbred breeding data, 2009-2018

	National			New York			
Breeding Season	No. Stallions at Stud	No. Mares Bred	No. Registered Foals	No. Stallions at Stud	No. Mares Bred	No. Registered Foals	Active Farms
2009	2,996	45,826	29,612	87	1,610	1,688	378
2010	2,771	40,841	25,954	65	1,352	1,393	307
2011	2,483	36,647	22,653	64	1,194	1,185	287
2012	2,296	35,017	21,469	67	1,640	1,426	273
2013	2,178	34,939	21,431	76	1,639	1,467	276
2014	2,036	35,529	21,424	70	1,674	1,524	276
2015	1,856	35,305	21,514	66	1,596	1,504	267
2016	1,783	34,441	21,086	60	1,528	1,515	269
2017	1,714	32,582	20,580	66	1,348	1,570	255
2018	1,506	30,984	19,925*	51	1,124	1,388	242
Pct. Chg. 2009-2018	**-49.7%**	**-32.4%**	**-32.7%**	**-41.4%**	**-30.2%**	**-17.8%**	**-36.0%**

Source: New York State Gaming Commission, New York State Racing and Wagering Board, New York Thoroughbred Breeders, The Jockey Club. **Note:** New York foal numbers are those registered with the Jockey Club. New York reported foal crops are larger because not all foals born are registered. *Estimated figure.

National Thoroughbred breeding has declined significantly in recent decades. In 1990, the U.S. registered foal crop was 40,333.[256] While the trends in the number of stallions and mares nationally compared to New York look similar, the New York numbers may be deceiving (and not as bad as they appear) because a number of mares can go out of state to breed to an out-of-state stallion and return to New York to give birth and have their foals race as a registered New York bred.

From 2009 to 2018, New York's foal crop declined by 17.8 percent, compared to a national decline of almost 33 percent. But a closer look shows that from 2011 (when VLT funds contributed to the breed development fund) to 2018 the number of New York foals increased by 17.1 percent compared to a 12 percent decline nationally over the same period. Likewise, the number of active New York farms declined by 15.7 percent from 2011 to 2018 compared to a 36 percent decline since 2009.

The New York foal crop, as a percentage of the national foal crop, increased from 5.7 percent in 2009 to 7.8 percent in 2018. One important aspect of the New York Thoroughbred foal crop trend is the impact it has on the economy. Each horse raised in New York contributes significant direct and indirect economic impact to the state economy, as is well documented in the New York State equine economic studies referenced. With lucrative New York State-bred purses and breeders awards, horses foaled in New York are also likely to stay in the state for much of their racing careers.

[256] The Jockey Club, "The 2019 Fact Book." http://www.jockeyclub.com/default.asp?section=FB&area=2

Figure 214: National and New York Thoroughbred racing data – race days, races, starters and starts, 2009-2019

	National					New York				
Year	Race Days	Races	Starters	Starts	Average Field Size	Race Days	Races	Starters	Starts	Average Field Size
2009	5,886	49,368	103,790	407,554	8.3	413	3,824	6,599	30,156	7.9
2010	5,422	46,379	99,020	380,511	8.2	405	3,740	6,355	29,077	7.8
2011	5,280	45,417	94,432	366,149	8.1	400	3,692	6,115	28,084	7.6
2012	5,296	45,086	90,077	356,199	7.9	405	3,781	6,462	29,100	7.7
2013	5,118	43,139	85,995	339,490	7.9	400	3,752	5,931	28,405	7.6
2014	4,973	41,276	81,451	318,242	7.7	403	3,686	5,899	27,050	7.3
2015	4,754	38,941	79,886	305,780	7.9	390	3,568	6,124	26,736	7.5
2016	4,669	38,284	78,350	298,784	7.8	379	3,481	6,015	25,640	7.4
2017	4,573	37,628	76,034	290,745	7.7	367	3,272	5,899	24,388	7.5
2018	4,432	36,586	73,178	279,774	7.6	359	3,170	5,545	22,479	7.1
2019	4,425	36,207	72,067	272,553	7.5	335	2,972	5,535	21,547	7.3
Pct. Chg. 2009-2019	**-24.8%**	**-26.7%**	**-30.6%**	**-33.1%**	**-8.8%**	**-18.9%**	**-22.3%**	**-16.1%**	**-28.5%**	**-8.1%**

Source: The Jockey Club Fact Book

The overall trend in Figure 214 for Thoroughbreds is similar to that seen with the Standardbred data in Figure 211. The decline in the number of races and starters for New York Thoroughbreds has not been as severe as the national trend.

Figure 215: National and New York Thoroughbred racing data – purses and handle, 2009-2019

	National		New York	
Year	Gross Purses Paid	Total Handle	Gross Purses Paid	Total Handle
2009	$1,098,186,870	$12,315,000,000	$128,229,613	$2,384,011,729
2010*	$1,031,443,979	$11,419,000,000	$115,759,945	$2,287,309,636
2011	$1,061,210,889	$10,770,000,000	$118,909,996	$2,113,207,819
2012	$1,127,801,116	$10,882,000,000	$164,575,940	$2,344,191,384
2013	$1,127,210,117	$10,877,000,000	$174,798,545	$2,337,163,753
2014	$1,111,715,735	$10,552,000,000	$182,545,665	$2,332,300,627
2015	$1,093,667,288	$10,675,000,000	$182,984,413	$2,351,415,558
2016	$1,083,696,320	$10,744,000,000	$181,518,088	$2,330,580,388
2017	$1,079,738,294	$10,909,000,000	$176,121,338	$2,322,066,069
2018	$1,117,728,125	$11,267,000,000	$178,936,281	$2,230,345,059
2019	$1,167,921,650	$11,039,000,000	$182,360,497	n/a
Pct. Chg. 2011-2019*	**10.1%**	**2.5%**	**53.4%**	

Source: New York State Gaming Commission, New York State Racing and Wagering Board, The Jockey Club**. *Note**: New York City OTB closed December 2010.

The good news is that purses for New York Thoroughbred races have increased well above the national trend. (The VLT revenue funding purses helped New York achieve parity with a number of states that compete with New York for horses.) However, what hurts New York in attracting horses from those same states, as previously mentioned, is the rising costs to train and race a horse in New York. The primary

increases have been labor costs. New York handle totals for 2019 were not available. When comparing the New York handle change from 2011-2018 to the national handle, the rates of increase are similar.

7. Simplified Distribution of Racing Revenue – How the Money Flows

For a pari-mutuel wager, in general terms, where/how the wager is made and what track the wager is placed on will greatly vary the revenue distribution and the amounts distributed to various stakeholders. The statutes and rules in each state vary and specifically in New York the complex revenue distribution is not easily understood and in fact many industry stakeholders are unable to fully understand their complexity (see *Current Situational Analysis*).

a. On-Track Distribution

Traditionally, the on-track handle is the most lucrative for horsemen and track operators as the net takeout after pari-mutuel tax is divided with the in-state stakeholders and there is no third-party distributor or content provider to share revenue with. The racing commission receives fees for regulation, the state receives the pari-mutuel tax, a percentage supports the breeders fund and the horsemen's purse account and track shares in revenue as well.

b. Off-Track Distribution

1) Wagers at a Track on Another Racetrack's Product

Import race signals: Wagers made at a track on another racetrack's content adds an additional entity to the mix to share the takeout from the handle wagered on those races. A host fee is paid to the track providing the content, and the balance of the revenue from the takeout is then divided in a similar fashion to the distribution of an on-track wager. In New York there are various distribution schedules for the remaining takeout depending on the track and type of race. When New York tracks are importing signals from other New York tracks the distribution is more complex depending on the location, track, and type of race.

Export race signals: Wagers made elsewhere on a racetrack's content receive a host fee. How that host fee is divided varies by state. In New York only the horsemen's purse account and the track shares in that compensation (§238(1)(b)(c)), leaving the State tax or racing commission and breeders fund excluded from any distribution of that compensation.

2) ADW Distribution

How revenues are divided when wagers are placed through advance deposit wagering (ADW) entities perhaps varies the most among different states. This is a result of the evolution of ADW and the fact that stakeholder interests in states varied dramatically. The New York statutes regarding out-of-state ADW revenue distribution are simple. N.Y. PML §1012-a governs out-of-state, multi-jurisdictional ADWs accepting online and phone wagers from within New York. Beginning in 2014, multi-jurisdictional ADWs pay 5 percent of all handle as a "market origin fee" that is redistributed to New York's racing and

regulatory interests by the New York Gaming Commission. **Appendix O** clearly illustrates the distribution or revenue from such handle wagered.

For wagers placed on New York races from outside New York they are the same as export race signals as the host track receives a host fee and the remainder is retained by the ADW or rebated to the customer.

3) OTB Distribution

OTB revenue distribution outside of New York is very different than how New York distributes such revenue. In most states the OTBs are track owned or operated (see **Appendix N**) or the OTB receives a distribution fee with the balance of the revenue divided like wagers placed at the track.

New York statutes regarding OTB wagering and distributions, codified in New York's Racing, Pari-Mutuel Wagering and Breeding Law ("N.Y. PML"), have evolved during a half-century into a dense collection of rules, formulas, and sunset provisions. For detailed explanation of the complexity of such revenue distribution Chapter L.1 of this report and **Appendix L**.

c. Racetrack Distribution – How Purses and Breeders Awards are Distributed

While statutes determine how revenues are divided and allocated to various funds, at the racetrack the purse fund and breeders fund is distributed based on the results of races run. While this aspect is not specific to the required RFP Questions and Requirements, it is important to the state, the economic impact, the racing industry and therefore included for completeness in the report.

Each race run in New York has a purse amount awarded to the participants in the race with a basic guideline followed of "better purses for better horses." While the details of each purse and how it is distributed to the finishers varies, they follow a principal of the winner receiving the majority percentage and subsequent finishers less. In most races about 50 percent to 60 percent is awarded to the winning owner. The trainer of the horse and the driver/jockey of the horse in most cases receive from 5 percent to 10 percent of the winning owners share as a bonus in addition to their daily or normal performance fees.

There are different breeders and owner awards for state-bred horses that are allocated from those breed funds. It will vary not only by state but in New York if also varies from Standardbred breeder awards and Thoroughbred breeder awards. In most cases the breeder of a winning horse in specific races receive an award based on the total purse; often the stallion owner and horse owner may also be rewarded in certain races where the in-state bred horse wins or places.

Appendix Q examines the actual allocation of the purses and breeders' awards using NYRA data and New York Thoroughbred and Standardbred Breeders Awards as examples of the distribution of those funds. While there are many participants in New York's horse racing industry, a relatively small portion of them account for most starts and earnings. This is important to the state and the industry and even will have an impact on the horse players. This is discussed in context in **Appendix Q**.

8. Stakeholder Feedback

Both qualitative and quantitative responses were solicited from the pari-mutuel stakeholders. Most of those stakeholders responded – some with more detail than others. Interviews also were conducted with several other stakeholders. **Appendix T** provides a synopsis of the broad variety of feedback from stakeholder groups: OTBs, horsemen groups, breeders' organizations, racetracks, totalizator companies, and ADW licensees.

L. Current Pari-Mutuel Situational Analysis

The history of horse racing in New York shows that several changes made were reactive to the market, the competitive landscape, and other events. The history of statutes and agreements that govern the distribution schedules for horse racing revenues in New York resembles a game of Whac-A-Mole, in which endless challenges randomly pop up. The New York racing entities view each other as competitors, sometimes seeking legal changes that may help one while reducing revenues or profits for another.

That context demands the consideration of certain fundamental issues and questions, including:

- Valuing what is already on the ground and operating versus new gaming opportunities, new gaming facilities or new dynamics in the market.
- Examining changes that occurred when the market fundamentals were different and assessing the impact of such changes in the current environment.
- Recognizing the NYRA and addressing the question of whether that franchise is a State asset (overseen by the Franchise Oversight Board). Should that change what is important to the State regarding that asset compared to the past?
- Addressing what should be done to protect the state's racing industry from outside competitors while allowing for overall in-state growth from gaming expansion and competition.

Such historical changes and questions challenge policymakers. The stakeholders acknowledged the complexity of the distribution systems, and several referred us to other sources to seek explanations. While the historical context of a number of the current distribution schedules were relevant at the time, changes in the fundamentals of pari-mutuel wagering markets make the market very different today.

For example, harness races were traditionally almost always held in the evening and, thus some of the statutes tried to "protect" that evening market. Today, many of the New York harness tracks have moved to daytime racing to reduce competition or to save on expenses. Monticello runs almost all daytime race cards, Saratoga harness runs several daytime cards and Buffalo, Batavia and Tioga all run during the afternoon instead of the evening at least one day a week.

Other statutes have unintended consequences. For example, rules established to minimize expenses or avoid payments based on antiquated statutes at times deny pari-mutuel players access to some race products on certain days. Streamlining the statutes to more simplified formulas will lead the distributors of the racing product to maximize their handle and revenues, which in turn helps maximize the pari-mutuel tax for the State.

Simplifying the rules does not lose the significance of the historical reasons for many of the changes. For example, the industry should pay for the regulation of the sport, but simplifying formulas to accomplish this does not diminish the importance of it or the value of this for the state.

Many rules date back to an era when methods of wagering were used that no longer exist in the United States. One illustration is the creation of New York OTBs in the early 1970s. The distribution model was based on separate pooling of pari-mutuel wagers, which is now almost non-existent worldwide. Why

should market fundamental changes (such as increased host fees) that did not exist at the time have an impact on the distribution of revenues thought to be equitable in the 1970s? A simple example: Instead of numerous statutory obligations from each stakeholder to cover the cost of regulation, have one payment made periodically.

To illustrate the complexity of the revenue distribution, Spectrum examined the rules regarding the OTB distribution of out-of-state handle.

1. Statutes Regarding the OTB Simulcasting of Out-of-State Races

Statutes regarding OTB wagering and distributions, codified in New York's Racing, Pari-Mutuel Wagering and Breeding Law ("N.Y. PML"), have evolved during a half-century into a byzantine collection of rules, formulas, and sunset provisions.

Some of the most complex OTB statutes apply to the simulcasting of out-of-state races. Key statutes regarding OTB simulcasting of out-of-state races are N.Y. PML §§1008, 1009, 1014, 1015, 1016, 1017 and 1018. Each statute was aimed to protect New York's racetracks from the potential loss of revenue due to wagering on out-of-state races. Complex protection clauses have had an impact on the scheduling of race meets and the balance of revenues between OTB corporations and racetracks.

The complexity of statutory OTB revenue distributions is proportional to the number of conditions affecting distributions. Each combination of yes or no answers to a series of questions is associated with different revenue distributions. Mathematically, the number of possible combinations equals 2 raised to the power of the number of questions. At a minimum, there are often at least 10 questions required to determine distributions of handle on out-of-state races, or 2^{10} – which equals 1,024 possible distribution scenarios. As New York's statutes governing OTBs have evolved, the complexity of OTB distributions has grown exponentially. This complexity may be negatively impacting New York's racing industry. OTBs have played an important role in generating handle on New York and out-of-state races, while benefiting State and local government.

Tables in **Appendix L** show statutory distribution formula for OTB handle on out-of-state races. Statutory distributions of OTB revenue from out-of-state Thoroughbred and harness races depend upon combinations of answers to many questions:

- Is it a Thoroughbred signal at 7:30 p.m. or earlier?
- Is it a Thoroughbred signal later than 7:30 p.m.?
- Is it a harness signal?
- Is it signal 1? (initial out-of-state signal wagered upon)
- Is it signal 2+? (non-initial out-of-state signals)
- Is NYRA's live meet at either Aqueduct or Belmont?
- Is NYRA's live meet at Saratoga, and is Saratoga still holding races for the day?
- Is NYRA's live meet at Saratoga, and is Saratoga finished holding races for the day?
- Is NYRA live (races scheduled for the day)?

- Is Finger Lakes live?
- Is it a regular win-place-show ("WPS") bet?
- Is it a multiple (wagers on two horses) bet?
- Is it an exotic (wagers on three or more horses) bet?
- Is it a super exotic (wagers on six or more horses) bet?
- Is the wager made at a branch?
- Is the wager made at a teletheater (or at Rivers casino in the case of Capital OTB)?
- Is the wager made via phone?
- Is the wager made via on OTB's advance deposit wagering (ADW) platform?
- Is it a Breeders' Cup or Triple Crown race?
- Is it a Dr. Harry M. Zweig Memorial Trot or Empire Commission's Cup race?
- Were there no live regional harness tracks?
- Was there one live regional harness track?
- Were there two or more live regional harness tracks?
- Were the regional harness tracks simulcasting out-of-state Thoroughbred races?
- Was the wager on an out-of-state harness race made at Western OTB?
- Was the wager made within a special Thoroughbred betting district?
- Was the wager made within a special harness betting district?

2. Statute N.Y. PML §1012-a Regarding Multi-Jurisdictional (Out-of-State) ADWs

None of the complex statutory distribution formulas applicable to OTBs apply to New York's multi-jurisdictional ADWs. ADWs consider wagers to be made in the jurisdiction where their hubs are located – primarily Oregon due to that state's low pari-mutuel tax rates. Initially, New York statutes did not anticipate multi-jurisdictional ADWs, which accepted wagers from New York residents from 2000 through 2013 without being subject to New York's statutory distributions other than contractual host fees with racetracks.

N.Y. PML §1012-a governs out-of-state, multi-jurisdictional ADWs accepting online and phone wagers from within New York. Beginning in 2014, multi-jurisdictional ADWs pay 5 percent of all handle as a "market origin fee" that is redistributed to New York's racing and regulatory interests by the New York Gaming Commission. As a percentage of ADW handle, market origin fees are distributed as 2.0 percent to OTBs, 0.6 percent to Thoroughbred racetracks, 0.6 percent to Thoroughbred purses, 0.3 percent to the Thoroughbred breeding fund, 0.4 percent to harness racetracks, 0.4 percent to harness purses, 0.2 percent to the Standardbred breeding fund, 0.25 percent to the New York Gaming Commission and 0.25 percent to New York State. Market origin fees are meant, in part, to offset regulatory fees of 0.6 percent of in-state handle paid by OTBs and racetracks.

Unlike OTB statutes, there are no differences in multi-jurisdictional ADW statutory distributions based on breed, New York racetrack schedules, type of wager, time of day, or the bettor's specific location, and there are no maintenance-of-effort or dark day payments. Internet and phone wagering are the most profitable segment of the betting industry. Multi-jurisdictional ADW handle has grown steadily, with offsetting declines in OTB and racetrack handle. National ADW handle has grown steadily in the past decade, with virtually no growth in total national handle, indicating that ADW handle displaces traditional forms of wagering.

3. OTB Maintenance-of-Effort and Dark-Day Payments

Distributions that apply solely to OTBs are "maintenance of effort" and "dark day" payments. To accept wagers on out-of-state Thoroughbred races after 7:30 p.m., OTBs must pay harness racetracks and purses the same amounts the OTBs distributed from the simulcast of out-of-state harness races displayed after 6 p.m. in 2002, pursuant to N.Y. PML §1015. These are called maintenance-of-effort or hold-harmless payments. Additionally, when combined OTB handle on out-of-state Thoroughbred races simulcast after 7:30 p.m. exceeds $100 million, §1017 requires OTBs to pay harness racetracks and purses a total of 2 percent of such excess handle, to be split equally between the tracks and purses.

The New York Legislature has proposed amendments in recent years that would end maintenance-of-effort payments and phase out payments on the portion of handle exceeding $100 million on out-of-state Thoroughbred races simulcast after 7:30 p.m. For example, New York Assembly Bill A3470 (2019-2020 Regular Sessions) offered justification that included the language (New York State Assembly, 2020):

> This ruling is inconsistent with the Legislature's intent expressed in section 1016 that distribution of revenue in multi-track regions be made based on the proportion of each track's live handle. Therefore, in a region with two or more regional harness tracks, if one track is not running the entire section 1016 payment goes to the track running live racing, but the track not running nonetheless remains eligible to receive maintenance-of-effort payments. The Board's misinterpretation of section 1017-a (2)(a) unfairly requires OTBs to subsidize those harness tracks not conducting live race meetings.[257]

OTBs pay harness racetracks and purses a total of 1.5 percent of handle on out-of-state Thoroughbred races on days that NYRA is dark [N.Y. PML §1016(1)(b)(5)(e)(ii) and §1014(h)(2)]. There have been periodic legislative bills to reduce dark-day payments while also paying a higher percentage of total dark-day payments to harness purses, such as New York Assembly and Senate Bills A7851 and S6709, respectively, from the 2015-2016 regular sessions (New York State Assembly and New York State Senate, 2016).[258]

[257] New York State Assembly, Bill and Sponsor's Memo A3470, January 8, 2020. http://public.leginfo.state.ny.us

[258] New York State Assembly and New York State Senate, Bills and Sponsor's Memo A7851-A & 56709, February 23, 2016. http://public.leginfo.state.ny.us

4. Example of OTB Revenue Distribution Complexity

As an example of the complexity of OTB revenue distributions, consider wagers made on out-of-state harness races at Western OTB, where distributions to Finger Lakes depend on whether the bet was made within the Western OTB region, and within a Thoroughbred special betting district, and outside of a harness special betting district. The statute that addresses this is N.Y. PML §1015(4)(d):

> For wagers placed at an off-track betting facility in that portion of the western region located with a Thoroughbred special betting district, but not included in a harness special betting district, one and one-half per centum of such wagers shall be paid to the racing association located in such district provided such association is neither accepting wagers nor simulcasting out-of-state harness races. Any payments required by this subdivision shall reduce payments required to be made to the regional licensed harness track under the provisions of subparagraph three of paragraph b of this subdivision.[259]

The following table shows the counties involved in this distribution scheme of §1015(4)(d). The highlighted counties in Figure 216 are associated with related distributions of handle on out-of-state harness races due from Western OTB to Finger Lakes Thoroughbred racetrack.

