

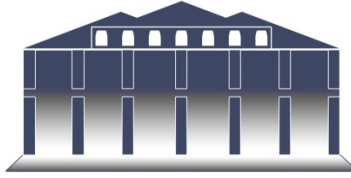
# **Options Exist for Increasing Lottery Proceeds for Education**



**Final Report to the Joint Legislative  
Program Evaluation Oversight Committee**

**Report Number 2017-03**

**May 1, 2017**



Program Evaluation Division  
North Carolina General Assembly  
Legislative Office Building, Suite 100  
300 North Salisbury Street  
Raleigh, NC 27603-5925  
919-301-1404  
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# NORTH CAROLINA GENERAL ASSEMBLY

## Legislative Services Office

Paul Coble, Legislative Services Officer

*Program Evaluation Division*  
300 N. Salisbury Street, Suite 100  
Raleigh, NC 27603-5925  
Tel. 919-301-1404 Fax 919-301-1406

*John W. Turcotte*  
Director

May 1, 2017

Members of the Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Honorable Members:

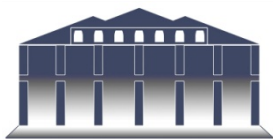
The Joint Legislative Program Evaluation Oversight Committee's 2015–17 Work Plan directed the Program Evaluation Division to evaluate whether the North Carolina State Lottery is providing the maximum benefit to the State by examining its operations, existing revenue-generating strategies, and efforts to reduce costs.

I am pleased to report that the NC Lottery cooperated with us fully and was at all times courteous to our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "J. W. Turcotte", written in a cursive style.

John W. Turcotte  
Director



# PROGRAM EVALUATION DIVISION

## NORTH CAROLINA GENERAL ASSEMBLY

May 2017

Report No. 2017-03

## Options Exist for Increasing Lottery Proceeds for Education

### Summary

As directed by the Joint Legislative Program Evaluation Oversight Committee, the Program Evaluation Division evaluated whether the North Carolina State Lottery is providing the maximum benefit to the State by examining its operations, existing revenue-generating strategies, and efforts to reduce costs.

**Annual lottery revenues have steadily grown and performance is slightly above average compared with other states.** In Fiscal Year 2016, the NC Lottery produced total operating revenues of almost \$2.4 billion with a net income of \$634 million transferred to the Education Lottery Fund. Ticket sales and revenue returns to the State have increased in each of the Lottery's 10 years of complete operations. North Carolina ranks 18<sup>th</sup> (out of 44) in per capita sales and 14<sup>th</sup> (out of 34) in per capita net revenues returned to the state from traditional lottery ticket sales.

**Expanding the retailer network could increase lottery revenue.** Increasing the number of retailers that sell lottery tickets has the potential to increase revenue by making lottery products more readily available for purchase. The NC Lottery ranks 26<sup>th</sup> in retailer density among the 44 lottery states.

**Reducing the compensation paid to NC Lottery retailers could yield additional revenue.** North Carolina provides the 7<sup>th</sup> highest compensation paid to its lottery retailers among the 44 lottery states.

**Additional options with the potential to increase sales revenue and subsequent increased transfers to the NC Education Lottery Fund include authorizing Video Lottery Terminals and offering iLottery games online.** These actions would create more retailers resulting in more opportunities for purchasing lottery tickets and could boost sales among younger generations of players.

**Improved data collection and analysis methods could help the NC Lottery more effectively measure the influence of advertising on sales.** Presently, the Lottery does not have a model that measures or predicts the relationship between sales and advertising expenditures.

**To address these findings, the General Assembly should** (1) require the NC Lottery to establish targets for retailer growth and annually report on its performance in meeting these targets; (2) direct the Lottery to examine the retailer compensation structure for all games and consider developing alternatives to the current compensation structure; (3) direct the Lottery to provide a business case for options to increase lottery ticket sales; and (4) require the Lottery to annually report on the effectiveness of advertising expenditures on ticket sales.

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## Purpose and Scope

The North Carolina Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to undertake this evaluation as part of its 2015–17 Work Plan. This project evaluated whether the North Carolina State Lottery is providing the maximum benefit to the State by examining its operations, existing revenue-generating strategies, and efforts to reduce costs. The directive did not request that the Program Evaluation Division determine social impacts of the NC Lottery.

Three research questions guided this evaluation:

1. What does the NC Lottery do to maximize the net income it transfers to the State?
2. What do other states do to maximize lottery net income transferred to their respective states and how does North Carolina's performance compare?
3. What other options could the NC Lottery pursue to maximize net income transferred to the State?

The Program Evaluation Division collected data from several sources including

- interviews with and data queries of the NC Lottery;
- review of laws governing the regulation and reporting requirements for the NC Lottery;
- review of statutorily required annual financial and performance reports;
- review of professional association literature and academic journals; and
- interviews with evaluators of lottery programs in other states.