Figure 216: Counties involved in distribution of revenue from §1015(3)(d)

Distribution of Revenue on Out-of-State Harness Races in Western OTB Region		
Western OTB Region Counties N.Y. PML §519(1)(g)	**Thoroughbred Special Betting District N.Y. PML §523(5)**	**Standardbred Special Betting District N.Y. PML §523(4)**
Allegany	Allegany	Cayuga
Cattaraugus	Cayuga	Chenango
Cayuga	Cortland	Cortland
Chautauqua	Genesee	Franklin
Erie	Livingston	Herkimer
Genesee	Monroe	Jefferson
Jefferson	Onondaga	Lewis
Livingston	Ontario	Madison
Monroe	Orleans	Oneida
Niagara	Schuyler	Onondaga
Ontario	Seneca	Oswego
Orleans	Steuben	Otsego
Oswego	Tompkins	St. Lawrence
Schuyler	Wayne	Tompkins
Seneca	Wyoming	
Steuben	Yates	
Wayne		
Wyoming		
Yates		

Source: New York Pari-Mutuel Laws §§519 and 523

[259] New York State Pari-Mutuel Law §1015(4)(d). https://newyork.public.law/laws/n.y._racing,_pari-mutuel_wagering_and_breeding_law_section_1015

5. Simplifying Statutory Distributions

As previously discussed, the historical context of several the current distribution schedules was relevant at the time, but the way the fundamentals of pari-mutuel wagering markets have changed makes the market today very different. The complexity of the current distribution schedules causes a number of problems including varying interpretations, mistakes, and stagnating change; also, because the market fundamentals have changed, some statutes are antiquated. Perhaps the most harmful negative impact of the current complexity of the statutes is the stagnation of change. It was clear to Spectrum that all stakeholders agreed the revenue distribution statues were dense and complex; most of those stakeholders were not able to explain in detail how revenues were allocated. Two less-complex approaches to streamlining several of the New York Pari-Mutuel Laws that seem reasonable are as follows:

- One would simplify these types of distributions in a fashion like New York's market origin fees. If the OTBs are permitted to keep a fixed percentage, as a distributor, then simple formulas can be used to allocate the remaining revenue. The New York market origin fee distribution is a simple formula and can be used as a model. In many states, the distributors (OTBs and ADWs) keep a certain fixed percentage of the net takeout after deduction of the host fee. The remaining revenue is then allocated to state taxes, tracks, horsemen and breeders – along with other unique funds that vary by state. Spectrum does believe that the live handle should not be the only determinant though (as is currently done with the market origin fees) to allocate the revenue, given the market fundamental changes outlined in this report.
- Another approach may be able to be used more broadly for all types of distribution statutes. OTB pari-mutuel handle and statutory revenue distributions were reviewed for 2016 through 2018 to estimate simplified, single-rate statutory distribution percentages for OTBs, in place of the existing complex formulas that resemble Rube Goldberg contraptions – complex mechanisms that perform simple tasks. The tables in **Appendix M** provide details of the 2016-2018 review and demonstrate this method, which can easily be modified when working on statute modifications.

a. Overview of OTB Statutory Distribution Rates in 2018 and Recommended Simplified OTB Distribution Rates

In 2018, as a percentage of total handle, OTBs paid 5.1 percent to New York's Thoroughbred industry (racetrack operators, purses and breeders) and 1.83 percent to New York's harness industry, for a weighted average of 5.10 percent of total in-state and out-of-state handle paid to New York's racing industry.

In 2018, as a percentage of out-of-state handle, OTBs paid host fees of 2.33 percent to out-of-state harness racetracks and 5.31 percent to out-of-state Thoroughbred racetracks, for a weighted average of 4.85 percent paid to the out-of-state racing industry.

In 2018, as a percentage of total handle, OTBs paid 10.13 percent to combined in-state and out-of-state racing interests, and 1.35 percent in State taxes and regulatory fees, for total statutory distributions of 11.48 percent.

In 2018, $6.8 million in multi-jurisdictional ADW source market fees, or 2 percent of ADW handle, was distributed to OTBs, which effectively reduced total OTB statutory distributions by 1.34 percent. Thus, effective total OTB statutory distributions were 10.14 percent of total OTB handle. For a detailed explanation of our recommended flat rates for statutory distributions based on the review of distributions from 2016-2019, see **Appendix M**. Figure 217 below summarizes the analysis from that appendix.

Figure 217: Spectrum's recommended simplified OTB distribution rates

Statutory Distributions	Simplified Rate	Applied to	2018 Percent of Total Handle
NY State (Pari-Mutuel Tax & Breakage)	0.75%	Total handle	0.75%
NY State Racing & Wagering Board Regulatory Fee	0.60%	Total handle	0.60%
NY Thoroughbred Industry			
NY Thoroughbred Tracks Direct Payments	Negotiated	NY TB handle	2.03%
NY Thoroughbred Tracks Regional Payments	2.66%	Total handle	2.62%
NY Thoroughbred Development & Breeding Fund	0.45%	Total handle	0.45%
Total NY Thoroughbred Industry			5.10%
NY Standardbred Industry			
In-State Harness Tracks Direct Payments	Negotiated	NY SB handle	0.50%
In-State Harness Tracks Regional Payments	1.10%	Total handle	1.09%
Ag. & NYS Breeding & Dev. Fund Breeders' Fund	0.24%	Total handle	0.24%
Total NY Standardbred Industry			1.83%
Out-of-State Racing Industry			
Out-of-state Thoroughbred Tracks	Negotiated	Out-of-state TB handle	2.96%
Out-of-state Harness Tracks	Negotiated	Out-of-state SB handle	0.24%
Total Out-of-State Racing Industry			3.20%
Total OTB Statutory Distributions as Percent of Handle			**11.48%**
Multi-Jurisdictional ADW Distributions to OTBs	2.00%	ADW handle	-1.34%
Effective OTB Statutory Distributions			**10.14%**

Source: New York State Gaming Commission, Spectrum Gaming Group

A consensus among stakeholders indicates that the laws pertaining to revenue distribution are too complex. Comments from stakeholders included:

- The rules put a burden on the accounting personnel and necessitate hiring of extra personnel.
- Corrective changes are difficult to implement, due to the complexity, as some people do not fully understand all aspects of the rules and are afraid of making changes that create more problems
- Mistakes have been made in the past (and may continue in the future) because of the constant changes, interpretations and intricacy.

As mentioned, some laws have gone unchanged for decades despite changes in market fundamentals. Agreements made decades ago may be impeding opportunities to expand revenues and handle. Two significant examples are:

- The NYRA not foreseeing the benefit of operating the OTBs in New York
- The OTBs overestimating benefits of Thoroughbred imports resulting in maintenance-of-effort payments.

6. Payments to Out-of-State Racetracks

OTBs negotiate host fees directly with out-of-state racetracks. A large percentage of handle generated on out-of-state racetracks is wagered on races controlled by Churchill Downs, Inc., and The Stronach Group, which also own the major multi-jurisdictional ADW companies operating in New York and which compete directly with the OTBs. These major national racing companies have greatly increased host fees charged to OTBs, resulting in lower OTB profits due to OTB statutory distributions and competition from ADWs that can operate in New York with lower and more clear statutory obligations.

While the ADWs now pay a 5 percent market origin fee, with 2 percent going to OTBs, the increased host fees diminish the value that those payments were supposed to provide to OTBs. New York OTBs should partner with NYRA or other racetracks to negotiate as a group for better out-of-state rates.

7. Other Critical Observations of the Current Situational Analysis

The following New York regulations, restrictions, market fundamentals and competitive forces are also important to the New York pari-mutuel evaluation.

- Market fundamentals of OTBs (and racetracks) have changed so much that they operate in what is a vastly different market today compared to years ago, and the current shift in wagering from retail to account wagering will continue.
- New York City OTB closed in December 2010, resulting in a significant decline in the OTB pari-mutuel tax revenue for the State.

Figure 218: New York pari-mutuel tax history, FY 2004-FY 2018

	Pari-Mutuel Taxes by Fund ($000)		
	Flat	Harness	OTB
FY 2004	9,999	796	16,694
FY 2005	9,257	426	16,346
FY 2006	5,736	258	16,673
FY 2007	7,152	450	13,208
FY 2008	8,287	672	14,621
FY 2019	7,602	589	14,110
FY 2010	6,710	669	11,439
FY 2011	7,355	661	9,024
FY 2012	10,903	589	5,706
FY 2013	11,407	593	5,416
FY 2014	11,039	538	5,244
FY 2015	12,428	482	5,128
FY 2016	11,423	466	5,293
FY 2017	10,604	426	4,726
FY 2018	10,318	378	4,676

Source: New York FY 2020 Economic and Revenue Outlook and 2013-14 Executive Budget, Economic and Revenue Outlook

- No other OTB structure is like the New York structure; most are run and managed by the racetracks. However, OTBs in other markets are struggling as well due to the market changes. **Appendix N** is a table of OTB structures in other states.
- There was a large decline in handle after the closing of New York City OTB, and only a percentage of that lost handle has been recaptured by the industry. This loss of revenue should be recaptured. As previously discussed, while some of the handle was recaptured with the convenience of ADWs, the cash wagers and casual social or leisure wagers made at typical OTBs were never absorbed by other options available. Some of the lost handle may be lost forever as some players have found other forms of gambling or entertainment, but there is still an opportunity to gain some cash and convenience wagers with easy access even if some will eventually migrate to an account wager platform. In the early 1990s, the statute was changed, allowing NYRA to open teletheaters with the approval of New York OTB and the City of New York. However, currently there does not appear to be an easy or streamlined path to capture the portions of the New York off-track wagering that was lost.
- While it is impossible to estimate how much of the New York City OTB handle had been recaptured by the industry, Spectrum did look at the shift in handle for NYRA on-track, phone and internet wagering from 2010 to 2015 with the assumption that most of the migration of handle would shift to NYRA. (Spectrum assumed most if not all of the handle would have shifted in five years and also with NYRA Bets going national in 2016, looking past that point would not be reasonable.)

Figure 219: Analysis of New York City OTB handle shift after the 2010 closing of New York City OTB

	NYC OTB	NYRA Total On-track, Internet, & Phone Wagering	Total U.S. Handle from Figure 206	New York OTBs Total Handle from Figure 207
2010	$647,004,074	$393,223,353	$12,848,159,969	
2011		$625,306,560	$12,058,714,638	$740,781,248
2012		$674,894,316	$12,394,192,007	$699,027,323
2013		$664,211,496	$12,481,039,996	$664,253,261
2014		$674,324,631	$12,049,004,583	$616,044,080
2015		$666,279,865	$12,187,300,328	$595,492,897
Pct. Chg. 2011-2018		6.55%	1.07%	-19.61%

Source: New York State Gaming Commission,Figure 206 and Figure 207 of this report.

- From 2010 to 2015, NYRA on-track, internet and phone wagers increased $273,056,513. If you assume all of that was a shift in handle from New York City OTB then 42.2 percent of the New York City OTB handle was recaptured.
- Another estimate could be made if you assume New York City OTB handle would have declined at the same rate (-19.6 percent) as the other New York OTBs from 2011 to 2015. In that case, New York City OTB handle would have declined to $520,108,104, meaning that 52.5 percent of the New York City OTB handle was recaptured.
- If, under a hypothetical case, New York City OTB handle continued to decline at the same rate as the other OTBs through 2018 (-31.56 percent), the New York City OTB handle would be $442,809,588. If you assume 42.4 percent had shifted, you still have a market of $255,929,711

in handle in the New York City market that one must assume a great portion of that has been lost to the industry.

- If only half of that loss, based on the above assumptions, could be captured by a well-run, modern OTB operation there is about $130 million in potential handle that could support the city, state, and horse industry. Spectrum believes this is a conservative estimate of the potential market.
- With the spring 2020 shutdown of many racetracks due to COVID-19, only a few racetracks nationally were operating and those racetracks that did race were spectator-less and offered only account wagering. The handle on those racetracks was large due to the lack of competition, and the amount bet with ADWs soared because it was the only method of wagering. It is difficult to know at this point how much of that shift in wagers will not return to off-track wagering or wagering at the racetrack. This surge in account wagering will further the shift in wagers to ADWs. Figure 220 below illustrates this shift to ADW due to the unique circumstances. As a rough estimate of the change, with OTB yearly handle of about $500 million, and using one-twelfth of that as a monthly estimate of OTB handle per month, perhaps as much as 50 percent of the expected OTB handle in April of 2020 may have shifted to ADW.

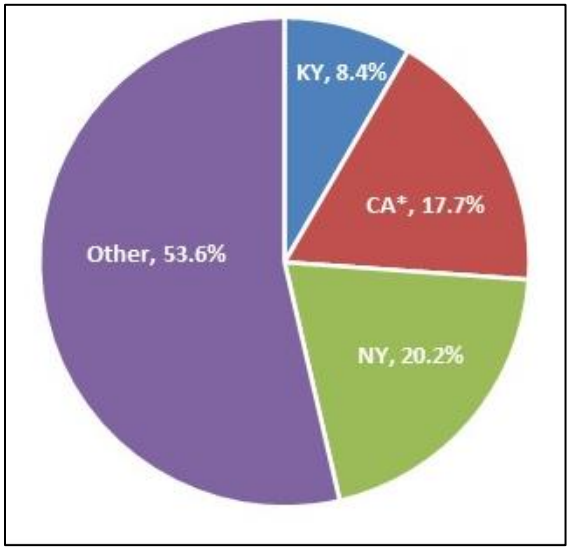
Figure 220: New York total out-of-state ADW handle from in-state residents

Month	2019	2020	Change
January	$23,048,251	$26,405,163	14.6%
February	$23,373,004	$27,400,927	17.2%
March*	$27,087,482	$34,855,827	28.7%
April*	$23,226,885	$46,005,398	98.1%

Source: New York State Gaming Commission Monthly ADW Market Origin Credit Reports ***Note:** 2020 results occurred during COVID-19 spectator-less racing in a portion of March and all of April.

- In the past decade, about 21 percent of U.S. pari-mutuel handle has been wagered annually on New York Thoroughbred and Standardbred races. This statistic is derived from data provided by The Jockey Club (2020), the New York State Gaming Commission (2019), and the United States Trotting Association (2020).
- Figure 221 illustrates this point. Wagers made on New York races exceeded the wagers made on races from any other state in 2018.

Figure 221: U.S. market share handle on all races, by state, 2018



Source: New York Gaming Commission, Jockey Club, USTA, California Horse Racing Board, Kentucky Horse Racing Commission.
*California reports handle for the racing year (12/20/2017-12/18/2018), not the calendar year. California handle does not include $39 million wagered through non-commingled pools.

- Surcharges on winning wagers put a facility at a competitive disadvantage. The surcharges were put in place 46 years ago, when the only place to make a pari-mutuel wager was at the track or at an OTB. The environment today is vastly different than it was 50 years ago when OTB was established in New York. Now with more convenient wagering available with the internet and ADW accounts, the OTB with brick-and-mortar establishments compete with ADWs that have greater profit margins. In fact, many ADWs offer rebates to good patrons. On the flip side, for less price-sensitive patrons, because the surcharge is applied only to winning wagers, some patrons may not be negatively influenced by a surcharge on winning. Allowing flexibility regarding the implementation of surcharges the OTB can manage their use to maximize the bottom line.
- Simulcast race restrictions on various entities put those wagering facilities at a competitive disadvantage. New York horse players who prefer to wager on both Thoroughbred and harness races cannot do so at the Thoroughbred tracks or with NYRA Bets, and thus the State and industry are losing potential tax and racing revenue. For example, NYRA and Finger Lakes are not able to simulcast out-of-state harness (or Quarter Horse) racing, while other competitors can (§1015); New York OTBs are not able to take nighttime Thoroughbred races unless they pay fees (maintenance of effort/hold harmless) based on handle results that are almost two decades old – a time when handle was substantially greater. Those types of restrictions are counter to maximizing handle. A solution to benefit all stakeholders (including the State), is to remove those restrictions and negotiate a fair distribution of all resulting incremental revenue.
- The tax structure of pari-mutuel wagering has been impacted by many changes to the market fundamentals that have occurred over time. Like most states, New York taxed horse racing's gross receipts (handle) – a model built around a live racing model dating back to the introduction of pari-mutuel wagering in 1940. The tax was placed on the in-state content providers and distributors (New York tracks and OTBs.) Simulcasting, laws and technology

changes shifted how and where wagers were placed, but the older tax models still rely heavily on the live racing and bricks-and-mortar racing for tax revenue.

- Both the import and export of simulcasting signals have grown while live on-track handle has declined. The export of races generates revenue from a small percentage of total handle (live racetrack receives a host fee or compensation), and only purses and tracks share in that compensation (§238(1)(b)(c)), leaving the State tax and breeders fund excluded from any distribution of those compensations. While the percentage of handle is low (host fees ranging from 3 percent to 6 percent for many guest sites), the total compensation is large for New York. An easy and equitable way to allocate revenue from this source – given the change in market fundamentals – is to distribute any compensation (host fees) proportionally the same as the average takeout from live race handle is distributed. (Harness racing §318 could likewise be amended.) Alternatively, New York could examine the approach of other states.
- Examples of two different approaches can be found in California and Maryland.
    - California assesses a license fee, and that money is then distributed according to statute. The California Business and Professional Code §19602260 and §19617.2261 provide details of that approach.
    - Maryland's approach is straightforward and leaves the distribution up to agreements between the licensee, horsemen and breeders, as detailed in the Maryland Business Code §11-804.1 (2018).262
- The law requiring market origin fees helped the New York OTBs. Still, while this was a positive for New York racing, it is worth re-examining the rate and distribution. California, Maryland, and other states, either by statute or contract, allocate a hub fee that the ADW may retain, while the balance of net revenue goes to the in-state racing industry. Maryland further monitors the average host fee that the ADWs pay, and if that fee exceeds a certain level, more revenue must revert to the in-state industry. This prevents the host fees from getting too high and impacting the net revenue balance that the state racing industry receives after the hub fee is subtracted for the ADW. We believe the market origin fee should be increased and part of the increase should offset some regulatory costs because the State must regulate the integrity of wagering as well as racing. (See **Appendix O** for suggested increases and reallocations.)
- Three of the five existing OTBs have support from VLTs, while two others (Capital and Catskill) do not have revenues from non-pari-mutuel gaming. Western operates VLTs from a racino operation and Suffolk and Nassau now receive revenues from VLTs because of bills passed.
- Numerous attempts over the years have failed to extend VLTs to the remaining two OTBs. There is also opposition to VLTs in those areas from various stakeholders including Saratoga

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[260] California Business and Professional Code §19602.
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=19602&lawCode=BPC

[261] California Business and Professional Code §19617.2.
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=19617.2&lawCode=BPC

[262] Maryland Business Regulation Code §11-804.1.
http://mgaleg.maryland.gov/mgawebsite/Laws/StatuteText?article=gbr&section=11-804.1&enactments=false

Casino/Hotel and Rivers Casino & Resort Schenectady. Similarly, Catskills' numerous attempts for VLTs faced opposition from various stakeholders, including MGM and Genting.

- Spectrum reviewed the following bills from 2009 to 2019 that attempted to extend VLTs to OTBs:
    - Authorizes off-track betting corporations to host video lottery terminals: 2009-10 S04588A (same as A08211-A), 2011-12 A9622 (same as S06792), 2011-12 S06792 (same as A09622), 2012-13 A05963, 2012-13 S04989A
    - Authorizes the division of the lottery to conduct a pilot program for video lottery wagering at certain regional off-track betting facilities: 2011-12 A9270, 2012-13 A01899
    - Relates to video lottery gaming; permits Ulster County to allow two existing destination resorts in such county to install video lottery terminals, subject to a local resolution: 2013-14 A10009A (same as S07753-A), 2015-16 A02196 (same as S04492), 2017-18 A01436
    - Relates to the Catskill regional off-track betting corporation including licensing, vendor fees, distribution of funds, collective bargaining, reporting and site approval: 2019-20 A05496, 2019-20 A05954
    - Authorizes Nassau and Suffolk regional off-track betting corporations to host video lottery terminals: 2012-13 A06562
- Capital OTB has made efforts to seek legislation at least since 2001 to operate VLTs, "According to the Albany Times-Union, Capital Off-Track Betting is seeking to retain the services of a new lobbyist to help make its case for anywhere from 500-1,000 VLTs at its teletheater in Albany, N.Y. if the Saratoga Equine Center in Saratoga Springs gets the machines."263
- Authorizing Nassau OTB to locate 1,000 VLTs at Resorts World New York City ("RWNYC") at Aqueduct Racetrack had a significant negative impact to the horse racing industry. The statutory "racing support payments" as outlined in the Tax Law §1612-f(1-5) of 7.5 percent of the total VLT revenue at RWNYC to purses and 1.5 percent to breeders has been effectively reduced to 5.5 percent to purses and 1.1 percent to breeders. (See **Appendix P**.) Similarly, the "capital expenditures" and the "general Thoroughbred race operations" funds have been effectively reduced. From 2017 to 2019, Nassau OTB revenue from RWNYC increased 39 percent. While some of those funds support Nassau County, a portion of the revenues going to Nassau OTB merely offset a deficit from Nassau OTB's pari-mutuel operations.
- The loss to purses and breeders' awards alone is more than $30 million (approximately $25.4 million to purses and $4.6 million to breeders) from 2016 through 2019.

[263] "OTB Operations in New York Seek Concessions on VLTs," *BloodHorse*, December 21, 2001. https://www.bloodhorse.com/horse-racing/articles/190223/otb-operations-in-new-york-seek-concessions-on-vlts

Figure 222: RWNYC VLT net revenue and NYRA purse and Thoroughbred breeders' distributions from VLT net revenue, 2013-2019

Year	Net Revenue	Purses	Breeders	Horsemen Total
2013	$785,128,863	$58,884,665	$11,776,933	$70,661,598
2014	$807,988,805	$60,599,160	$12,119,832	$72,718,992
2015	$831,222,582	$62,341,694	$12,468,339	$74,810,032
2016	$856,560,710	$62,678,200	$12,547,670	$75,225,869
2017	$968,029,929	$58,774,957	$11,861,355	$70,636,312
2018	$1,051,805,586	$60,209,259	$12,185,514	$72,394,773
2019	$1,111,615,731	$60,890,067	$12,350,945	$73,241,012

Source: New York State Gaming Commission

- Using the 2013-2015 compound annual growth rate ("CAGR") of 2.89 percent, we projected the following new revenue for RWNYC without the Nassau OTB and Jake's 58 in Figure 223.