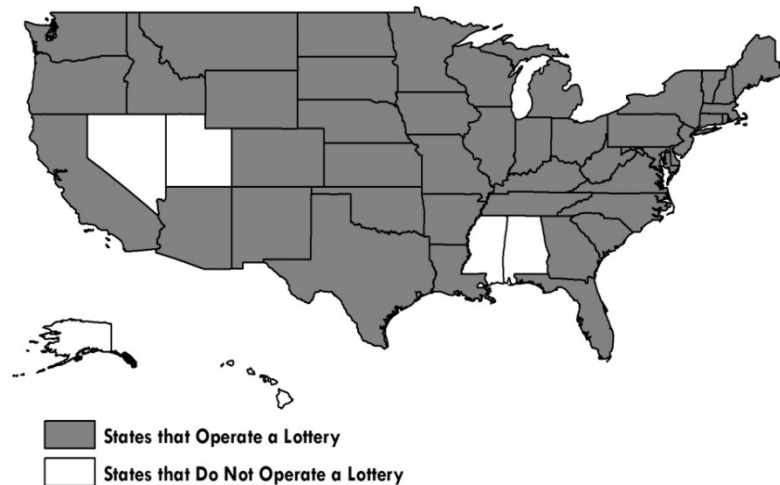
## Background

In August 2005, the North Carolina State Lottery Act and the 2005 Appropriations Act were signed into law, establishing the North Carolina State Lottery.<sup>1</sup> The North Carolina State Lottery is also known as the “North Carolina Education Lottery” (NCEL). In this report we will refer to the North Carolina State Lottery as simply the NC Lottery or the Lottery.

In the United States, 44 states operate a lottery. As shown in Exhibit 1, Alabama, Alaska, Hawaii, Mississippi, Nevada, and Utah are the only states without lotteries.<sup>2</sup>

### Exhibit 1

#### Forty-Four States Operate a Lottery



Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.

The mission of the NC Lottery is “to operate the lottery with the highest degree of integrity and security to maximize net revenues raised for the education programs identified by the legislature.”<sup>3</sup> To that end, the Lottery has returned over \$4.6 billion to the State for education purposes since its first day of sales on March 30, 2006. In Fiscal Year 2016, the NC Lottery produced total operating revenues of almost \$2.4 billion with a net income of over \$634 million transferred to the NC Education Lottery Fund.<sup>4</sup>

The two largest portions of the Lottery's revenue are directed towards prizes (62.4%) and earnings for education (26.5%). The relationship between these two categories of revenue distributions has changed over time. Initially, the percentage of revenue dedicated to prizes was 50%, whereas the percentage returned to education was 35%. Session Law 2007-323 gave the NC Lottery flexibility regarding the percentage of revenues dedicated to prize percentage payout in order to increase overall revenues and thus increase the money directed to fund education. Exhibit 2 depicts the distribution of lottery revenue in Fiscal Year 2016 and further shows the breakdown of allocations for education.

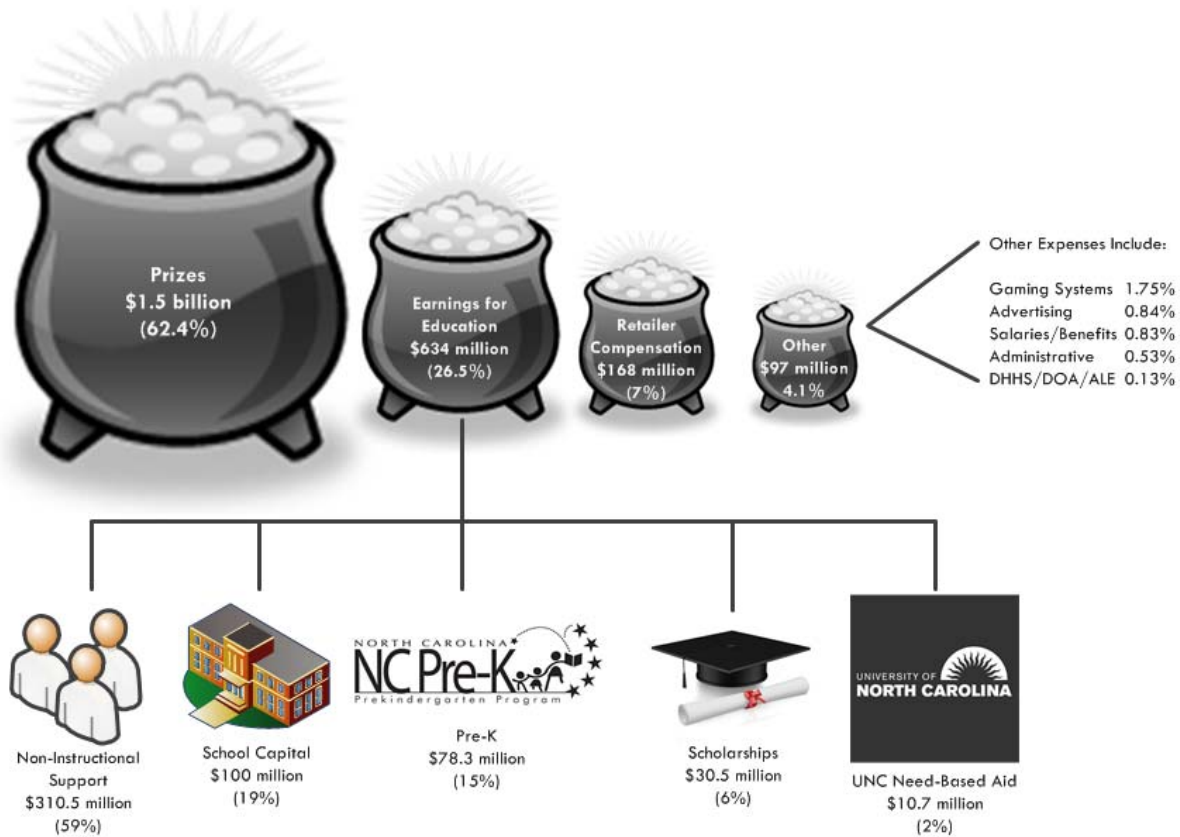
<sup>1</sup> N.C. Sess. Laws 2005-344 and 2005-276.