Figure 223: Projected RWNYC net revenue without Nassau OTB and Jake's 58, and projected NYRA purse and Thoroughbred breeders' distributions from VLT net revenue, 2016-2019

Based on 2013-2015 CAGR				
Year	Net Revenue	Purses	Breeders	Horsemen Total
2016	$855,274,509	$64,145,588	$12,829,118	$76,974,706
2017	$880,022,393	$66,001,679	$13,200,336	$79,202,015
2018	$905,486,372	$67,911,478	$13,582,296	$81,493,773
2019	$931,687,167	$69,876,537	$13,975,307	$83,851,845

Source: Spectrum Gaming Group

- Based on the projected RWNYC VLT net revenue in Figure 223, Spectrum estimated the difference between the actual and the projected, as shown in Figure 224.

Figure 224: Estimated loss in revenues to NYRA purses and Thoroughbred breeders, 2016-2019

Year	Purses	Breeders	Horsemen Total
2016	$1,467,389	$281,448	$1,748,837
2017	$7,226,723	$1,338,981	$8,565,704
2018	$7,702,219	$1,396,781	$9,099,000
2019	$8,986,470	$1,624,362	$10,610,833

Source: Spectrum Gaming Group

- The loss to purses, breeders and other racing support payments are not only significant and compounding, but also those funds have lost the opportunity of future growth.
    - Using January 2020 monthly VLT reports, a fair way to estimate the NYRA purse losses would be to assess the total daily win per unit ("WPU") of both the Nassau machines and the remaining RWNYC machines. The daily WPU for Nassau machines is $754 (1,000 machines), and the remaining ones have a daily WPU of $304 (5,516 machines). Combining all machine revenue, the daily WPU is $373. If purses received the 7.5 percent of the $373 daily WPU for the 5,516 machines (still leaving 1,000 for Nassau) instead of the lower WPU used of $304, purses would have received $885,728 more in the month of January 2020 alone.

Figure 225 below shows a current purse distribution of $4.4 million. If no allocation to Nassau were required, the total would be $5.65 million.

Figure 225: Estimate of NYRA purse differential from VLT distribution, January 2020

	Nassau OTB	RWNYC	Total
GGR Nassau OTB + RWNYC	$23,385,058	$52,041,383	$75,426,441
Current Purse Splits	2.30%	7.50%	5.89%
Current Purse Distributions	$537,856	$3,903,104	$4,440,960
Purse Splits w/o Nassau OTB			7.50%
Purse Distributions w/o Nassau OTB		*Estimate:* $5,656,983	

Source: New York State Gaming Commission, Spectrum Gaming Group

- The negative impact has affected all components of the "racing support payments."
- While it is impossible "to prove a negative" of what could have resulted had Nassau built a VLT facility eight miles from Aqueduct it is apparent that both the existing Nassau VLT arrangement and had there been a facility eight miles away would have a negative impact on all components of the "racing support payments."

While the negative impact to the "racing support payments" has been significant Spectrum reviewed the potential for offsetting increases to those payments in Figure 226 and Figure 227. Figure 226 estimates the increased GGR when the 400-room hotel is completed. It assumes 100 percent occupancy, a spend visit of $150 normally for the occupant and a 100 percent increase in their spend when they stay at the hotel. In addition, it assumes 75 percent of the time there will be double occupancy and their guest will spend at a rate of 50 percent of the first guest. Figure 227 then calculates the increase to "racing support payments" given that increase in GGR. Under an optimistic 100 percent occupancy, the increase to those payments is only 3.6 percent. If 75 percent occupancy is assumed, that increase is only 2.7 percent. At 100 percent occupancy purses only gain $1.7 million and the breeders gain $335 thousand. Both of which is only a small portion of the losses calculated from the existing Nassau arrangement.

Figure 226: Estimating increased GGR when the RWNYC hotel is operational

Fiscal Year Ending March 2020 Net Win RWNYC					
Aqueduct	$625,897,092	(74.2% of net win)			
Nassau	$217,741,429	(25.8% of net win)			
Total	**$843,638,521**				
Potential Increase Floor Revenue upon Hotel Opening at RWNYC					
Current Revenue	$843,638,521		Rooms	400	
Spend per Visit	$150		Occupancy	100%	
Visits	5,624,257		Annual Rooms	146,000	
			Complimentary	100%	
			Increased overnight VLT Spend	$150	100%
			Primary Floor Revenue	$21,900,000	
			Double Occupancy	109,500	75%
			Second-Guest Spend	$75	50%
			Second-Guest Revenue	$8,212,500	
			Increased Floor Revenue	**$30,112,500**	

Source: New York State Gaming Commission, Spectrum Gaming Group

Figure 227: Estimating change in racing support payments when RWNYC hotel is operational

Current Racing Support Payments						
FY 2020				FY 2020		
Aqueduct	$625,897,092	**Rate**		Nassau GGR	$217,741,429	**Rate**
Purses	$46,942,282	7.5%		Purses	$5,008,053	2.3%
Breeders	$9,388,456	1.5%		Breeders	$1,088,707	0.5%
NYRA	$18,776,913	3.0%		NYRA	$1,959,673	0.9%
NYRA Capex	$25,035,884	4.0%		NYRA Capex	$2,830,639	1.3%
TOTAL	**$100,143,535**			**Total**	**$10,887,071**	
Increase to Racing Support Payments with Hotel						
Aqueduct Side				Nassau Side		
Added Hotel GGR	$30,112,500					
To RWNYC	74.2%			To Nassau VLTs	25.8%	
GGR to RWNYC	$22,340,523	**Rate**		GGR of OTB VLTs	$7,771,977	**Rate**
Purses	$1,675,539	7.5%		Purses	$178,755	2.3%
Breeders	$335,108	1.5%		Breeders	$38,860	0.5%
NYRA	$670,216	3.0%		NYRA	$69,948	0.9%
NYRA Capex	$893,621	4.0%		NYRA Capex	$101,036	1.3%
Total	**$3,574,484**			**Total**	**$388,599**	
Increase	3.6%			Increase	3.6%	

Source: Spectrum Gaming Group

- Revenue from all pari-mutuel wagering in the state should support live racing. There must be an industry incentive to grow wagering statewide, and a healthy live-racing product is integral to maximize the industry's economic impact to the state. Further to that point, Spectrum believes it is essential to maintain wagering and other revenue from live racing to support purses, breeders' awards and profits for all stakeholders or else there will be less (if any) incentive to produce an attractive product in the competitive gambling environment.
- The foal crop declines noted earlier in this report have a negative impact on the quality and quantity of the product (live races).
- Several states, including New York, have statutes requiring a large number of live race days. Given the dramatic changes outlined in this report and the declining supply of racehorses, those statutes are outdated and, in most cases, solutions have been put forth to reduce the number of live days to address a situation similar to that confronting New York. Some examples include:
    - "The West Virginia Racing Commission has drafted a resolution that requests state lawmakers reduce the minimum number of racing days at the state's four racetracks to 185, and to let the Racing Commission set the number of racing days, rather than the Legislature by statute. The minimum for the Thoroughbred horse track in Jefferson County is 220 and for the Thoroughbred horse track at Chester in the Northern Panhandle, Mountaineer Racetrack, is 210."[264] The West Virginia Racing Commission

[264] John McVey, "Conflict arises over W.Va. live racing requirements," *West Virginia Press*, September 22, 2014. https://wvpress.org/copydesk/insight/conflict-arises-w-va-live-racing-requirements/

"approved reducing live racing days at Charles Town in 2020 from the statutorily required 220 days to 173 days, two more than in 2019."[265]

- Ohio statute requires Scioto Downs to run 120 days, but horsemen and management have agreed to 90 days currently.[266]
- Arizona statute requires more than 150 days (an average of five days a week from October 1 through the first full week of May), unless agreed in writing with the horsemen, in order to be able to operate the OTBs in Arizona, which are essential to the profitability of the racetrack. The horsemen have agreed to 133 days.[267]
- New York is currently similar to Arizona and Ohio; while statutes exist requiring a minimum number of race days, if the horsemen, breeders and racing management agree to fewer days and provide justification, a number less than the statutory minimum may be approved by the commission. In New York there is no formalized process and little transparency year-to-year on what parameters are used to make those determinations.

- In many jurisdictions, the discussion of live race days is often driven more by supply than by demand, often because the suppliers (horsemen/breeders) enjoy a more active role in making the rules or writing the statutes than do the wagering patrons. Horsemen also have an economic interest in more races, and a race with less horses makes it easier to earn purse money. Moreover, the local (New York) horsemen and the tracks often have different economic interests due to the high costs of the live racing product.
- Increasing supply – such as attracting more horses to race and breed in New York – increases the economic impact of the industry on the state. But that contrasts with the economic impact on the local horsemen who would benefit from less competition.
- The economic impact of horse racing is important to the state, and therefore there is a critical number of live race days that drive the demand for supply (horses/breeding) and the demand for the product. Because of this, changes to live race days should be made incrementally, and measures should be in place to monitor the effect of those changes. This will benefit the industry in the long run because there is a balance between maintaining a sufficient number of days while at the same time not having so many that it places a strain on the supply, demand, product quality and the cost of producing the live product.
- Decisions cannot be based solely on economic considerations. More than ever, animal and participant safety and welfare – as well as wagering integrity – are critical components that should inform policy decisions.

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[265] Phil Kabler, "WV Racing Commission leader says agency on track to go broke," *Charleston Gazette-Mail*, December 10, 2019. https://www.wvgazettemail.com/news/politics/wv-racing-commission-leader-says-agency-on-track-to-go/article_fcdb013e-00f3-59ec-b52c-69dc88f513b7.html

[266] Stacy Cahill, General Manager of Racing Operations, Eldorado Scioto Downs, interviewed August 27, 2019.

[267] Dave Johnson, Vice President/Assistant General Manager, Turf Paradise, email of February 17, 2020.

- The harness horses have less economic impact per horse than Thoroughbreds[268], for reasons that include:
    - The demand for ownership of Standardbred horses and demand for the pari-mutuel wagering product is lower than for Thoroughbreds.
    - Harness operations, including stables, have fewer employees and less expenses.
    - Many such operations are smaller than Thoroughbred operations and are "family-type" operations that race locally, resulting in a smaller influx of Standardbred horses from other states.[269]
- Horses aged 2, 3, 4 and 5 comprised 89.4 percent of all the horses that ran at the NYRA tracks the past 10 years.[270] For example, the foal crops of 2014-2017 accounted for more than 90 percent of the supply of horses for NYRA in 2019. Figure 228 illustrates the critical relationship of supply to the number of races. Prior to allocating race days and the number of races, we know the total supply of the four foal crops that account for 90 percent of the supply utilized. We believe that while it may vary some, this is a reasonable estimate for most racetracks regarding the age of racehorses participating in races. Also of significance over those same 10 years is that 47.1 percent of all horses running at NYRA tracks were New York foals.[271] At Finger Lakes in 2018, 76 percent of the starts were made by New York foals.[272] We believe the number of New York foals running at the in-state harness racetracks is also a significant percentage of all horses at New York harness tracks but we did not have the detailed data to quantify this.

Figure 228: U.S. Thoroughbred four-year foal crop supply and total number of races, 2009 and 2019

Years	Four-Year Total Foals	Total Races One Year	Year
2004-07	139,113	49,368	2009
2014-17	84,828	36,207	2019
Pct. Chg.	-39.02%	-26.66%	

Source: Jockey Club Factbook 2020

- The declining utilization of Thoroughbred horses also affects the supply of horses for live races that is relevant to the number of race days. This is specific to the Thoroughbred racehorse supply and has not been observed to be a serious factor affecting the harness racehorse supply.
    - In 1975, Thoroughbred horses on average started 10.23 times. The number of starts a Thoroughbred horse makes on average per year has declined and had a negative impact on the supply of Thoroughbred horses to fill live races.

[268] Margaret Ray, Chair and Professor of Economics, University of Mary Washington, interviewed February 20, 2020.

[269] Ibid.

[270] NYRA racing stats from 2010-2019, provided by NYRA, emailed January 22, 2020.

[271] Ibid.

[272] New York Thoroughbred Breeders Association data provided to Spectrum, January 2020.

- As seen in Figure 229, if Thoroughbred horses started as often in 2019 as they did in 1980 the average field size would be over 11 horses per race. Using more recent data, if the Thoroughbred horses started as often as they did in 1999, average field size would be a respectable 8.7 per race. This decline in average field size is having a severe impact on live races and handle.

Figure 229: Actual versus theoretical field size based on average starts per horse

Year	Starters	Races	Total Starts	Average Field Size	Average Starts per Horse
Actual					
1980	64,506	68,243	593,849	8.7	9.21
1999	68,678	60,182	493,926	8.21	7.19
2019	49,542	40,798	305,954	7.5	6.18
Theoretical Results Using 1980 and 1999 Average Starts per Horse					
2019 Assuming 9.21 starts per horse	49,542	40,798	456,282	11.2	9.21
2019 Assuming 7.19 starts per horse	49,542	40,798	356,207	8.7	7.19

Source: 2020 Jockey Club Fact Book, Spectrum Gaming Group

- For the years 2009-2019, 86.5 percent of the horses racing at NYRA tracks made six or fewer starts at NYRA tracks during the entire year. It is close to 88 percent in the last five years.
- Spectrum examined several studies and industry reports to illustrate how important the above issues are to the wagering handle on Thoroughbred races.
  - Jennifer Owen, Research Consultant, Aspire Wealth Management Pty Ltd., presenting December 9, 2014, at the Global Symposium on Racing & Gaming as part of the panel entitled "Declining Field Size: A Global Issue," stated the results of her regression model examining the U.S. pari-mutuel market: "The 2013 base case is a field size of 7.86, some 43,000 races run and an industry handle of 11 billion (dollars). Consolidation of starters into fewer races with the upper band of 10 horses per field indicates an uplift of handle could be possible of the magnitude of 43 percent. Should field sizes contract further to say, six per race, the regression indicates potential downside of 58 percent to industry handle."[273]
  - During the same panel, Steve Koch, who was then the Vice President of Racing for Woodbine Entertainment Group, analyzed over 1,500 races at Woodbine, using a multivariate regression model, and found an increase from 7 to 8 starters would increase handle more than 10 percent.[274]
  - Ian Tapp, Managing Editor of *The Blood-Horse MarketWatch*, also presented at the 2014 Symposium panel. His data illustrated the effect horse starts per year seemed to have on field size over time. Tapp said "if horses take more time between starts, they require more training. … Now with more training days, I think there's a shift of the revenue source where now day rate occupies a larger portion of a trainer's revenue

[273] Transcripts from "2014 Global Symposium on Racing & Gaming," University of Arizona. https://ua-rtip.org/symposium/transcripts-and-powerpoint-presentations

[274] Ibid.

than it did previously."[275] Tapp went on to explain how the win percentage increases for horses starting 35 to 40 days apart. "Their win percentage had gone up. The number of training days and the day rate is increasing. There was really not much of an incentive for them to go back to the old-school ways."[276]

- A University of Arizona Race Track Industry Program study in 2006 analyzed more than 400,000 races offering trifecta wagering at 12 tracks in the United States (including Belmont Park) from 1992 through 2005. The average trifecta wagering pool for eight-horse fields was 27.7 percent higher than for seven-horse fields.
- Spectrum examined a few other studies and, in each case, field size was a critical determinant of handle and had a positive correlation with an increase in field size.

- The recent changes in the number of races and racetracks running shows the importance of field size, number of races run and the handle for races. Figure 230 illustrates the increase in wagering per race due to two factors. Field size increased and the number of races reduced the competition for handle. Average handle per race was very strong given those factors. Average purses did not increase because many racinos' casino style games were closed due to COVID-19 and those purse contributions were reduced during the shutdown.

[275] Ibid.

[276] Ibid.

Figure 230: Thoroughbred economic indicators, year-over-year comparisons

June 2020 vs. June 2019

Indicator	June 2020	June 2019	% Change
Wagering on U.S. Races*	$998,448,300	$990,923,384	+0.76%
U.S. Races	2,485	3,905	-36.36%
Average Field Size	8.11	7.10	+14.18%
Average Wagering Per Race Day	$3,328,161	$1,985,818	+67.60%
Average Purses Per Race Day	$231,545	$230,851	+0.30%

Second quarter 2020 vs. second quarter 2019

Indicator	2nd Quarter 2020	2nd Quarter 2019	% Change
Wagering on U.S. Races*	$2,546,352,350	$3,137,805,499	-18.85%
U.S. Races	4,290	10,167	-57.80%
Average Field Size	8.42	7.22	+16.55%
Average Wagering Per Race Day	$5,012,505	$2,490,322	+101.28%
Average Purses Per Race Day	$234,112	$251,494	-6.91%

First half 2020 vs. first half 2019

Indicator	First Half 2020	First Half 2019	% Change
Wagering on U.S. Races*	$5,055,522,519	$5,672,774,271	-10.88%
U.S. Races	10,906	17,457	-37.53%
Average Field Size	8.08	7.46	+8.25%
Average Wagering Per Race Day	$3,885,874	$2,696,185	+44.12%
Average Purses Per Race Day	$249,160	$258,556	-3.63%

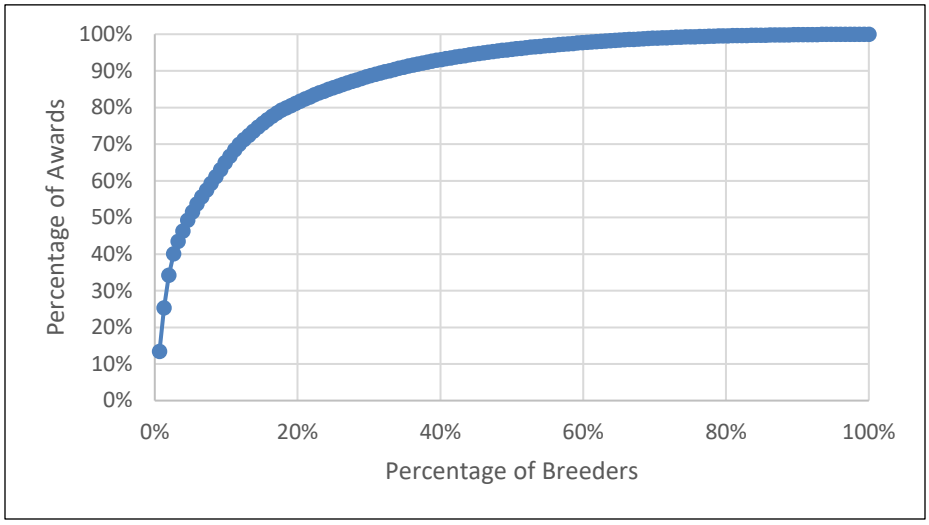
Source: Equibase Company LLC. *Includes worldwide commingled wagering on U.S. races.

- Looking at Figure 214 and Figure 215, when comparing Thoroughbred handle and race trends on a national level we observe that from 2009 to 2019 handle was down 10.4 percent but the number of races declined 26.7 percent over that period. However, New York City OTB had a significant negative impact on national handle when it closed in December 2010. When we examine the trend from 2011 to 2019, handle increased 2.5 percent while the number of races declined by 20.3 percent. Considering handle declined in 2019 due to the trouble at Santa Anita and the resulting media attention, we see that for 2011 to 2018 the handle increase is even larger.
- Aqueduct, Belmont, and Saratoga are different than the other New York tracks because they are New York State assets and NYRA is the current lessee of those State assets and the Franchise Oversight Board is the trustee.
- While it is not a part of the statutory distribution of revenue, we also examined the distribution of revenues to horse owners, trainers, jockeys, and breeders which result from the distribution of the purse and breeder funds created by statute. The way those funds are distributed also have an impact on the State's economic benefits. Attracting more industry participants to New York helps grow the economic impact.
    - We hypothesized the Pareto Principle (also known as the 80/20 rule) would be observed when examining the distributions. The Pareto Principle is based on the principle that

about 80 percent of results are generated by 20 percent of participants or effort. See **Appendix Q** for the full analysis of the data we had available. Not all the New York data was available, but we suspect there would be similar results for most racetracks.

- Some of the distribution models are likely not the most effective if the goal is to grow the industry. The distribution of those revenues come not only from pari-mutuel sources but also VLT revenue. The result, which is an outcome of state policy, effects the racing industry and even the product for the horseplayers. This is further discussed in the Appendix.
- Figure 231 is just one example. Over half of the 2019 Standardbred Breeders Awards were won by eight breeders (5.3 percent of New York Standardbred breeders).

Figure 231: New York Standardbred Breeders' Awards Pareto analysis, 2019



Source: Agriculture and New York State Horse Breeding Development Fund 2019 Report

M. New York OTB Structure and Trends

The consensus is that New York's off-track betting corporations are failing, or that the structure is broken. Indeed, the decline in wagering and revenues has been well documented in past studies, and the negative trend has continued. While the problem is readily apparent, no consensus exists as to how to fix the struggling entities or whether to save them.

As noted in previous New York pari-mutuel and OTB studies, the increase in competition from gaming facilities, sports wagering, and other forms of entertainment for a typical New Yorker's disposable income is still a cause for the decline in pari-mutuel horse racing. For example, statewide video gaming machine credits played increased from $12.3 in 2009 to $39.9 billion in 2018, with net win more than doubling from just over $1 billion to more than $2 billion.[277]

Figure 232: New York OTB handle, 2013 vs. 2018

	2013			2018		
Source	Handle	Pct. of NY OTBs	Pct. of NY Statewide	Handle	Pct. of NY OTBs	Pct. of NY Statewide
Intrastate Thoroughbred	$219,725,719	33.1%	13.5%	$146,760,615	28.9%	8.8%
Intrastate Standardbred	$48,767,646	7.3%	3.0%	$25,730,858	5.1%	1.6%
Intrastate Total	$268,493,365	40.4%	16.5%	$172,491,473	34.0%	10.4%
Interstate Thoroughbred	$320,826,798	48.3%	19.7%	$282,699,555	55.8%	17.0%
Interstate Standardbred	$74,933,098	11.3%	4.6%	$51,795,532	10.2%	3.1%
Interstate Total	$395,759,896	59.6%	24.3%	$334,495,087	66.0%	20.2%
Total Thoroughbred	$540,552,517	81.4%	33.2%	$429,460,170	84.7%	25.9%
Total Standardbred	$123,700,744	18.6%	7.6%	$77,526,390	15.3%	4.7%
Total OTB Handle	$664,253,261	100.0%	40.9%	$506,986,560	100.0%	30.5%

Source: New York State Gaming Commission. **Note:** Interstate Thoroughbred handle includes "special events" comprising of the Breeders' Cup, Kentucky Derby and Preakness.

OTB handle is continuing to decline and has continued to be less, percentage wise, of the total statewide New York handle. As a percentage of the OTBs' total handle, the interstate handle is growing compared to intrastate. Figure 233 illustrates the continued shift of handle away from New York tracks as the interstate handle has not declined as rapidly.

[277] New York State Gaming Commission video gaming reports, 2009-2018. https://www.gaming.ny.gov/gaming/index.php?ID=2

Figure 233: New York OTB intrastate and interstate handle, 2013 vs. 2018

	Capital NY Tracks	Capital Interstate	Capital Total
2013	$66,262,171	$87,394,719	$153,656,890
2018	$54,059,442	$90,058,554	$144,117,996
Pct. Chg.	-18.4%	3.0%	-6.2%
	Catskill NY Tracks	**Catskill Interstate**	**Catskill Total**
2013	$33,516,218	$54,138,321	$87,654,539
2018	$17,748,375	$41,540,111	$59,288,486
Pct. Chg.	-47.0%	-23.3%	-32.4%
	Nassau NY Tracks	**Nassau Interstate**	**Nassau Total**
2013	$82,860,582	$136,634,729	$219,495,311
2018	$48,327,321	$102,114,682	$150,442,003
Pct. Chg.	-41.7%	-25.3%	-31.5%
	Suffolk NY Tracks	**Suffolk Interstate**	**Suffolk Total**
2013	$48,050,999	$61,149,646	$109,200,645
2018	$31,830,507	$52,452,139	$84,282,646
Pct. Chg.	-33.8%	-14.2%	-22.8%
	Western NY Tracks	**Western Interstate**	**Western Total**
2013	$37,803,395	$56,442,481	$94,245,876
2018	$20,525,828	$48,329,601	$68,855,429
Pct. Chg.	-45.7%	-14.4%	-26.9%
	All OTBs NY Tracks	**All OTBs Interstate**	**All OTBs Total**
2013	$268,493,365	$395,759,896	$664,253,261
2018	$172,491,473	$334,495,087	$506,986,560
Pct. Chg.	-35.8%	-15.5%	-23.7%

Source: New York Gaming Commission

The evolution and rapid growth of ADWs and wagering using internet and mobile technologies has had a fundamental market impact on OTBs. The economic models of out-of-state competitors gave those new entrants to the market a competitive advantage. This is evident as the Oregon ADW hub already processes 35 percent of all wagers nationally. A total estimate of all ADW handle as a percentage of total handle could easily exceed 50 percent today. ADW handle will continue to grow and with the recent spectator-less racing (due to COVID-19), account wagering has grown dramatically, and many horseplayers shifted to account wagering as their only option under those circumstances and most likely will continue to use those accounts.

Many of the competitive market changes discussed throughout this report and issues cited in past reports about the OTBs were factors leading to the closure of New York City OTB. The loss of that New York City OTB market has been a loss to the state and the horse racing industry in New York as previously documented.

Spectrum examined other East Coast racing jurisdictions with OTBs to compare trends in other markets.

Figure 234: Pennsylvania OTB handle data, 2010 vs. 2016

Track Affiliation	OTB	Handle 2010	Handle 2016	Note
Parx	Center City	$14,305,857	$2,055,246	Closed in 2016
	South Philadelphia	$51,298,750	$30,209,825	
	Valley Forge	$22,622,465	$14,091,588	
	Brandywine	$12,863,535	$6,672,849	Closed in 2016
	Northeast	$31,758,873	$20,437,356	Closed in 2018
	Upper Darby	$5,237,598	n/a	Closed in 2010
Penn National	Reading	$15,503,264	$6,164,818	
	Chambersburg	$11,681,783	n/a	Closed in 2013
	York	$22,878,867	$13,707,645	
	Lancaster	$15,991,595	$9,894,293	
Pocono Downs	Lehigh Valley OTW	$28,376,965	$17,203,514	
	Hazleton OTW	$7,842,492	n/a	
	Carbondale OTW	$8,497,712	$5,890,199	Closed in 2018
	East Stroudsburg	$10,809,105	$6,186,800	
Meadows	New Castle OTW	$19,300,749	n/a	Closed in 2014
	Harmar OTW	$17,229,033	$15,376,964	
	Moon OTW	$14,711,167	n/a	Closed in 2013
	West Mifflin OTW	$17,078,753	n/a	Closed in 2012
Totals		**$327,988,563**	**$147,891,097**	**(Decline of 55%)**

Source: Pennsylvania State Horse Racing Commission

The off-track wagering in Pennsylvania has suffered like many OTBs due to the changing trends in wagering and the shift to ADWs. According to a Parx Casino and Racing official, in 2019 sports wagering was added to the South Philadelphia and Valley Forge OTB locations as well as to Parx.[278]

Figure 235: New Jersey OTB handle, 2014-2018

Track Affiliation	OTB	2014	2015	2016	2017	2018
Atlantic City	Vineland	$10,112,460	$11,309,590	$9,648,132	$8,590,808	$1,057,946
Monmouth	Woodbridge	$70,579,822	$67,416,281	$60,839,594	$55,973,667	$51,336,039
Freehold	Toms River	$28,988,394	$29,731,319	$30,368,605	$29,561,201	$26,628,984
Meadowlands	Bayonne	$45,622,095	$39,359,972	$36,254,861	$39,301,024	$39,908,517
Freehold	Gloucester	$8,049,212	$16,654,798	$17,603,353	$17,758,512	$17,184,534
Monmouth	Hillsborough	n/a	$1,795,155	$11,916,068	$11,514,418	$10,868,590
Atlantic City	Egg Harbor Twp.					$5,939,525

Source: New Jersey Racing Commission 2018 Annual Report. **Note:** In 2018, the Vineland OTB closed and a smaller facility was opened in nearby Egg Harbor Township.

[278] Joseph Wilson, Chief Operation Officer, Parx Casino and Racing, interviewed February 14, 2020.

OTBs in New Jersey cannot offer sports wagering, but the racetracks may offer sports wagering.[279] According to a Monmouth Park executive, its Woodbridge OTB is profitable, but the profit margin is small. Its Hillsborough OTB is close to break-even but earns purse money.[280] Because the track is owned by horsemen, if the OTB is close to break-even it may make sense to leave it open because of the purse money generated. Two of the key components impacting the feasibility of an OTB are the local population and finding a location with reasonable rent. Other factors have been examined in the past studies as well.

1. Review of Historical New York OTB Reports

Spectrum examined several past reports regarding the New York OTB structure, performance, and future. The reports reviewed included Task Force on the Future of Off-Track Betting in New York State 2010, Research Brief of the Office of the New York State Comptroller September 2015, the five OTBs' 2015 September audits/fiscal oversight reports of the Office of the State Comptroller, Financial Condition of New York State Regional Off-Track Betting Corporations 2014, and "New York OTB's and Their Payments to Racetracks," from Albany Law School's Racing and Gaming Law, August 2006.

A few recommendations made in those reports are still relevant and useful, and we address those in the recommendations section of this report.

The 2010 Task Force Report reported on the declining revenues and increasing costs of operations of the OTBs. Spectrum found that some of the issues that existed in 2010 are still applicable today:

> By law, the OTBs in New York are required to raise a reasonable amount of revenue for the support of government *and* ensure that off-track betting is conducted in a manner compatible with the well-being of the State's horse racing and breeding industry. These two statutory requirements create conflict as the OTBs struggle to maintain benefits paid to municipalities. The decisions the OTBs make are not always to the benefit of the New York tracks. The clearest example of this is the amount of out [of] state racing the OTBs now accept bets on; versus bets accepted on the New York tracks. As a result, adversarial situations between the tracks and the OTBs are sometimes created while they each struggle to compete against each other.
>
> Clearly the New York OTB structure is not the optimal situation. If off-track betting was being created now, the present structure of six regional corporations, independently operated tracks, with racing regulated by one state agency and VLT's by another, would not be the ideal plan. However, the political reality is that this will likely not change. Several commissions and task forces have recommended structural changes to the system without ever being acted on. Regional off-track betting is here to stay, so the question becomes how to optimize its operations.[281]

Spectrum agrees with the Task Force finding that the New York OTB structure is not optimal. In the decades since the Task Force report, despite numerous recommendations for structural change, the OTB structure remains as it was. (It should be noted from the above excerpt of the 2010 Task Force Report

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[279] "Sports betting in New Jersey: Everything you need to know," Eyewitness News, July 31, 2018. https://abc7ny.com/3593573/

[280] William Knauf, Vice President of Business Operations, Monmouth Park Racetrack and Sportsbook, interviewed January 24, 2020.

[281] New York State, "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010, p 23. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

that one significant change has occurred: the creation of one state agency regulating both the pari-mutuel wagering and VLTs.) Spectrum reiterates the need for structural change but also will make other recommendations for OTBs that benefit the State. If consolidation or structural change would occur, there would be some reduction in jobs, while some decline in the overall industry's economic impact and the issue of health benefits and the pension liabilities would need to be resolved.

One outcome from the Task Force that Spectrum believes was beneficial to the State, the NYSGC and other New York racing stakeholders was the regulation of out-of-state ADWs. The market-origin fee provided additional pari-mutuel tax revenue, revenue for the NYSGC to offset some of the costs of regulation and added revenue for the New York OTBs and other racing stakeholders. Subsequent to the Task Force report was the closing of New York City OTB, which had a significant negative impact (handling approximately half of the state's OTB total pari-mutuel wagering activity, as shown in Figure 207) for the State and New York City and on total New York pari-mutuel handle.

The 2015 Research Report and audit reports of the New York State Comptroller found deteriorating financial conditions of the OTBs' pari-mutuel wagering operation. The report correctly noted the decline in OTB handle and the decline in nationwide handle during the 2009-2013 study period. Other factors causing the decline in OTB handle cited in that report include the increase in competition, host fees for content increasing, and the shift in handle to ADWs. Except for the handle decline nationwide, all those factors today continue to negatively impact the pari-mutuel handle wagered at OTBs and racetracks. The nationwide handle has leveled off and increased slightly since that report, but the increased competition, rising host fees, and shifting of handle to ADWs has continued and had a greater impact on the OTBs.

Figure 236: OTBs' pari-mutuel expense distributions as a percentage of total OTB handle, 2008 vs. 2018

	2008	2018
Distributions - Total	10.41%	11.48%
1. State tax, breakage & reg fee	1.27%	1.35%
1a. Tax & Breakage	0.77%	0.75%
1b. Regulatory Fee	0.50%	0.60%
2. NY racing industry	7.62%	6.93%
2a. Thoroughbred	5.82%	5.11%
i. Tracks & Purses	5.35%	4.66%
ii. Breeders	0.48%	0.45%
2b. Harness	1.79%	1.82%
i. Tracks & Purses	1.55%	1.59%
ii. Breeders	0.24%	0.24%
3. Non-NY racing industry	1.52%	3.20%

Source: New York State Gaming Commission

As noted in the Comptroller's report, the host fees paid by OTBs for out-of-state racing content has more than doubled since 2008 as a percentage of handle. The percentage of handle paid to New York racing industry has declined some since 2008.

The 2015 reports reviewed the improved conditions due to increased wagering on VLTs for the OTBs benefiting from those revenues.

Figure 237: OTB Enterprise Fund and other income revenues/loss, 2016-2018

		Capital	Catskill	Nassau	Suffolk	Western
2016	Enterprise Fund [Net Revenue /(Loss)]	$(1,576,945)			$(619,011)	$6,094,704
	Other Income	$1,689,712	$831,492	$13,176,526	$262,241	$1,769,890
2017	Enterprise Fund [Net Revenue /(Loss)]	$(1,435,518)			$16,359,680	$5,885,840
	Other Income	$2,017,076	$785,266	$8,327,684	$2,625,978	$2,531,030
2018	Enterprise Fund [Net Revenue /(Loss)]	$(1,163,997)			$34,815,894	$6,964,158
	Other Income	$2,077,504	$857,750	$12,573,680	$1,439,618	$1,496,429

Source: New York State Gaming Commission. **Note:** Enterprise Fund - Net revenue or loss from the corporation's business enterprise. For Capital OTB, the amount relates to the operation of a simulcast television channel. For Western OTB, the amount relates to the operation of Batavia Downs Racetrack and Video Gaming Facility. For Suffolk OTB, the amount relates to the operation of a Video Gaming Facility.

Three of the OTBs – Nassau, Suffolk and Western – have a more diversified business and are different than Capital and Catskill OTBs, as they have revenue from VLTs that has changed their business models. The September 2015 Research Brief summarizing the New York Comptroller's findings suggested that "additional consideration by policy makers allowing OTBs to operate other gaming activities may be warranted." The report noted:

> Changing times for the horse racing industry and an increase in overall gaming operations in New York have taken their toll. Now, with the advent of commercial casinos in the State, it would seem to be the right time to re-examine how OTBs fit into State-authorized gambling, as well as consider a comprehensive reassessment of OTBs' gambling-related revenue streams and distribution to the State, local governments and other participating entities.[282]

The Comptroller's reports also cited the negative impact on the OTBs caused by the 2003 statutory "maintenance of effort" or "hold-harmless" provision requiring OTBs to provide in-state harness racing tracks with a minimum payment to offset the potential adverse impact on the harness tracks' "evening races." That report correctly predicted where handle would be in 2018. The report also documented examples of OTB struggles in other states (Kentucky, New Jersey, and Pennsylvania), and Spectrum has updated those struggles in this report.

[282] Office of the New York State Comptroller, "Research Brief – Are Off-Track Betting Corporations Nearing the Finish Line," September 2015. https://www.osc.state.ny.us/localgov/pubs/research/otb0915.pdf

Figure 238: New York OTB summary of operations, 2008 vs. 2019

(Handle in 000)	Capital		Catskill		Nassau		Suffolk*		Western*	
	2008	2019	2008	2019	2008	2019	2008	2019	2008	2019
Full-time employees	159	83	48	40	142	69	124	251	232	115
Part-time employees	154	23	193	59	158	97	217	116	351	183
Total Employees	313	106	241	99	300	166	341	367	583	298
Avg. Handle per Employee	$608.8	$1,310.1	$505.7	$531.2	$939.9	$851.2	$523.7	$215.1	$229.8	$233.2
Number President/VPs	5	3	1	1	3	1	2	2	2	4
Telephone Wagering	1	1	1	1	1	1	1	1	1	1
Internet Wagering	1	1		1	1	1		1		1
Teletheaters	2	2	1	1	1	1	1	1	1	
Branches	41	27	20	12	11	5	13	3	37	17
EZBets/Remote sites	37	31	4	8	9	15	11	44	7	26
Total Locations	82	62	26	23	23	23	26	50	46	45
Avg. Handle per Location	$2,323.7	$2,239.9	$4,687.3	$2,286.6	$12,259.0	$6,143.6	$6,868.9	$1,578.9	$2,912.7	$1,544.2

Source: 2009 & 2020 Simulcast Applications and 2019 End of Meet Report submitted by each OTB to the New York State Gaming Commission. ***Note:** 2019 Suffolk and 2008 & 2019 Western employment figures may include employees working at the VLT facilities. For 2019, Suffolk provided Spectrum with employee numbers of 118 OTB-only employees and an additional 32 employees shared by both facilities. For 2019 Western OTB said it had 105 for OTB-only employees.

Most of the OTBs have made efforts to reduce costs and become more efficient since those reports. They have reduced staff, utilized EZBets and made other cost-saving steps. The employee levels of Suffolk OTB and Western OTB are not comparable because they may include employees for VLT operations. Suffolk OTB did provide Spectrum employee numbers separated out for just OTB operations, and like some other OTB operators they have reduced the workforce for OTB operations.

Figure 239: New York OTB expenses and pari-mutuel revenues, 2008, 2013, 2017, 2018

Year	Operating Expenses	Total Pari-Mutuel Revenue	Operating Expense % to Revenue
Capital			
2008	$21,673,649	$45,680,664	47.4%
2013	$15,941,188	$32,871,383	48.5%
2017	$15,467,323	$30,796,971	50.2%
2018	$13,863,414	$30,368,262	45.7%
Catskill			
2008	$12,347,972	$30,404,362	40.6%
2013	$11,044,861	$19,623,133	56.3%
2017	$9,334,773	$14,802,170	63.1%
2018	$8,420,873	$13,119,644	64.2%
Nassau			
2008	$31,531,673	$65,762,834	47.9%
2013	$28,439,858	$47,614,790	59.7%
2017[1]	$31,287,377	$33,978,642	92.1%
2018	$23,239,909	$32,245,772	72.1%
Suffolk			
2008	$23,742,366	$42,250,011	56.2%
2013	$16,971,803	$23,512,054	72.2%
2017	$13,333,780	$18,675,001	71.4%
2018[2]	$15,404,798	$17,960,422	85.8%
Western			
2008	$19,484,733	$34,427,523	56.6%
2013	$19,798,249	$21,461,040	92.3%
2017	$17,811,323	$16,330,458	109.1%
2018[3]	$32,408,708	$15,629,437	207.4%

Source: New York State Gaming Commission. **Note**: [1] Nassau OTB 2017 expense included about $1.5 million OPEB (Other Post-Employment Benefits). [2] Suffolk OTB 2018 had approximately $2 million in one-time expenses including: settlement of debt with Yonkers, retroactive increases for non-union employees, lobbying, human resource and legal services and loss of rental income. [3] Western OTB 2018 expense includes the non-cash book entry posting at December Year End for the migration adherence to GASB 75 (Government Accounting Standards Board Statement 74) Post-Employment Benefits.

Figure 239 compares the OTBs' operating expenses (consisting of both branch expenses and general and administrative expenses) and the total pari-mutuel wagering revenue (consisting of takeout, breakage and surcharges.) Absent 2018 for Western OTB due to the non-cash book entry, it still appears some OTBs are doing a better job than others at cutting expenses as recommended in prior OTB studies. However, using 2017 compared to 2008 for Western and 2018 compared to 2008 for the other OTBs, Western OTB has not cut expenses to the same degree as the other four OTBs. The two more efficient OTBs, based on expenses as a percentage of revenue, are the two OTBs without VLTs to augment their pari-mutuel revenues. Capital OTB pari-mutuel revenue decline from 2008 to 2018 was only 33.5 percent compared to the other four OTBs' decline in handle from 51 percent to 56.8 percent.

2. Survival of Existing OTBs

While OTBs provide State tax revenues, provide revenue to municipalities, add to the economic impact of the horse industry, and increase the exposure and distribution of the horse racing product, their solvency is tied to either increasing horse race wagering, decreasing expenses, or identifying and capturing other revenue sources. As cited in the audit reports, revenue from VLTs has considerably helped some of the OTBs.

The State tax and municipality revenue could continue without an intermediary (OTB) adding layers of duplicated efforts and expenses. In most states, the OTBs are track-run or managed or run by the industry (see **Appendix N**). In a number of those states, not only does the State benefit from a pari-mutuel tax but in California, Connecticut, Illinois, and Virginia the municipalities also share in revenue.[283] Ideally, a complete restructure of the New York OTBs similar to what is found outside of New York might make sense, but past studies have indicated this would be an unlikely outcome.

The OTBs have cut expenses over time as recommended in past OTB reports (as noted above, some better than others). Room for improvement can still be found in areas suggested by past reports, but the OTBs cannot "cut their way to profitability" while solely offering one product line: pari-mutuel. With that in mind, Spectrum examined alternative solutions to be considered.

3. Finding Solutions

As noted earlier, the racing sector has a $3.08 billion economic impact on New York State, and 87 percent of that impact has been attributed to the suppliers and producers (horse racing/breeding and racetracks). Without healthy live racing, the benefit to the State is greatly reduced. Examining the percentage that OTBs pay to the racing industry, specifically to the New York racing industry, reducing those contributions to make OTBs more viable would not be a practical or realistic solution. Supporting municipalities and racing were two of the three primary intentions of the law creating the OTBs. There are other aspects of the OTBs that can be examined, however.

a. Structure Changes

Perhaps the first question to ask is what if OTBs were closed? It is difficult to answer that question in isolation; not only are there political issues given the long history of OTBs and the municipalities/counties that benefit from the OTB revenue but also knowing what changes would be permitted in lieu of the existing structure would be critical to estimate the impacts.

What value is given to existing gaming operators versus new gaming that is legalized? The impact of new gaming options and outside market fundamentals changing have put OTBs at a competitive disadvantage.

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[283] "Task Force on the Future of Off-Track Betting in New York State," January 13, 2010, p. 39. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

The following is a list of considerations that would impact any recommended changes for either closing or consolidating OTB operations.

- Economic effects
  - Loss of jobs
  - Revenue loss to counties
  - State pari-mutuel tax decline
- Racing industry
  - Handle decline and smaller pari-mutuel pools for an industry already facing challenges. Handle trends have been declining for a number of the racetracks in New York as well.
  - There would be significant handle shifting to ADW, which would result in revenue shifts, with significant portions migrating to out-of-state ADWs
  - Some handle will shift to the New York horse industry
- Alternatives permitted are critical to any analysis

While structure change was not part of the scope of work, it is directly related to the distribution schedules. Spectrum considered three possible structure changes the most reasonable based on the analysis and past studies. One would be consolidation under one management. The second is re-structure like other states with OTBs, managed by racetracks. The third would be closure.

A compelling idea was proposed by Governor Andrew M. Cuomo in 2019 that suggested potential consolidation of OTBs. "OTBs would have greater flexibility to operate under Cuomo's proposed 2019-2020 budget, as they contend with declining revenues. The budget proposal would allow OTBs to get out of horse betting entirely or merge with other OTBs, officials said."[284]

Given the potential decline in handle, job loss and taxes, Spectrum Gaming believes the best alternatives for the state, counties and racing industry would be either re-structuring to permit race tracks to manage OTBs or to consolidate operations under one OTB with the best performance and the ability to focus on pari-mutuel operations statewide. Both alternatives keep as much handle in the state as possible while making more efficient operations and minimizing any handle, tax, and municipality revenue loss.

b. Consideration of Sports Wagering

Racetracks have been taking bets on the "sport of kings" for 80 years, and OTBs have taken bets on the sport for almost 50 years. That raises questions as to whether entities taking wagers on the sport of horse racing should be restricted to only one sport to wager on at their facilities while newer entrants to the market are able to take bets on an almost unlimited number of sports.

[284] Rachelle Blidner, "Andrew Cuomo budget: OTBs could shed horse racing operations," *Newsday*, January 27, 2019, https://www.newsday.com/long-island/politics/off-track-betting-nassau-suffolk-1.26434306

Many OTBs and track outlets cannot offer a sufficient diversity of wagering options, putting them at a competitive disadvantage to commercial casinos. By permitting sports wagering (either directly or through an affiliate model) to the tracks and OTBs, such facilities could benefit from cross-marketing to new patrons and could increase exposure of the pari-mutuel product to new patrons. As in other states, horse racing would provide "filler content" between other sport events for patrons.

The authorization of sports wagering in New Jersey, for example, allowed the state's tracks to accept retail sports bets. Freehold Raceway, which recently received approval from its local government, is expected to soon become the third track in the state to accept such wagers. Meadowlands and Monmouth Park already offer sports wagering. Similar rules have been put in place in Illinois.[285]

The addition of sports wagering for OTBs in New York could address the stated purposes of the OTB laws. Such authorization would:

- Provide more outlets for legal wagers. The original purpose was to curb illegal bookmaking on races286 (sports wagering is now legal but was part of bookmaking operations at the time)
- Assist municipalities by making the OTBs more solvent
- Provide further assistance to the state's horse racing and breeding industries (although the profit margins are small).

Further to this point, the sports wagering entities could also add horse racing to their sport options. The State, OTBs, the racetracks and the existing sports wagering providers all would benefit.

As noted throughout this report, however, any further expansion of gaming – including authorizing additional licenses for mobile sports wagering – requires careful deliberation by lawmakers as to the potential impact on multiple public policies, including attracting capital investment while promoting employment and tourism at future integrated resorts in the New York City market.

While sports wagering most likely will not help the pari-mutuel handle directly, it would provide increased traffic to both OTBs and racetracks. It will also allow those facilities to compete for traffic with other gaming entities and help the struggling OTB model address its stated purpose of the law establishing OTB in 1970.

Of course, there is another alternative that could be considered more closely aligned to the intended purpose of the 1970 OTB law and existing horse racing laws for racetracks. Pari-mutuel wagering on horse racing is already permitted and with a minor modification to the law, pari-mutuel wagering could be expanded to any sport where fixed odds wagering is permitted in the state of New York. This would create a market for exotic type wagers on sports that sportsbooks would shy away from due to the loss exposure of very high payouts. The types of wagers would be conducted under existing pari-mutuel rules

[285] Kelsey Landis, "Fairmount Park bets big on sports wagering. Will Illinois let it become a 'racino'*?," Belleville News-Democrat,* March 2, 2020 https://www.bnd.com/news/local/article240732791.html

[286] Task Force on the Future of Off-Track Betting in New York State," January 13, 2010, p. 20. https://www.gaming.ny.gov/pdf/Task%20Force%20Final%20Report%201-08-10%2011am.pdf

for exotic wagers such as trifectas and superfectas. For example, a trifecta on a golf tournament or several interesting exotic wagers on a Saturday or Sunday of football would provide exciting pari-mutuel pools.

c. Update Benchmarking Models

In 2002, the New York OTBs' expectations of handle from importing Thoroughbred races were much higher than the actual outcomes, as previously mentioned in the "Current Situational Analysis" section of this report. As past studies have noted, the maintenance-of-effort or hold-harmless payments the OTBs pay to harness tracks have placed a burden on operations because the expected gains from Thoroughbred imports were not realized.

Perhaps benchmarking to 2002 handle seemed harmless at the time. But benchmarking to industry numbers almost two decades old is not reasonable if industry fundamentals and environmental changes are not taken into consideration.

Indexing to the Consumer Price Index ("CPI") (inflation), which historically is going up most years, means historical payments are going to inflate even if an industry does not move in tandem with national indices. National handle certainly has not kept up with inflation, and 2003 was the peak for pari-mutuel handle.

Benchmarking to handle numbers that are decades old also does not consider industry market fundamentals that may change dramatically over time. If handle goes up, the OTBs should be held accountable to such expectations, but how can their payments be expected to go up (based on decades-old handle benchmarks) as handle goes down everywhere? In practice, this has resulted in denying players racing products they may wish to wager on because a decades-old law makes it too costly for an OTB to offer that wagering option, thus reducing statewide handle and perhaps interest in wagering by New York players.

Benchmarking to handle trends would mean OTBs need to manage their business well while ensuring that the payments they make would be tied to the industry realities. If U.S. harness handle declines and New York's harness tracks' handle on harness racing declines, it is hard to argue that the OTBs are favoring Thoroughbred imports over harness handle; the fear that OTBs would favor Thoroughbred signals over harness signals was the reason for the hold-harmless payments.

A one-time adjustment can be made based on the past trend in handle, and moving forward, some equitable benchmark for payments could be based on a five-year moving average of handle, yearly handle change, or national harness handle and New York harness handle. The latter gives harness tracks an incentive to increase New York handle.

Such indices give OTBs relief in a downward market but not in an upward-moving market; in that case, the OTBs would have incentive to grow their business as well or face payments at a higher percentage than in past years. With proper benchmarking making it feasible for OTBs to take Thoroughbred signals, handle will increase because those signals are generally the preferred product. If revenue from this increased handle is equitably shared, not only do players benefit but OTBs and harness tracks may benefit as well. Tracks have expressed a need for VLT support payments to be tied to the growth of VLTs instead of benchmarking it to 2013 levels. If both ideas are coupled, any loss to racetracks

from revisions to maintenance-of-effort payments from OTBs would be more than made up by VLT increases in an upward-trending market for VLTs. This would be like benchmarking OTB handle-related payments to handle and VLT payments to VLT trends.

d. Annual Payments and Surcharge Issues

OTBs expressed a desire to see a law change to allow paying profits on an annual basis versus quarterly payments, which seemed reasonable because horse racing is seasonal. The second and third quarters of the year have higher handle totals due to the Triple Crown races, Saratoga and Del Mar, and other premium products available during those months. Spectrum requested quarterly OTB handle totals from all OTBs but did not receive all of them.

Two years ago, there was a law change (Chapter 59, Laws of 2018 Part OO) that permits the OTB to go to each individual county to get approval from their OTB corporation's board for such a change. For some OTBs it is an easier process than others. Capital OTB currently has obtained such approvals, and Nassau and Suffolk only have one county. It may be cumbersome for the remaining two OTBs with a significant number of counties involved.

Allowing annual payments would allow OTBs to apply ongoing expenses more fairly to total profit but Spectrum was unable to quantify the actual potential impact.

As previously discussed, because the market fundamentals have changed so much in almost 50 years, the best solution is not to mandate surcharges, but to allow OTBs the option to administer surcharges (either selectively offer or not charge at all) as a business decision. That would permit them to manage the OTBs to maximize their profits. Because the municipalities/counties benefit from the surcharge, consideration to maintain that revenue must be protected if an OTB can improve the bottom line by proper management of the surcharges.

e. Enhance ADW Operations, CAF

Keeping up with technology is an expensive project for every entity in New York State. With the changed distribution model for horse racing, technology plays a more important role in keeping the product user-friendly and competitive.

As personnel changes to key staff occur in the technology area, hence changing the competitive edge forward or backward, those changes thus affect the operation in either direction.

There is a need to enhance ADW operations and improve the OTBs' ability to compete in the growing and ultracompetitive ADW market. The OTBs would be best served if they combined ADW efforts and had one unified IT solution, given the growth of this distribution channel.

Some OTBs have gone bankrupt in the past, and other OTBs have come close. Currently, some OTBs are behind in payments to racetracks that host the live racing, purses for live races and breeders' awards. While the Capital Acquisition Fund ("CAF"), §509-a, was not designed for operations, bankruptcies and diminishing support for live racing does not advance the interests of the State. Supporting live racing (paying their bills) and the benefits the State reaps from that should be a priority before OTBs acquire capital assets.

Under the current market fundamentals OTBs are facing, it would be a better utilization of the CAF to support racing and pay funds due to racetracks and perhaps other vendors than to build and invest in infrastructure that does not have a positive return on investment. We believe amending the law to permit use of the CAF when OTBs revenues are not able to pay the necessary support for live racing is a benefit to the State and the large infrastructure of New York's live racing stakeholders.

N. Pari-Mutuel Race Day Analysis

No significant changes in NYRA purses (see Figure 243) has occurred in the last few years, with the reductions made in New York race days. The other eight racetracks in New York get 78 percent to 84 percent of their purse money from VLT revenue (a significantly higher percentage than NYRA purses get from VLTs) and therefore are less impacted by shifts in pari-mutuel revenue as race dates are changed.

Still, many factors should be considered when analyzing the effects of modifying live racing requirements for pari-mutuel facilities. Of course, there would be an impact on purses and breeders' awards and an effect on both horse owners and breeders. But the patrons' needs and wants, the economic impact on the state, and racetrack viability also deserve consideration.

For example, one obvious variable to monitor to determine the impact of a change in race days/races is the variation in pari-mutuel handle. Because handle generates purse money and breeders' awards, a change in handle is directly correlated to purses/awards. However, because VLTs are also a source of purses/awards, the greater the percentage that VLT revenue contributes to purses/awards, the less impact a negative change in handle will have on purses/awards. The percentage of purses that comes from VLTs varies significantly by racetrack.

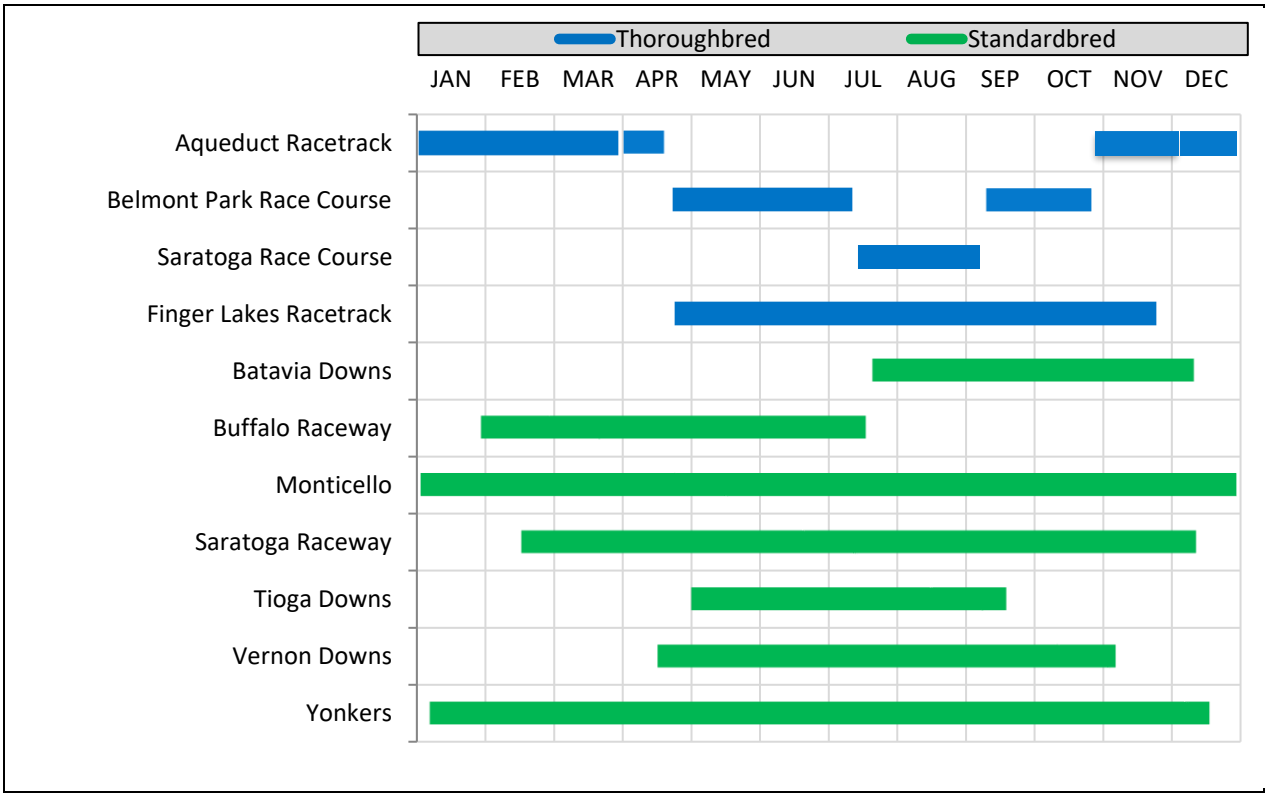
In the case of the harness racetracks and Finger Lakes – because the percentage of breeders' awards and purses that comes from VLTs is significant and a change in handle from a race day change will have minimal impact – what is more important is the potential loss in a very large number of racing opportunities to earn those purses and awards.

One factor that is driving the current decline in the number of races is the drastically reduced supply of horses available to race because of the decline of foals, as documented earlier in this report. Regardless of any negative impact on purses/awards, this factor alone would normally necessitate some reduction until supply increases. This decline is also causing a decline in the field size for races in New York, which has a negative impact on the handle (and thus breeders' awards and purses) and on patrons' interest in the product.

Some revenue sources that are tied to live race handle (for example, ADW market origin fee allocations) or revenue tied to live race days of operation versus dark days (for example, dark-day OTB payments and various distributions from OTBs to tracks depending on what other tracks are running at the time) create incentives to run races when live racing would otherwise not be prudent.

An analysis of the New York race days calendar needs to be separated into at least three scenarios. Clearly, the Standardbred days are different from the Thoroughbred days. The Thoroughbred racetracks are different, because Finger Lakes is like a minor league franchise on the New York circuit and currently operates a seasonal calendar. NYRA with its "tier one" racing programs is like a major league franchise and it operates three racetracks.

Figure 240: New York horse racing meets, 2020



Source: USTA, NYRA, Finger Lakes

In all three scenarios, there are issues and stakeholder interests that must be balanced. Another important factor is the ability to measure the effects of any race day modifications. As the late Peter Drucker, a prominent business consultant and founder of the Drucker Institute,[287] stated, "If you can't measure it, you can't improve it."[288]

Besides the immediate impact on purses and awards, several factors will influence the direction of changes and the subsequent results. For example, the supply of horses will influence how many races can be filled in the near term, and the future supply of horses may be affected by the number of racing opportunities and purses/awards available at the time. Changes may also have effects on patron demand, state economic impact and track revenue/expenses. Spectrum believes the industry needs to identify metrics to measure as incremental changes are made to race days. We will suggest some of the obvious ones in our recommendations, but we believe the stakeholders must reach some consensus on the measures that provide a more structured process and transparency to improving race dates, the number of races and thus the product for the horse players. This is an opportunity for New York to lead the industry with an analytical approach to change.

[287] Drucker Institute. https://www.drucker.institute/perspective/about-peter-drucker/ (accessed April 7, 2020)

[288] Gray MacKenzie, "If You Can't Measure It, You Can't Improve It." https://guavabox.com/if-you-cant-measure-it-you-cant-improve-it/ (accessed February 20, 2020)

Incremental change, as opposed to a large sweeping change, reduces the risk of having a significant negative effect on the economic impact the state realizes from horse racing that could not be readily reversed. For example, if a major change in the race days were to negatively impact the number of horses participating in New York, it would not only decrease the sport's economic impact, but it may also be more difficult to take corrective action to bring horse owners and breeders back to the state. The economic impact is even more important to the state and the industry than an incremental impact on the purses and breeders' awards.

The existing system is constrained by unrealistic live race day statutes, negotiations between suppliers (horsemen associations and breeders associations) and content providers (racetracks) with some conflicting economic interests, and minimal measurement of the economic impact or the buyers' (wagering patrons') needs and wants.

Currently while horsemen, breeders and racetrack management negotiate race days, when fewer days than statutory requirements are desired, there is no structured formal process, consistent measures, or benchmarks to monitor change, and there is little transparency. Race dates historically have been amended under this informal process.

Figure 241: New York racing dates by facility, 2015-2020

Racetrack	2015			2016			2017		
	Statutory	Approved	Conducted	Statutory	Approved	Conducted	Statutory	Approved	Conducted
NYRA	246	257	238	246	237	229	246	234	224
Finger Lakes Racetrack	145	155	153	145	155	150	145	145	145
Buffalo Raceway	143	92	92	143	90	88	143	90	84
Monticello Raceway	213	207	207	213	207	206	213	207	200
Saratoga Raceway	143	170	170	143	170	170	143	170	169
Tioga Downs	129	61	61	129	59	59	129	59	58
Vernon Downs	120	90	90	120	84	84	120	84	74
Yonkers Raceway	256	238	237	256	238	235	256	238	235
Batavia Downs	129	72	70	129	72	72	129	71	71

Racetrack	2018			2019			2020		
	Statutory	Approved	Conducted	Statutory	Approved	Conducted	Statutory	Approved	Conducted
NYRA	246	229	219	246	223	213	246	217	x
Finger Lakes Racetrack	145	145	140	145	119	117	145	127	x
Buffalo Raceway	143	88	60	143	66	65	143	66	x
Monticello Raceway	213	207	193	213	207	198	213	207	x
Saratoga Raceway	143	170	170	143	170	170	143	170	x
Tioga Downs	129	58	56	129	58	57	129	58	x
Vernon Downs	120	70	68	120	70	70	120	70	x
Yonkers Raceway	256	238	237	256	234	229	256	237	x
Batavia Downs	129	70	67	129	65	63	129	65	x

Source: New York State Gaming Commission

New York's horse racing industry has an opportunity to be innovative. With the creation of proper metrics to measure the effects of incremental changes – as well as monitoring the fluctuations of those metrics over time – changes can be made (either decreasing *or* increasing days/races) that make sense to the supply, demand and other important measures in place.

This type of analytical approach would not only facilitate positive change but also help regulatory bodies (as a neutral third party) to assist stakeholders in understanding and interpreting the results of variations of the agreed-upon metrics.

1. Thoroughbred Race Days

Spectrum examined the Thoroughbred race days first because they have the greatest impact on the state economy and because the data available were more complete. We looked outside of New York to determine if there were similar markets where race days changed and what changes may have occurred as a result. Kentucky and California – based on market size and quality of racing – are similar to New York.

Kentucky has reduced days, but a large growth in the revenue from historical horse racing machines that supports purses and attracts horses makes it difficult to determine the effects of the change. (The data includes a track that closed in 2015, Thunder Ridge, which had very few races and the handle was not material. It had no impact on the overall data.) The number of starters and field size have increased, but how much of those increases could be attributed to changes in race days is impossible to isolate based on the limited data available.

Figure 242: Kentucky horse racing data, 2014-2019

Year	Races	Purses	Starters	Starts	Race Days	Avg. Field Size	Avg. Purse per Race
2014	1,779	$70,015,009	5,779	14,482	187	8.1	$39,356
2015	1,823	$100,325,081	6,111	15,542	194	8.5	$55,033
2016	1,922	$78,976,485	6,215	16,520	206	8.6	$41,091
2017	1,874	$81,505,742	5,990	15,688	203	8.4	$43,493
2018	1,794	$115,778,248	5,992	15,282	195	8.5	$64,536
2019	1,766	$113,642,903	6,112	15,435	190	8.7	$64,350

Source: Kentucky Horse Racing Commission Annual and Biannual Reports 2014-2019

While there has been a positive change in the number of horses starting and average field size since the number of races was reduced, the increases in purses from the historical horse racing[289] revenue was clearly a factor, along with the decrease in days and purse increase from handle.

Spectrum examined data available from the California Horse Racing Board ("CHRB") for the major California race meets from 2015 through 2019. In most cases, due to a lack of in-depth data or unusual changes between comparison years, it was not possible to infer a definite cause/effect when the race days and number of races changed. We will cite a few examples to illustrate.

[289] Some jurisdictions, including Kentucky (KY Statute: 810 KAR 1:011. Pari-mutuel wagering), have permitted pari-mutuel wagering on historical horse races. The wagers are placed on an electronic gaming system that allows players to wager on replays of horse races or dog races that have been previously run. The electronic games play and look like slots or VLTs and are a competitive substitute, with the difference being the games are not random but use a pari-mutuel system as defined in those jurisdictions.

Comparing both Golden Gate and Santa Anita between 2018 and 2019, we know the results were skewed by the unusual negative publicity, cancelations and other factors involving animal welfare issues that made national news.

Golden Gate increased races from 1,274 in 2018 to 1,369 in 2019, and the results were positive for handle averages. Santa Anita – due to the cancelations and the difficulties they had in 2019 – ran only 734 races compared to 908 the prior year, and average handle declined.[290]

From the other perspective, comparing Del Mar summers of 2016 to 2017 there were fewer races and days run in 2017, but the averages for handle increased both per day and per race. Likewise, Del Mar's fall meet decreased race days by 25 percent from 2015 to 2016, and handle increased substantially with less racing. Lacking more detailed data than what is available, Spectrum is unable to draw any conclusions or useful comparisons for the New York Thoroughbred market. The one harness track in California, Watch and Wager Cal Expo, was also reviewed but there were too many variables and not enough data to draw useful comparisons.[291]

2. NYRA Race Days

Figure 243: NYRA race data, 2015-2019

Year	Race Days	Races	Race Earnings	Statutory VLT Revenue to Purses	Non-VLT Purses Paid
2015	238	2,217	$165,627,150	$62,341,694	$103,285,456
2016	229	2,153	$163,041,680	$62,678,200	$100,363,480
2017	225	2,090	$158,901,450	$58,774,957	$100,126,493
2018	219	2,038	$161,645,675	$60,209,259	$101,436,416
2019	217	2,000	$165,272,654	$60,890,067	$104,382,587
Pct. Chg. 2015-2019	**-8.8%**	**-9.8%**	**-0.2%**	**-2.3%**	**1.1%**

Source: New York State Gaming Commission, Equibase Race Charts, NYRA

Many factors affect the purses and breeders' awards when considering a race days change, and the net difference alone will not provide sufficient data to determine the long-term effects.

As opposed to all the other racetracks in New York, NYRA has a much lower percentage of total purses derived from VLTs. Therefore, each case requires examining the purses that change as race days or the number of races change. Despite the decline in the number of races and race days, the non-VLT purses have remained stable.

Spectrum analyzed complete race and handle data for all NYRA races from 2016 to 2019. Our hypothesis was that the winter race days would, on average, be the races with the lowest pari-mutuel handle and the less attractive races from a quality/quantity perspective. However, that is not the only consideration when considering the race days and number of races.

[290] California Horse Racing Board, 2016-2019 Annual Reports. http://www.chrb.ca.gov/annual_reports.html

[291] Ibid.

As a percentage of total purses, about 37 percent of the NYRA purses is from VLT funds, while approximately 63 percent is from pari-mutuel handle-related sources. This is the lowest percentage of total purses from VLTs among New York racetracks.

The pari-mutuel handle-related sources require further examination because those are the numbers that will be affected by the number of races and race days changed. Those sources are live on-track handle, on-track import handle, off-track export handle, New York OTBs' funds on non-NYRA races, and the purse allocation from the market origin fees.

We estimate the breakdown of those sources in Figure 244 as a percentage of the total pari-mutuel handle-related sources (non-VLT) for purses:

Figure 244: Estimated percentage of total pari-mutuel handle-related sources (non-VLT) for purses for NYRA races, 2016-2019

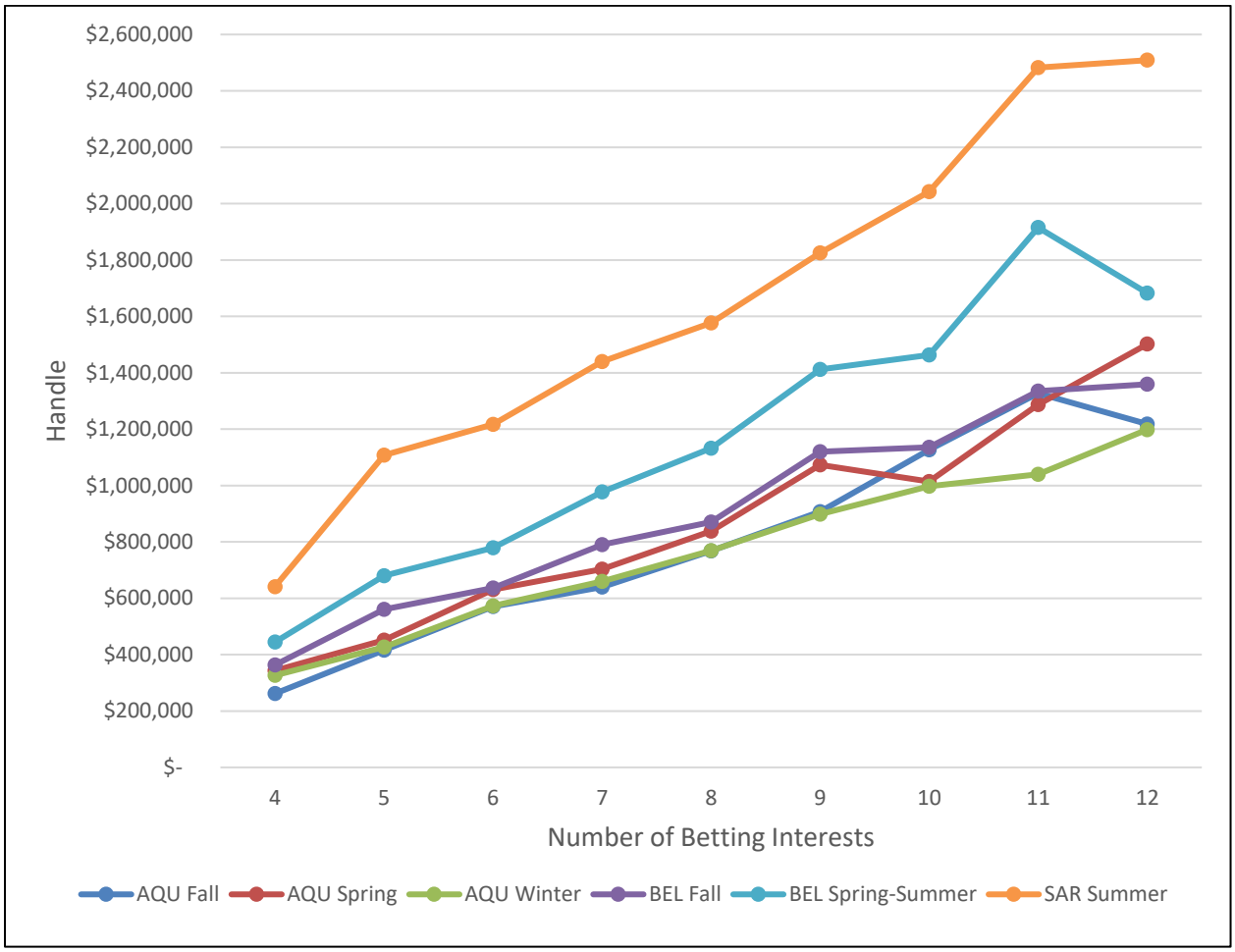
Pari-Mutuel Related (Non-VLT) Purse Sources	Estimated Percent of Total Pari-Mutuel Related (Non-VLT) Purse Sources
On-Track Live Handle	17.4%
On-Track Import Handle	15.4%
Off-Track Export Handle	59.8%
NY OTBs wagers on non-NYRA races	5.8%
Market Origin Fee Distribution	1.6%

Source: New York State Gaming Commission, Spectrum Gaming Group

Of those five sources, only two would have a direct impact based on the number of races run – the on-track live handle and the off-track export handle. However, because there is currently no revenue generated for breeders' awards from the export handle, any race day effect on those awards would be even less than the effect on purses. Therefore, the effect on breeder's awards in this case is currently not very significant, but it is also noteworthy that the breeders currently do not share in the fastest-growing area of handle-based revenue for racing.

We hypothesized that the winter race days would rely on a greater percentage of New York-bred horses to fill the race cards. Approximately 47 percent of all horses running at NYRA tracks are New York-bred horses. For all Aqueduct race meets, the percentage of New York-bred horses is over 53 percent.

Figure 245: NYRA handle vs. number of betting interests by race meet



Source: Equibase. **Note:** Spectrum limited data to races with 4-12 betting interests (to omit averages based on less than 10 races) and omitted eight races during 2016-2019 for the Belmont Stakes and Travers Stakes to remove the effect of their high handle on means. In all, 63 races were omitted.

Figure 245 plots the average handle per race (2016-19) by the number of betting interests for each NYRA race meet. (A betting interest – abbreviated as a "bint" – is one or more horses identified by a single program number for wagering purposes.)

Figure 245 confirms the previously referenced national studies' conclusion that field size has a significant impact on handle, but it also supports Spectrum's hypothesis that the Aqueduct winter race meet has the lower handle on average.

To further examine our hypotheses and quantify the significance of each NYRA race meet and what significance the race days have throughout the year, the following tables provide four years (2016-2019) of detailed race data by NYRA race meet.

Figure 246: NYRA race data by meet, 2016-2019 combined

	Aqueduct Winter			Aqueduct Spring			Aqueduct Fall		
Variable	Not NY Bred	NY Bred	Total	Not NY Bred	NY Bred	Total	Not NY Bred	NY Bred	Total
Races	1273	701	1974	384	160	544	588	247	835
Days	226	219	226	60	58	60	91	87	91
Runners	8,755	5,412	14,167	2,589	1,238	3,827	4,541	2,202	6,743
Earnings	$66,192,576	$37,003,728	$103,196,304	$29,194,560	$8,349,760	$37,544,320	$43,731,216	$13,814,702	$57,545,918
Total Pool	$834,526,278	$513,927,905	$1,348,454,183	$269,065,869	$130,823,838	$399,889,707	$455,629,078	$221,212,356	$676,841,434
Bints/Race	6.88	7.72	7.18	6.74	7.74	7.03	7.72	8.91	8.08
Races/Day	5.63	3.20	8.73	6.40	2.76	9.07	6.46	2.84	9.18
Earnings/Day	$292,888	$168,967	$456,621	$486,576	$143,961	$625,739	$480,563	$158,790	$632,373
Earnings/Bint	$7,561	$6,837	$7,284	$11,276	$6,745	$9,810	$9,630	$6,274	$8,534
Total Pool/Bint	$95,320	$94,961	$95,183	$103,927	$105,674	$104,492	$100,337	$100,460	$100,377
Total Pool/Day	$3,692,594	$2,346,703	$5,966,611	$4,484,431	$2,255,583	$6,664,828	$5,006,913	$2,542,671	$7,437,818
NY Bred races/ total days		3.10			2.67			2.71	
NY Bred races/ total races		35.5%			29.4%			29.6%	
	Belmont Spring-Summer			Belmont Fall			Saratoga Summer		
Variable	Not NY Bred	NY Bred	Total	Not NY Bred	NY Bred	Total	Not NY Bred	NY Bred	Total
Races	1363	607	1970	919	418	1337	1213	408	1621
Days	205	201	209	141	140	145	155	146	159
Runners	9,822	5,117	14,939	6,694	3,515	10,209	9,463	3,504	12,967
Earnings	$137,865,237	$36,668,103	$174,533,340	$79,232,456	$30,065,513	$109,297,969	$135,393,761	$31,349,847	$166,743,608
Total Pool	$1,691,098,365	$664,688,641	$2,355,787,006	$751,779,208	$388,518,224	$1,140,297,432	$2,035,386,913	$654,464,940	$2,689,851,853
Bints/Race	7.14	8.38	7.52	7.22	8.34	7.57	7.75	8.53	7.94
Races/Day	6.65	3.02	9.43	6.52	2.99	9.22	7.83	2.79	10.19
Earnings/Day	$672,513	$182,428	$835,088	$561,932	$214,754	$753,779	$873,508	$214,725	$1,048,702
Earnings/Bint	$14,157	$7,211	$11,774	$11,942	$8,622	$10,798	$14,411	$9,011	$12,952
Total Pool/Bint	$173,660	$130,716	$158,928	$113,305	$111,419	$112,655	$216,646	$188,119	$208,937
Total Pool/Day	$8,249,260	$3,306,909	$11,271,708	$5,331,767	$2,775,130	$7,864,120	$13,131,528	$4,482,637	$16,917,307
NY Bred races /total days		2.90			2.88			2.57	
NY Bred races/ total races		30.8%			31.3%			25.2%	

Source: Spectrum Gaming Group, NYRA, Equibase. **Note:** Bint = number of betting interests; Total Pool = total pari-mutuel pool.

Examining the data by race meet, the Aqueduct winter and spring meets offer less quality/quantity for the patron, less handle per event and have less economic impact. Therefore, as reductions in race days/races are warranted, those race days are the ones to eliminate.

Figure 247: NYRA racetrack equine fatality rates, cumulative 2009-2018

Track	Starts	Fatalities	Number of Fatalities per 1,000 starts
Aqueduct	71,795	145	2.02
Belmont	68,687	92	1.34
Saratoga	32,538	42	1.29

Source: Jockey Club Equine Injury Database[292]

Another factor to consider is the increasing concern of animal welfare and safety. Aqueduct over a 10-year period had a significantly higher fatality rate than the other two NYRA racetracks (Figure 247.) The rates are relatively small, so there will be some variance from year to year because a few incidents during a short race meet will create significant percentage changes year to year. For example, if you just look at the last three years of the data averaged from Figure 247 (2016-2018) Saratoga's rate is the same as Aqueduct. New York's horse racing industry has made substantial efforts to reduce those numbers. The more recent years' rates are without a doubt better than a decade ago. The issue remains a serious challenge regarding the safety and integrity of the sport.

Figure 248: Races at NYRA with 5 or fewer betting interests ("bints"), cumulative 2016-2019

Race Meets 2016-2019	Races ≤5 Bints	Total Races	Pct. of races ≤5 Bints
Aqueduct Fall	85	835	10.2%
Aqueduct Spring	100	544	18.4%
Aqueduct Winter	319	1,974	16.2%
Belmont Fall	189	1,337	14.1%
Belmont Spring-Summer	303	1,970	15.4%
Saratoga Summer	171	1,621	10.5%
Total 2016-2019	**1,167**	**8,281**	**14.1%**

Source: Equibase, Spectrum Gaming Group

As documented in Figure 245, the pari-mutuel handle on short fields is significantly lower than for races with more betting interests. Both the Aqueduct Spring and Fall race meets have a higher percentage of short fields. Having fewer races with short fields should be a goal when assessing the impact on the purses and breeders' awards. Based on the average handle, it is clear that wagering patrons have a stronger preference for races with more betting interests. Unfortunately, horsemen have an economic interest in races with fewer betting interests because they are less competitive, increasing the horsemen's opportunity to win purse money.

The Aqueduct winter meet is the most logical place to cut days and have the least negative impact, but that meet has the largest percentage of New York-bred runners and races for New York-bred horses. Thus, as further reduction is incrementally made to the winter days/races, there should be an effort to

[292] The Jockey Club, "Equine Injury Database." http://jockeyclub.com/default.asp?section=Advocacy&area=11 (accessed April 15, 2020)

move those New York-bred races to another time of year so as to maintain a reasonable number of opportunities for New York-bred horses.

A large reduction in opportunities for New York-bred horses to run in restricted races would reduce the value of New York foals. On the other hand, if the average purse for New York-bred races increases due to an incremental decline in the number of races without a similar decline in total purse revenue, it may have a positive effect on their value, and this is an example of just one of many metrics that can be monitored over time to benefit the industry.

We noted earlier that the supply of horses has declined and the fact that almost 90 percent of the runners in NYRA races are 2-year-old, 3-year-old, 4-year-old, and 5-year-old horses in any given year. This means that there are four foal crops each year that primarily indicate the health of the supply of horses racing that year.

Figure 249: Supply of horses and NYRA trend of race days and number of races run, 2010-2019

	NYRA Data	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Race Days	242	240	245	239	246	238	229	225	219	217	
	Races	2,261	2,244	2,316	2,283	2,299	2,217	2,153	2,090	2,038	2,000	
	PctChg.		-0.75%	3.21%	-1.42%	0.70%	-3.57%	-2.89%	-2.93%	-2.49%	-1.86%	
						5 yr. moving average:		-0.37%	-0.79%	-2.02%	-2.23%	-2.75%
	Runners	5,056	4,816	5,262	4,729	4,844	5,093	4,993	4,887	4,602	4,638	
	PctChg.		-4.75%	9.26%	-10.13%	2.43%	5.14%	-1.96%	-2.12%	-5.83%	0.78%	
						5 yr. moving average:		0.39%	0.95%	-1.33%	-0.47%	-0.80%
	Starts	17,827	17,315	18,669	17,892	17,490	17,383	16,767	16,332	15,040	14,915	
	PctChg.		-2.87%	7.82%	-4.16%	-2.25%	-0.61%	-3.54%	-2.59%	-7.91%	-0.83%	
						5 yr. moving average:		-0.41%	-0.55%	-2.63%	-3.38%	-3.10%
	Avg Field Size	7.88	7.72	8.06	7.84	7.61	7.84	7.79	7.81	7.38	7.46	
	Years	2005-08	2006-09	2007-10	2008-11	2009-12	2010-13	2011-14	2012-15	2013-16	2014-17	2015-18
National Foal Crop	4 yr crop total	136,645	131,207	122,256	110,551	99,688	91,505	86,969	85,802	85,357	84,828	83,335
	PctChg.		-3.98%	-6.82%	-9.57%	-9.83%	-8.21%	-4.96%	-1.34%	-0.52%	-0.62%	-1.76%
						5 yr. moving average:		-7.68%	-7.88%	-6.78%	-4.97%	-3.13%
	National Data	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Races	46379	45417	45086	43139	41276	38941	38284	37628	36586	36207	
	PctChg.		-2.07%	-0.73%	-4.32%	-4.32%	-5.66%	-1.69%	-1.71%	-2.77%	-1.04%	
						5 yr. moving average:		-3.42%	-3.34%	-3.54%	-3.23%	-2.57%
	Runners	99,020	94,432	90,077	85,995	81,451	79,886	78,350	76,034	73,178	72,067	
	PctChg.		-4.63%	-4.61%	-4.53%	-5.28%	-1.92%	-1.92%	-2.96%	-3.76%	-1.52%	
						5 yr. moving average:		-4.20%	-3.65%	-3.32%	-3.17%	-2.41%
	Starts	380,511	366,149	356,199	339,490	318,242	305,780	298,784	290,745	279,774	272,553	
	PctChg.		-3.77%	-2.72%	-4.69%	-6.26%	-3.92%	-2.29%	-2.69%	-3.77%	-2.58%	
						5 yr. moving average:		-4.27%	-3.97%	-3.97%	-3.79%	-3.05%

Source: Jockey Club 2020 Fact Book, NYRA

Figure 249 compares the change of races run nationally and at NYRA tracks over the most recent 10-year period. The rate of change (percentage) in the four-year foal crop was decreasing from 2014 to 2017, but in 2019 and 2020 that rate began to increase again. NYRA has not cut the number of races as drastically as the national reduction, however it has begun to have a negative impact on the field size for NYRA races.

Figure 250: Comparison of trends in Figure 249

	2010-2019	
	National Pct. Change	NYRA Pct. Change
4-Year Foal Crop Total	-37.9%	
Races	-21.9%	-11.5%
Runners	-27.2%	-8.3%
Starts	-28.4%	-16.3%

Source: Jockey Club 2020 Fact Book, NYRA

The horsemen who participate in the races should be encouraged that NYRA's reduction in races run was less than the national trendline. However, there may be signs that the reduction is currently impacting the product and handle. From 2010 to 2017, the NYRA field size remained reasonably steady at slightly fewer than eight runners per race; in 2018 and 2019, the field size dropped to 7.38 and 7.46, respectively (this does not compare well to Kentucky as seen in Figure 242). When looking at Figure 245 (which shows handle and field size) the slope of the line between 7 and 8 is steep, and a drop in field size had a negative impact on handle, making it a factor when assessing the impact to purses/awards.

New York horsemen on the NYRA circuit will not all have the same concerns regarding race dates. For example, there is a portion of New York trainers and owners that take horses south for the winter and will have little interest in race dates in the winter and may actually benefit from fewer days and larger purses for the remaining days. On the opposite spectrum are horsemen that race all year in New York or just race in the winter since the competition is significantly less. Many of the "winter" trainers and owners will find the competition easier in the winter and most likely make a reasonable percentage of their purse earnings during that time.

Discussed in more detail in the harness race dates section is what happens during a year-round racing circuit. The trainer can charge a day rate for 12 months. This creates a cash flow for the trainers all year. In addition to the opportunity in the winter to run against lesser competition by racing all year, the trainer received a steady income all year with their day rate.

Generally, across all jurisdictions, horsemen do not want fewer racing opportunities. There are several economic reasons for this. With more race days and races, they have more races to choose from, they prefer short fields because there are less horses to beat and it is easier to earn a portion of the purse. In addition, each trainer is an independent contractor and their concern is their stable and not what benefits the entire stakeholder group. With more races offered there are more racing conditions available to select a race that minimizes the competition. That is in the horse owners' best interest for that race, especially now that Thoroughbred horses only run an average of six times a year compared to as many as ten times a year a few decades ago.

Under the current conditions, NYRA race numbers should continue to decline until the supply and product measures return to more suitable levels. However, since race days and race numbers are allotted for 2020 and the supply of horses for the years beyond that are not yet known, the first item to address is the creation of a good set of metrics to assist in determining the proper number of race days or races.

Archaic statutes that force negotiations between horsemen and the licensee may result in short-sighted planning, compromising on unrelated issues, and uneven bargaining power. That is not the best alternative. Forcing too many races/days could have a negative impact on the quality of the product in a competitive wagering market; extreme cuts made at once could have substantial impact on the economic impact resulting from live racing. Either may have long-term results that may have serious detrimental impacts to the State and industry stakeholders.

Based on the current data, Spectrum suggests some elements to consider for an incremental reduction of race days/races that would result in a measurable change that could then be evaluated for future decisions. The stoppage of racing should be short enough to avoid a serious negative impact to the economic benefits of the industry to the State yet be long enough to measure change incurred because of a break in the racing calendar. Currently, in order to implement such a suggestion, either the Franchise Agreement and statutes (§238(1)(d)(i)) would need to be changed or with racetrack, horse breeders and horsemen association agreement the NYSGC may permit less than the required number of days based on reasonable circumstances.

The following are considerations related to an experimental change in the NYRA year-round racing calendar:

- Thoroughbred horses on average run slightly more than six times a year, and most horses wait 21-30+ days between starts when they are in training and racing. For all NYRA horses making two or more starts (during 2016-2019 race meets) the median time between races was 31 days. When adjusted to include only horses making two or more starts that have an average of less than 75 days off, the median time between races was 29 days.
- The winter race meet at Aqueduct has the lowest handle on average and the harshest weather, resulting in occasional cancelations. Likely due to the weather factors and/or the horse quality difference, Aqueduct has a higher fatality rate per 1,000 starters than at the other two NYRA tracks. (See Figure 247.)
- If a short break from racing of about four weeks takes place, horses that need to stay in training can remain in training with a track open five or six days each week for training instead of the customary seven days a week. This will alleviate any concern horsemen may have about continuous training for twelve months.
- The racing schedule can be modified to run a few more races just before the break and just after the break, because horsemen will be cognizant of the break and can run a number of horses at both ends of the break since horses normally take almost a month between starts anyway. The race “condition books” (schedule of races for a given track during a certain period of time, usually a few weeks or a month) can be easily modified to utilize the supply of horses to minimize the reduction in opportunities while maximizing the benefit of increasing the quality and quantity or the races offered both before and after the calendar break. While horsemen may lose some races in total numbers, a number of those races can be reallocated to other race days.
- Such race scheduling can decrease the actual total number of race opportunities. However, because only a few actual race days will be lost, a significant number of New York-bred horse races that normally run at the Aqueduct meet can be scheduled throughout the remaining days surrounding the break since horses normally do not compete too often. From 2015 to

2019, more than 50 percent of the runners starting at NYRA tracks made two or fewer starts per year at NYRA tracks, and almost 88 percent of runners made six or fewer starts at NYRA tracks per year.[293] This type of incremental adjustment (unlike an extended period of time off) can be more easily adjusted to by slight changes to training and racing schedules and should not necessitate any movement of horses to other jurisdictions if the racing management and horsemen work together. The New York bred races may be of greater concern to those horsemen that stay during the winter when they may earn a greater portion of their yearly purses. Rescheduling some of the races for New York-bred horses to other days outside of the closed month will alleviate some of the concern and potential negative impact.

- A short break would allow a significant portion of the workforce to get a "vacation break" from the year-round schedule of NYRA racing. Several studies have shown that vacations from work are good for your body and your brain.[294] A year-round racing schedule is taxing on all employees due to the demands of seven-day weeks and 12 months of racing. The results of this, while not measurable by likely metrics, would be beneficial.
- The incremental nature of such a break will provide the type of data needed to measure impacts without posing a threat to disrupting the horsemen's schedules to the point of having severe potential negative consequences on the state's economy. The first year such a schedule change is made, every effort should be made to address the horsemen's concerns outlined above while at the same time providing a baseline of data to analyze the impacts.
- While difficult to control, racetracks should study the best utilization of a fixed quantity of horses participating in any given week. For example, what is the best use of 36 horses in the same race category: four 9-horse fields or three 12-horse fields? That type of analysis has not been well quantified by the industry.

Establishing a set of metrics to measure the impact of race days changes would allow industry stakeholders and regulators to make changes that can improve New York racing and at the same time formalize a process for change and add transparency to an important decision effecting all stakeholders. The metric model (see **Appendix R** for suggested metrics) would measure the effects of incremental variations and progressively react (either decreasing or increasing days/races) to those changes that make sense to the supply, demand and other important measures in place. Such a model would also provide regulators a tool to use for the difficult task of race day allocation instead of relying on decades-old statutes or simply leaving it to stakeholders to compromise.

[293] Equibase and NYRA.

[294] Hilary Brueck, "What Taking a Vacation Does to Your Body and Brain," September 1, 2018, *Business Insider*. https://www.businessinsider.com/vacation-health-benefits-2018-8

3. Finger Lakes Race Days

Figure 251: Finger Lakes handle and race days, 2008, 2018, 2019

	Handle						Race Days	
Year	Live	Live/Day	Export	Export/Day	Import	Import/Day (363)	Number of Days Run	Number of Days Approved
2008	$10,869,950	$70,129	$147,734,648	$953,127	$14,891,821	$41,024	155	160
2018	$3,479,023	$24,850	$113,458,200	$810,416	$10,950,304	$30,166	140	145
2019	$3,191,825	$27,281	$116,696,391	$997,405	$10,284,972	$28,333	117	119

Source: Finger Lakes Racetrack

Finger Lakes did not provide enough data to draw reasonable conclusions on the effect of the decrease in its race days from 2018 to 2019. We believe a similar model suggested for the NYRA race data analysis with incremental changes made each year as warranted will be an improved model compared to the current system (although given the seasonal calendar at Finger Lakes, a break in the race meet is not necessary). The type of data presented in this report is also available for Finger Lakes races and would aid stakeholders in determining the impacts and suggest more specific changes.

The Finger Lakes analysis is different because of the percentage of purse money coming from VLTs, which is much greater than exists in the NYRA purse structure. About 78 percent of purses in 2018 were from VLT funds. What this means is that if there is a decline in handle because of any race reduction, it will have far less impact on the purses and awards compared to similar changes in NYRA handle. The main concern regarding a Finger Lakes reduction in races is more a function of lost opportunities for the "minor league" New York-bred horses to run. But on the flip side, if there is a reduction of races – and because the handle will have less impact on the purses – the average purse will increase and the total purse structure those horses run for in a given year will not fluctuate much.

4. Harness Race Days

The harness race analysis is different because:

- The utilization of the supply is better than in Thoroughbred racing because the Standardbred horse runs more often and there has not been the same declining trend in the average number of starts a harness horse makes in a year.[295] However, the supply of New York Standardbred horses is declining, with the number of mares down 27 percent and foals down 24 percent from 2010 to 2019. The national foal crop has leveled off in recent years and is not facing the same decline.
- The field size for New York harness races also has declined, and some tracks are faced with running more races with short fields. In eight years, average field size for New York harness races has declined from 7.86 to 7.46 – despite an almost 22 percent decline in the number of races.

[295] United States Trotting Association.

- Pennsylvania and Ohio compete for the same wagering players and horse owners and trainers as New York. Ohio in 2018 had 6,653 harness races with 57,739 starters, which is an average field size of 8.68 per race.296 Pennsylvania in 2018 had 49,693 harness starters, and the average field sizes at its three harness tracks were 8.59, 8.07 and 7.64.297 Given the competitive purses and larger field size in Pennsylvania and Ohio, those races will have a negative impact on both the wagering and horse supply in New York.

Figure 252: New York harness race days conducted, 2009-2018

	Batavia	Buffalo	Monticello	Saratoga	Tioga	Vernon	Yonkers
2009	72	90	208	170	57	90	241
2010	72	90	210	170	58	89	241
2011	72	91	206	171	58	90	240
2012	72	99	206	170	61	90	233
2013	72	99	206	170	61	88	231
2014	68	95	201	160	61	90	232
2015	69	91	200	170	61	90	230
2016	71	88	207	170	59	84	236
2017	71	84	200	170	57	74	235
2018	67	60	193	170	56	68	237
Pct. Chg. 2009-2018	**-6.9%**	**-33.3%**	**-7.2%**	**0.0%**	**-1.8%**	**-24.4%**	**-1.7%**

Source: New York State Gaming Commission

Apart from Buffalo Raceway and Vernon Downs, the number of harness race days in New York has been fairly stagnant for the past 10 years. The decline in the New York number of races and number of starters is similar to the national declines in races and starters. We believe this is due to statutes requiring a large number of race days and rules driving behavior that is not always in the interest of putting on the best quality product, but driving revenue based on live handle and race days.

New York essentially offers five harness racing circuits:

- Monticello and Yonkers each year-round
- Saratoga Harness for 10 months
- Buffalo/Batavia almost year-round
- Tioga/Vernon for seven months

The stakeholders who benefit the most from this scenario are the horse trainers – not the horse owners or track owners. The trainer can charge a day rate for either 12 months or almost 12 months on most of the circuits. This creates a cash flow for the trainers all year.

[296] "2019 Breeders Crown Champion to Ohio," Harnesslink.com, December 2019. http://www.harnesslink.com/News/2019-Breeders-Crown-Champion-to-Ohio

[297] Pennsylvania Gaming Control Board. "2018 Racetrack Casino Benchmark Report." https://gamingcontrolboard.pa.gov/files/reports/2018_Pari-Mutuel_Benchmark_Report.pdf

The horse owners would be better off with fewer months of racing; they could race for higher purse averages (but essentially the same net purse structure) and they could turn the horse out for a couple of months of rest and save expenses, as it costs less per month to keep the horse out of training. The track owners can operate more efficiently with slightly fewer race days and, when not open, they can more easily make repairs and improvements to their facilities. For the owners who opt to not turn a horse out, they could still race in New York because there are ample race days within the state, even if one or more racetracks closed for a month or two.

Like Finger Lakes, while the percentage of purses from VLTs varies for each harness track, it is relatively high at approximately 83 percent to 84 percent on average. Therefore, an incremental reduction in race days would not significantly impact purses and awards. (Absent the complex set of revenue distribution models that are tied to live race handle and live race days.) Depending on the size of an incremental reduction in days, in most if not all cases, the average purses will increase.

As discussed, other factors complicate the decisions of when to race live that have nothing to do with optimizing the live-racing events themselves. Market origin splits are based on live handle, and variable sources of revenue from OTB handle are related to live racing. Normally, with the continuing decline in Standardbred handle in New York, a change to attract more horses to the jurisdiction and minimize short fields would be positive moves to attempt to stem the decline. With a better purse structure, the tracks could also create marquee days with more stake races. The marketing of special days has been successful at many racetracks nationwide. Utilizing the purse money in this way would generate more handle and give the tracks something to market.

Another aspect of the race days analysis for harness racing is the fact there are seven tracks operating, and from May to mid-September six are operating at once.

Figure 253: Approximate drive times between New York harness racetracks, in hours

	Batavia	Buffalo	Monticello	Saratoga	Tioga	Vernon	Yonkers
Batavia	–	1.00	4.25	4.00	2.50	2.25	5.75
Buffalo	1.00	–	5.00	4.75	3.00	3.00	6.50
Monticello	4.25	5.00	–	2.75	2.00	3.00	1.75
Saratoga	4.00	4.75	2.75	–	3.50	2.00	2.75
Tioga	2.50	3.00	2.00	3.50	–	2.25	3.50
Vernon	2.25	3.00	3.00	2.00	2.25	–	4.00
Yonkers	5.75	6.50	1.75	2.75	3.50	4.00	–

Source: Google Maps

As seen in Figure 253, the drive times between many of the seven tracks mean it is not a difficult commute for a horse to race at another track or stable elsewhere when one track closes. It is even more common in other states to see Standardbred horses ship to race much more often than the Thoroughbred horses. Many harness tracks in the United States have eliminated full barn areas, so horses ship in and race from “detention/receiving barns” the day of the race. New York harness tracks are perfectly situated for incremental changes to move toward a racing schedule that would look like a major league and minor league circuit of racing scheduled with fewer conflicts. There are significant barriers to achieving this, however.

Spectrum found the New York market different from other harness racing jurisdictions as there seemed to be less movement of horses between racetracks (with the exception of some races such as the sire stakes series), despite the proximity of several of the tracks. This should be viewed as an impediment to a healthy racing product for the harness industry in New York and somewhat of a "closed shop."

The shift of handle away from racetracks and OTBs, discussed earlier in this report, has had a greater negative impact on the harness tracks. The in-state handle wagered on New York harness races at OTBs and New York tracks dropped more than 38 percent – from approximately $105 million to $65 million – from 2013 to 2018. Other handle wagered on New York harness races is either export handle (selling at low host-fee rates) or at ADWs, both with much smaller revenue margins. The shift in handle and decrease in handle has a negative impact for track operators. The decline in handle would indicate the product is less competitive and would further support change to improve the product.

The statutes and the revenue-distribution model currently in place are driving decisions on race days, rather than factors such as coordinating race days to produce the best live racing product. Handle from a track's live product has become much less significant; the money from OTBs, market origin fees and designated track payments, along with horsemen's desire for as many race days as possible, are driving decisions. Those factors, along with statutes protecting many live race days and current distribution schedules make any change in race days unlikely until those are addressed.

For example, New York harness tracks in 2018 averaged from about $6,600 to $38,500 a day for live on-track handle. The track might retain about 10 percent of that after paying taxes, purses, and winning wagers. With handle revenue of about $660-$3,850 a day, you might suggest closing the track grandstand would be more efficient. Run the races, collect the export host fees and OTB money, and your net revenue could be better, right? However, each harness track's share of the market origin fee is based on live handle and therefore a track may have the incentive to stay open to collect money from out-of-state ADWs. (Figure 73 in **Appendix O** illustrates the amounts derived from the market origin fees in 2019.) There are other incentives, such as running on days other tracks are "dark" (dark days are days a racetrack has no live racing), which allows your track to be the designated track and benefit from OTB payments.

The five "racing circuits" described earlier should be examined by the industry with similar analysis suggested for the NYRA racing circuit. However, given the large number of tracks and large number of race days in comparison to the NYRA circuit, there are opportunities to better coordinate the racing schedules between some of the tracks. For example, one idea that would result from coordination and creating a circuit would be a better race product to sell. In addition, several tracks could easily schedule races between them seven days a week for long periods of time. This "new package" of continuous product could be sold at a reduced host fee if other tracks took the entire "package." If, for instance, three tracks work together, they could sell the combined product for X percent less than if the buyer only wants one or two of the signals.

Other relevant factors need to be considered when examining the race day allocations. Winter weather makes racing more difficult in regions like Buffalo, Oneida, and Saratoga Springs. Buffalo Raceway perhaps has the most difficult situation of running races that are on the lower end as far as quality of New York harness races and running the worst days (January and February) as part of that circuit in western

New York State. Harness racing is also facing safety and integrity challenges. A few of New York's leading harness trainers are part of the recent indictments mentioned earlier in this report.

Another impediment to making changes to race days are the tax implications when some tracks reduce race days beyond a certain level. For example, if Saratoga were to slightly reduce its race days to fewer than 168, the tax rates are significantly higher (§318 5a). What if – after proper analysis, negotiation with stakeholders and monitoring race day changes – the optimal number of race days was 165? Simply running a few less days in this case, while otherwise optimal, would not be financially viable for all the stakeholders. Like the statutes stipulating a minimum number of race days, these statutes are now archaic, given the dramatic change in the market fundamentals of horse racing compared to decades ago.

When incentives to host live race days are driven by what revenue you can obtain from other sources, or where there are outdated statutes forcing a certain number of race days (§307 5-a), it is difficult to suggest adjustments until a number of changes to the Pari-Mutuel Laws are made. We believe that most harness tracks (with a couple of exceptions) are satisficing when it comes to live race days and not trying to create race days in the best interest of the players. We would suggest the product decisions are more supply-driven rather than demand-driven.

Like our overall suggestion for the NYRA racing circuit, if incremental changes were made and metrics determined that could monitor the effect of those changes, this would help adjust race days/races on an annual basis as industry trends move. Metrics for the measuring changes may vary slightly from the Thoroughbred metrics, but essentially the same type of approach would be useful. The metrics should be agreed upon to monitor the effect of the changes and continue with proper adjustments to the schedule.

Also, like the Thoroughbred race days, the statutes requiring many race days are outdated. Because there are a number of current laws that provide revenue based on the running of a live race day or the total live handle for the year, the focus at times on race days is driven by volume (number or race days and total handle) instead of the quality of the product. In the long run, if handle continues to decline and shift to other more desirable racing products, the negative trend in harness handle in New York will continue.

If the harness racing product continues to decline to where seven racetracks and all the horse industry infrastructure cannot be rationally supported by other non-pari-mutuel revenues, the State may find the opportunity cost of that funding greater than the potential gain. Long term, the State may shift that assistance elsewhere. If, on the other hand, a longer view is taken by the industry, the industry should build interest in live racing and create a better racing product, attracting more wagering and more horses. This would benefit the State more in the long run. Efforts to modify the race days and racing circuits will create better long-term gains and avoid a continued decline in the industry.

O. Pari-Mutuel Recommendations

The Spectrum recommendations in this report, if enacted, would benefit the State and the primary stakeholders – breeders, owners, and racetracks – that create a significant economic impact for the State. However, fears of one stakeholder benefiting more than another stakeholder could lead to more layers of distrust, preventing the implementation of ideas that could benefit statewide interests. Given the downward trends for the racing industry, instead of looking at capturing other industry participants' market share to keep margins up, or discussion of why things can't be done, the New York racing industry needs to collectively examine change in light of what can be done to benefit the state and the stakeholders.

There are recommendations and issues on which industry stakeholders will remain divided. In those cases, the State and the industry should agree to monitor future changes and make wise adjustments incrementally, rather than accept permanent stalemate and risk the continuing declines that will produce negative outcomes in the long term. There are opportunity costs that policymakers must consider while noting that a racing industry moving forward rather than in decline is a better investment.

1. Current Distribution of Pari-Mutuel Horse Racing Revenue

Statutes pertaining to the distribution of pari-mutuel revenue have significant historical significance, the importance of which, in some cases, is still relevant, such as the need for the industry to fund the regulation of the sport and wagering. Other portions of the distribution schedules are either too complex or antiquated; they warrant change and simplification due to competitive market fundamentals and changes in the industry.

This pari-mutuel report reviewed how the horse racing wagering market has changed for all stakeholders. OTBs and some tracks continue to struggle due to changing pari-mutuel dynamics. The OTBs cannot "cut their way to profitability." If OTBs are not restructured or augmented with alternative revenue sources, their decline in pari-mutuel profitability will continue. Regardless of which path is chosen for OTBs, the revenue for municipalities and horse racing from off-track wagers is important and should continue. The following are Spectrum's recommendations pertaining to the distribution schedules and market forces impacting the state's horse racing industry and the benefits the State realizes as a result.

1. Revise/rewrite laws that pertain to revenue distribution schedules. The historical context of several of the current distribution schedules was relevant at the time, but the way the fundamentals of pari-mutuel wagering markets have changed makes the market very different today. The current layers and complexity of the formulas used to allocate revenue among stakeholders create problems and in many cases are outdated. Examples are discussed in the "Current Situational Analysis" section of this Pari-Mutuel Evaluation report. There are reasonable solutions rather than thousands of distribution patterns depending on archaic rules built over time to address changing market fundamentals.
    a. It is important that stakeholders agree beforehand that this is *not* the time to jockey to improve one's position; it is time to simplify the process and equitably distribute revenue to the stakeholders. This effort should be stakeholder-driven given the seemingly unanimous consensus for such a simplification.

b. Take complex formulas and consider simplification like the existing allocation of market origin fees and/or examine the past-three-year average percentages to stakeholders and create one formula versus the complexity that exists. When examining the results, there appears to be little gained from the layers of formulas.

    i. One method would allow OTBs (as distributors) to keep a percentage of the net revenue (after host fees are deducted) and divide what remains to support live racing stakeholders based on a simple formula.

    ii. We believe most allocations can be refined to a percentage that will closely reflect the status quo on distribution while simplifying the process for future change. This method is outlined in detail in the report's analysis and in **Appendix M**.

    iii. The benefits discussed in the analysis include:

        - Eliminates varying interpretations
        - Minimizes mistakes, reduces "gamesmanship" of the rules
        - Allows entities to focus on maximizing handle/revenue and thus State taxes
        - Fixes antiquated statutes
        - Facilitates future change and eliminates some unintended consequences
        - Removes barriers to growing handle as discussed in several sections of this report

c. The new statutes should position the industry to avoid too much "gamesmanship" of the political process and avoid multiple interpretations and applications of the laws. The new statutes will alleviate many of the problems cited by stakeholders in this report and create simplified distribution schedules to work from as the market fundamentals continue to change and challenge the industry, which needs to adapt more readily to those changes.

d. As part of the process of simplification, the statutes should permit changes in the future (without law changes) when the affected stakeholders can agree to modifications. For example, the 2018 Maryland Code, Business Regulation, Title 11, Horse Racing §11-515.1, permits changes to the amounts distributed to purses when agreed upon by stakeholders and does not necessitate a statute change. The code states: "amount of the takeout relating to purses, the Maryland-Bred Race Fund, and the amount retained by the licensee may be allocated in accordance with the terms of a written agreement signed by the authorized representatives of"[298] licensee, owners/trainer association and breeder association.

    i. A change as described in paragraph d above would have no negative impact on the State and would apply only to the allocation of funds among industry stakeholders. Allow stakeholders to experiment with reallocation of their funds without statute changes permits experimentation to improve the overall economics of the horse racing industry. If a net gain is not realized, such

[298] "2018 Maryland Code, Business Regulation – Title 11." http://mgaleg.maryland.gov/mgawebsite/Laws/StatuteText?article=gbr&section=11-515.1&enactments=false

agreements can easily revert to the status quo. This in turn may benefit the State directly with marginal increases in pari-mutuel tax or indirectly with improved economic impact benefits.

e. By adopting language like the Maryland Code above, changes can be made without rewriting statutes, and New York can more easily avoid having archaic distribution models. Past benchmarking to an outdated model has hindered growth at times. The affected parties can even agree to short-term changes to see if the net gain for everyone improves.

f. We believe that if rules are simplified and can be easily changed by contractual agreements, there will be opportunities to re-evaluate current distributions where entities that were formerly adversarial will be able to easily attempt modifications to improve the overall revenue and find ways to share in incremental gains of revenue.

g. While the process is complicated, if done with cooperative motives there is already a unanimous consensus among stakeholders supporting this type of change. While the state will benefit indirectly, if the industry benefits, we also realize there are limited state resources to undertake such an effort. Therefore, it is our recommendation that the industry lead this effort and present the State with simplified statutes to address the issues outlined. If the existing stakeholders cannot reach a consensus on a process, we believe it is an important enough task to accomplish that the industry consider when an independent third party should be funded and tasked with the process.

2. Increase the market origin fee from 5.0 percent to 6.5 percent or 6.0 percent and reallocate the percentages to the various stakeholders. Spectrum Gaming recommends most of any increase should be allocated to support the horse racing industry, which is consistent with the analysis and other recommendations. Racing integrity and wagering integrity are vital to all parties taking wagers, and the ADWs benefit and thus should share in those costs. Both the State and the NYSGC would realize a gain of almost $500,000 per year. All stakeholders will gain revenue, and out-of-state ADW should provide more of the cost of regulation as handle shifts to those entities. **Appendix O** shows the suggested revised schedules and reallocation percentages. The appendix also shows each revised allocation based on actual 2019 ADW handle. Most if not all the increases should go to support the live racing industry.

3. One entity/agent should negotiate statewide host fees on behalf of New York, and the law should be amended to require out-of-state entities to negotiate with this entity for access to the New York market. Wagers on New York races are more than 20 percent of all wagers nationwide. New York residents' wagers are more than 10.5 percent of all wagers nationwide. New York needs to exploit its power of buyers and power of suppliers in negotiation for host fees, which have been rising and have lowered margins for everyone, especially New York harness tracks and OTBs. Every stakeholder can benefit from this recommendation, including the municipalities, because the revenue margins on wagers taken from out-of-state providers will increase.

    a. Spectrum sees only one impediment that would derail this recommendation – industry stakeholders unable to agree on the party in charge of the negotiations because of historical mistrust among stakeholders.

    b. NYRA is the logical entity to be part of the process to represent the State because its market power based on wagering handle is greatest. A small, representative board could be created to act as the agent to buy horse racing content (out-of-state imports) on behalf of all New York racing's stakeholders.

c. The entire industry can benefit. Each stakeholder will see more revenue. A stronger industry has a positive impact on the state's economic benefits from horse racing. Less money leaves the state if host fees are reduced. Past New York studies have documented the negative effects of the rising host fees charged by out-of-state content providers.

4. If an OTB system were being designed from the start, a complete restructure of the New York OTBs like what is found outside of New York would be recommended. A major impediment to such a change would be the health insurance and pension liability of the existing OTBs. There would also be a loss of jobs. We have included other alternatives because past studies have indicated this would be an unlikely outcome. See **Appendix N** for examples of structures in other states. Spectrum does not believe complete closure of the OTB system is in the best interest of the state or the horse racing industry, which is already facing challenges of declining handle. Alternative gaming and or consolidation would be the better alternatives for stakeholders.

    a. Consolidation of the OTBs given the state's policy changes for some OTBs and the competitive environment is one option. As noted in this report, Governor Cuomo's 2019-2020 budget proposal suggested allowing OTBs to get out of horse betting entirely or merge with other OTBs. Merging all OTB operations under one efficient and effective operator would be a viable alternative. (An assessment of which OTB operator best suited for this was not a focus of this report).

    b. A similar option would be to re-structure the OTBs with racetracks as the operators, as is done in other states, while allowing the OTBs the ability to get out of the horse racing business.

    c. Cutting contributions to municipalities and/or racing are not viable alternatives to save the existing OTBs.

5. Include racetracks and OTBs in any expansion of sports wagering, as New York racetracks have taken wagers since 1940 and OTBs have taken bets since 1971. *(Because this option has failed several times, an alternative is offered in number 6 below.)* This is a competitive issue: Tracks and OTBs would have only one sport to wager on while their competition would accept wagers on an almost unlimited number of options. As OTBs cannot cut their way to profitability, offering only one product while competitors can offer a large menu of options does not position them as competitive suppliers to the players seeking continuous and multiple wagering opportunities. We agree with the New York State Comptroller's reports that it is the "right time to re-examine how OTBs fit into State-authorized gambling."

    a. The racetracks and OTBs can benefit from cross marketing to patrons; increased traffic and exposure to racing will provide "filler content" (content for patrons to wager on while other sports' games take place).

    b. Cross marketing of sports can help everyone; require other sports wagering outlets to offer horse racing, and racetracks, and OTBs will offer other sports.

    c. This recommendation assists OTBs with the revenue to help support the State, municipalities, and racing.

    d. Sports wagering for the NYRA franchise adds value to this State asset.

6. If allowing racetracks and OTBs to offer fixed-odds sports wagering is not feasible, an alternative would be to allow the New York pari-mutuel industry exclusive rights to pari-mutuel (non-horse racing) sports wagering via a revision of N.Y. PML. The pari-mutuel industry could offer "exotic"

type wagers like those in horse racing that the traditional sportsbooks would not want to offer due to the risk. The pari-mutuel takeout for such wagers should be reduced to allow the racetracks and OTBs to offer competitive pari-mutuel sports wagers. For example, a superfecta wager involving picking the total points scored (from given ranges) in each quarter of a football game. The options for different exotic-type wagers are unlimited and could be designed to the players' needs and wants but still fit within current pari-mutuel wagering rules. The sportsbooks and racetracks/OTBs should cross-market both product lines to increase revenue to the State.

   a. Pari-mutuel sports wagering has not been offered in this country, so projections of total revenue would be speculative. But as a new product that would offer players many options, New York State could be innovative and generate additional revenue. The takeout for those types of wagers should be low but include a pari-mutuel tax as any other pari-mutuel wager would.

7. While the allocation of the revenues may vary by each jurisdiction, all OTBs should have equal competitive gaming products to offer. VLTs changed the revenue model for the three OTBs and positioned them to better support the municipalities. Capital and Catskill OTBs should receive some VLT revenue to create competitive parity with the other three OTBs if OTBs are not consolidated. As noted in the report, efforts to allow the two OTBs VLT operations have been resisted and failed often in the past.

   a. Capital OTB is an example of an operation that has managed the pari-mutuel operation well, given the challenging market fundamentals. All OTBs that are (or have been) granted auxiliary revenue from VLTs should be accountable to the State to manage the pari-mutuel side of the business and make sure they are still making every effort to grow handle while managing expenses and not relying solely on VLTs.

   b. Five OTBs simply surviving on horse race wagering without other varieties of wagering products would be extremely difficult, given the competitive advantages the national ADWs have and the dramatic market fundamentals that have changed, as discussed throughout this report. Without some modifications to the product line, restructuring off-track wagering in New York and eliminating the OTB corporations as an intermediary would be the alternative. (See recommendation No. 4 in this list.)

8. Make surcharges a business decision. As discussed in the report, when surcharges were established 46 years ago the pari-mutuel wagering competitive environment was very different and the reason for such a barrier no longer is applicable. The OTBs should be able to manage surcharges to maximize the revenue to help achieve their intended purpose. For example, with variable surcharges the OTBs could offer no-surcharge wagers on lower-cost and higher-revenue-margin products. Like airlines, OTBs could have levels of wagering in which players who achieve better status would pay lower or no surcharges. The purpose of this recommendation is to provide a change that can increase overall revenue if managed well. As an OTB improves the bottom line by proper management of the surcharges, consideration to maintain the benefit the municipalities/counties received from surcharges should be protected.

   a. Spectrum also sees an opportunity for the OTBs to better manage the profit margins of the various products. The net revenue on a wager varies based on the takeout, the host fee, and other statutory payments. By positioning higher-profit-margin race products better or offering incentives for patrons to wager on those products, the net revenue for the OTB will improve. For example, a "win" wager on a southern California track has a small profit margin for the OTB due to the high host fee and low takeout. On the other

hand, an "exotic" wager on many other tracks has low host fees and high takeout, making the profit margin for the OTB significantly higher on a wager of the same amount.

9. Recapture some lost revenue for the city, State, and industry by opening the New York City off-track wagering market. As noted in the report, the December 2010 closure of OTB facilities in New York City resulted in a 30 percent decline in wagering business in the city. Some of the handle was recaptured with the convenience of ADWs, but the cash wagers and casual social or leisure wagers made at typical OTBs were never absorbed by other options, which represents lost revenue for the State and the horse industry. Spectrum believes the estimate of the opportunity of $130 million in handle is very conservative based on the examination of the amount of New York City OTB handle that most likely has already been recaptured. Horse players that did not shift their wagering elsewhere by 2015 most likely have found other options for their discretionary income. If a well-run OTB system is in place in the city, revenue will be captured due to the broader exposure, niche product, social aspects of the OTB and a more modern approach.
    a. There are two ways to open the off-track wagering in New York City.
        i. Permit NYRA to run and manage the New York City OTB. Alternatively, streamline the existing process with a clear, easy path for NYRA to open teletheaters and preferably EZBets as well. Because NYRA is a State asset – not a for-profit racetrack like others – it would benefit the State to add value to the franchise while also allowing the State and the horse racing industry to gain from the additional wagering lost because of the closure of the OTB in 2010. This option closely resembles most other OTB models in other states, allowing the industry to maximize the benefits of the off-track wagering and minimizing the cost of operations while growing revenues for the State and industry.
        ii. The second preferred option to open the market is to allow a consolidated OTB operator (see 4a above) to open the city off-track wagering market.
        iii. With either option, New York City will receive benefits (as will the State). This will maintain the original intent of the law creating the OTBs in 1970. Opening the New York City market will also increase pari-mutuel tax for the State.
10. OTBs made a forecast on nighttime Thoroughbred simulcast years ago when the market was different. Maintenance-of-effort or hold-harmless payments are benchmarked to handle 18 years ago when handle and the market fundamentals were very different. We suggest changing the benchmarks to realistic trends in the industry. For example, the maintenance-of-effort payments could be tied to a three-to-five-year moving average of national handle and New York harness handle. This would tie payments to trends that are realistic rather than decades old. Similarly, the hold-harmless payments from VLTs for tracks could be tied to trends of VLTs and benchmarked to the growth or decline of VLT revenues instead of 2013 numbers, which become more outdated with time. By doing this, any loss incurred to harness tracks from the changes in maintenance-of-effort payments most likely will be more than covered by VLT hold-harmless adjustments. Regardless of the future trends, the newer hold-harmless payments will and should go up or down as the market fundamentals change in either industry. Tying payments to fixed days in time does not allow for reasonable adjustments when we know that as we move forward, we will continually see changes in the gaming industry and the competitive environment. (Note: the COVID-19 impact is an example of how a benchmark to revenue 20 years ago could also negatively impact the VLT operator.)

11. Allow all entities to wager on any racing products (signals). Amend §1015 to permit Thoroughbred racetracks to accept wages on all out-of-state harness horse racing signals. It will increase overall revenues and pari-mutuel tax, and equitable sharing of incremental revenues should be negotiated. With the market fundamentals shifting and ADWs gaining in market share, not allowing some entities the ability to take all racing products puts them at a competitive disadvantage with out-of-state ADW operators and lowers overall state handle and taxes. Laws that restrict some New York pari-mutuel operators from taking out-of-state harness racing, Quarter Horse racing, or other products are outdated.

    a. In addition, both Standardbred and Thoroughbred race rules should be consistent in the number of betting interests required to conduct certain wager types. Also, both breeds should also be permitted to host the same wagering pools (types of bets). Allowing this is also an opportunity to increase wagering, revenues and State taxes.

    b. In addition, allow simulcasting of Quarter Horse racing from out of state for all New York wagering distributors. The State and the industry are losing revenue to out-of-state ADWs that can offer all breeds of horse races for simulcast wagers.

12. We believe that when implementing recommendation No. 1 (the revision of laws pertaining to distribution models), proration allocations should be changed to reflect the common pool wagering environment today. Rates should be based on net revenue (host takeout minus host fees). Distribution percentages of revenue for New York stakeholders should not change because of increases made in host fees by out-of-state content providers.

13. As reviewed in the "Other Market Fundamentals" section of this report, the cost of doing business in New York has become a barrier to attracting more horsemen to the state, hurting the state economically. When revenue and statute redistribution is reviewed, consideration of this fact could be deliberated in allocations of incremental revenues from other recommendations in this report. For example, if the recommendation to increase the market origin fee is implemented, gains from market origin fees to purses could be allocated to relieve total costs (including the Jockey Injury Compensation Fund, the NYRA surcharge, and the NYRA premium) instead.

14. The Tax Law §1617-a designates that Resorts World New York City allocate machines (exclusively electronic table games) that are the best-performing machines as those designated for OTBs while the remaining machines are those used for calculations for the "Purse Support Payments." As demonstrated in the "Current Situational Analysis" section of this Pari-Mutuel Evaluation report, the machine allocations have resulted in severe losses to the "racing support payments" and eliminated any hope of growth for those funds. From 2017 to 2019, Nassau OTB revenue from RWNYC increased 39 percent (with a portion of that used to erase the OTB's operational deficit from pari-mutuel) while the purses decreased 3 percent. The weighted average for NYRA purses from VLTs dropped from 7.5 percent to 5.5 percent. Likewise, the other three components of the "racing support payments" decreased in total and as a weighted average percentage from VLT sources. (See **Appendix P**.) While there will be some gain for the racing industry from VLT revenue once the RWNYC hotel expansion is complete, that gain is minimal compared to the declines from the Nassau VLT gains.

    a. The horsemen and breeders' associations both suggested that to correct this unfair re-allocation the 2013 cap could be removed or raised to 2015 levels. We agree that is one potential solution that would aid the state's horse industry. Or a moving benchmark as discussed in recommendation No. 10 above.

b. Alternatively, the daily win per unit for all machines (times the appropriate number of machines) should be used to calculate the allocation of "racing support payments" after adjusting for Nassau County support but not to offset an OTB deficit. It would allow for payments to fluctuate with business cycles but also provide a fairer interpretation of the intent to support live racing, which is critical to the economic impact the industry creates for the state. Nassau County should continue to be supported at a reasonable level (this has significantly increased since the inception while racing has been negatively impacted.) We do not believe decreasing the "racing support payments" to offset Nassau OTB's growing pari-mutuel deficit by the higher WPU is best for the State's long-term benefits from pari-mutuel wagering. (The State's share could remain the same.)

c. Either of the changes would help the Thoroughbred racing industry compete with other jurisdictions for horses, owners, and breeders to race in New York and increase the state's overall impact from racing.

15. Due to the continued shifting of wagering handle, amend the PML pertaining to Thoroughbred exported out-of-state simulcasting (§238(1)(b)(c)) to allocate a small portion of compensation to the State (or toward the cost of regulation) and the breeders' funds. Examples from the Maryland and California codes are two methods mentioned in this report as to how they allocate such funds. Or consideration could be given to distributing that compensation proportionally, in a fashion similar to how the average takeout from live racing is distributed. Similar changes can be made regarding the Standardbred exported out-of-state simulcasting (§318) compensation.

16. There were a few recommendations from the 2010 and 2015 OTB studies and reports reviewed.

    a. If privatizing or total consolidation does not occur due to the complexity and resistance, economies of scale, efficient upper managerial structure and other savings could be realized. Absent that, we believe there are some areas where the OTBs working together would result in savings.

    b. A single network hub or a common tote contract for all the OTBs would result in savings and efficiency, especially if it extended statewide to include all tracks and/or is coupled with the recommendation in part (c) below. California, for example, has one tote company for the entire state's pari-mutuel wagering, and a similar approach in New York would result in savings for the pari-mutuel industry in New York. The arguments we heard against this idea were minor and easily overcome. This has been continuously recommended in past reports but not acted upon by the OTBs.

    c. The five OTBs would have better results given the new market fundamentals if they combined their ADW operations into one. Given that ADW is the growing segment of the pari-mutuel industry, the OTBs can manage the revenue share in a way to keep everyone – at a minimum – equal to their current revenue from ADW and manage agreements to share in the incremental revenue. Another alternative would be to split revenues by residency.

        i. OTBs must compete in the ADW market with large, well-established national firms that include Twin Spires, TVG, Xpressbet and others. While the national firms will always have a competitive advantage, a consolidation of OTBs' ADW efforts would allow them to reduce costs and be more effective.

ii. The OTB/ADW hub can locate anywhere at one site with lower costs, consolidate networks, and be more competitive in the one area showing pari-mutuel handle growth, ADW.

d. Given the steady decline in the percentage of OTB wagers that are placed on live New York State races, we concur with the Task Force recommendation to "(a)mend the PML to require OTBs to prominently display and give preference in all branches and simulcasting (including in-home) to all live NYS races."[299]

17. Until other relief (as applicable in the recommendations above) is implemented, OTBs that are behind in payments to racing industry stakeholders should be permitted to pay statutory payments to racetracks – if they are behind in paying them – from the Capital Acquisition Fund. In the short term, that would be a more resourceful use of the funds instead of forcing capital investment with no return on investment or no gain for the state. In the event of another OTB bankruptcy any loss in payments to the industry and state would hurt the already struggling horse racing industry.

18. The horse racing and breeding industry needs to focus not only on strengthening live racing but also on how to better distribute support payments to increase the benefit to the State. (Several examples in **Appendix Q** demonstrate several categories in which the non-statutory-related distribution schedules of breeders' awards and purses are distributed to a small population of participants.) The appendix further explains the importance of how the purses and awards are distributed. The goal should be to:

    a. Attract more horses, horse owners, and trainers (along with the concomitant infrastructure) to the state.

    b. Increase the total amount wagered, as that in turn will enhance the economic and fiscal benefits of racing.

Changes to the distribution schedules that would make it more attractive to compete in New York would help the industry, which in turn benefits the State.

2. Effect of Modification of Live Racing Requirements

Recent changes in race days in New York have not had a severe negative impact on purses, breeders' awards, or the breeding industry, but a large-scale immediate change could have lasting negative impacts. Large-scale changes in the quantity of live racing, if implemented in a short period of time, could create a situation that harms the breeding industry and the number of horses participating in racing in New York. Therefore, Spectrum's overall recommendation is that incremental changes to race days and number of races be allowed, with an industrywide, mutually acceptable, set of metrics to evaluate the resulting impacts. The ongoing results are then used to make future adjustments. Such a process would be more analytical then present negotiations, formalize the process and provide transparency to a critical decision process impacting the industry and the state.

1. Race days/races – The racing industry must change, and New York has an opportunity to be innovative and lead the industry in an analytical approach to determining future race days and

[299] Ibid., p. 3.

number of races per year/meet. We believe there are three important pillars to all the race day recommendations and impacts of such changes:

a. The changes are made incrementally.

b. The effects must be monitored, and metrics established beforehand. **Appendix R** along with the discussion in the report, gives suggestions for some metrics to be used.

c. The key industry stakeholders (breeders, horsemen, tracks) must cooperate in establishing the metrics and agree that those metrics will help determine the direction of future changes. In addition, it is important that the most important stakeholder, the wagering patron, is considered when establishing metrics that affect the product they wager on. The state is also impacted, and decisions of this nature affect handle and the economic impact generated by the industry. If necessary, the NYSGC or appointed arbitrator could be established to negotiate any stalemate that may occur in the process/approval of changes.

d. An impediment to those three pillars is outdated statutes requiring a certain number of race days based on the number of race days decades ago. Decades ago, racing faced less competition and the breeding industry was producing many more racehorses. As noted in the report, there exist informal mechanisms currently but they should be more transparent and formalized.

2. Race days/races – Thoroughbred. The supply of racehorses has declined, as has the number of races. Nationally since 2009, average field size has declined from 8.3 to 7.9. New York has seen field size decline from 7.9 to 7.3 since then. Clearly, the cut in the number of races has not been enough to maintain a product that players prefer at certain times of the year.

    a. The NYRA operates three racetracks and runs races all 12 months. Clearly some days are dramatically better than others. Saturday is better than weekdays, and race days at Saratoga are better than race days at Aqueduct.

    b. We recommend a one-month closure of the Aqueduct winter meet (with full details of certain conditions and barriers to this recommendation outlined in the report). Prior to this change, the industry stakeholders should agree to a set of metrics that will measure past and current impacts and measure changes to help determine future race days and number of races to host. (See the "New York Race Days" section of the Pari-Mutuel Evaluation report and **Appendix R**) Currently, in order to implement such a suggestion, either the Franchise Agreement and statutes (§238(1)(d)(i)) would need to be changed or the NYSGC, NYTB and NYTHA would have to agree to such a recommendation.

    c. Finger Lakes stakeholders should agree on similar metrics discussed above and utilize them to manage race days and the number of races. The same type of monitoring of changes as outlined in **Appendix R** should be established for the Finger Lakes racing days. (Note: We did not have access to as much data for the Finger Lakes races as we did for the NYRA races to undertake a similar in-depth analysis. We do believe little, if any, reduction in days at Finger Lakes is needed, but if the metrics are established and monitored it would lead to similar analysis as outlined in the report and the appendix, and future race day changes could be better managed.)

    d. Once those metrics are established, if the stakeholders cannot agree on the interpretation of the metrics for the next year's allocation, the NYSGC or an appointed arbitrator could mediate.

3. Race days/races – Standardbred. Changing the Standardbred race days in New York will be more complex and challenging than changing Thoroughbred race days, but it is more necessary given the industry trends, and the upside may be greater.

    a. The Standardbred racing industry in New York is ideally positioned to move to only two or a maximum of three well-defined circuits that horsemen can participate in year-round (and never have to leave New York State). This would make a much better product, increase average purses to attract others to race in New York, and increase field size and the quality of the races. The current system of five quasi-circuits does not efficiently utilize the horse population statewide and more closely resembles one major circuit (Yonkers, only a half-mile track) with four minor league circuits.

    b. Unfortunately, there is resistance to change, and there are many barriers preventing this from being done. The changes needed to achieve significant gains are much more dramatic than what is outlined regarding Thoroughbred race day changes.

    c. Therefore, based on the difficulties of accomplishing change that would be most impactful, any small move to create better average purses and consolidate race opportunities to improve field size and quality of races would be the best alternative. Spectrum believes that while this is achievable, it will not be enough to make meaningful positive impact. Without the type of sweeping changes needed to achieve the racing circuits, we forecast that Standardbred racing will continue to rely on VLTs as its sole source of meaningful purse revenue.

While the industry contributes significant economic impact to New York, Spectrum believes it is imperative that serious efforts must be made to increase wagering and make sure wagering dollars make proper contributions to live racing. As market fundamentals evolve, if the revenue (purses, breeders awards, etc.) becomes less tied to live racing, in the long-term New York will no doubt end up with much less racing and thus New York State will end up with fewer economic benefits from racing.

Adoption of these recommendations would help the State, the New York horse racing industry, and the primary stakeholders. In light of continued negative press for the horse racing industry, changing social norms, and the industry's need to maintain a social license to operate, it is imperative for the racing industry to work on a number of these recommendations. We note that a few of the recommendations do not require statutory changes.

Making the racing product more attractive, keeping revenues in state, growing wagering on racing, and maintaining the critical support any wager makes to live racing will, in the long term, help maintain and hopefully grow the industry and the essential economic impact for the state. To move in directions that are counter to those goals would make evaluation of support for racing by public policymakers more difficult.