<sup>2</sup> This report only examined U.S. states; it did not examine any jurisdictions or territories such as Washington, D.C. or Puerto Rico.

<sup>3</sup> North Carolina Education Lottery Strategic Plan, 2015-2020.

<sup>4</sup> The largest Powerball jackpot in history, \$1.59 billion, occurred on January 13, 2016, which contributed to the NC Lottery's record sales in Fiscal Year 2016.

## Exhibit 2: Distribution of Lottery Revenue and Breakdown of Allocations for Education, FY 2016



Source: Program Evaluation Division based on financial data from the NC Lottery.

**Lottery ticket sales generally increase as prize payout percentages increase.** In one study, the Georgia Lottery concluded that sales and profits have increased significantly for every state that has raised payouts.<sup>5</sup> The Massachusetts State Lottery, which ranked first in per capita sales in Fiscal Year 2015, also had the highest prize payout percentage for instant ticket games (76%) among the 39 states that reported this figure to the North American Association of State and Provincial Lotteries (NASPL).<sup>6</sup> The NC Lottery ranked 16<sup>th</sup> in payout percentage in Fiscal Year 2015 with a prize payout percentage of 69% for instant games and 50% for draw games. The average for the 39 reporting lottery states was 68.3% for instant games and 52% for draw games, meaning the NC Lottery's payout percentage was slightly higher than the average of other states for instant games and below the average of other states for draw games.

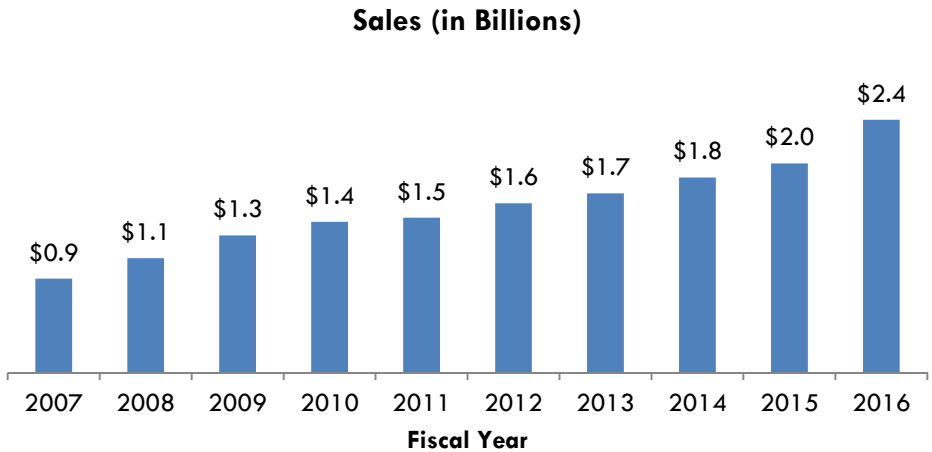
Exhibit 3 shows NC Lottery sales increasing in each of its 10 years of complete operations. Appendix A in this report provides a condensed history of the NC Lottery's revenues and expenses for the 10 full years of operations (Fiscal Years 2007–2016).

<sup>5</sup> *Profit Optimization for Georgia Education, The Impact of Prize Payouts on Returns to Education*, prepared by the Georgia State Lottery.

<sup>6</sup> Five of the 44 states with lotteries (Illinois, Kansas, Ohio, Oklahoma, and Wyoming) did not report their prize payout percentages to NASPL. NASPL data is self-reported by state lotteries.

### Exhibit 3

Lottery Sales Have Increased Every Year Since the NC Lottery Began

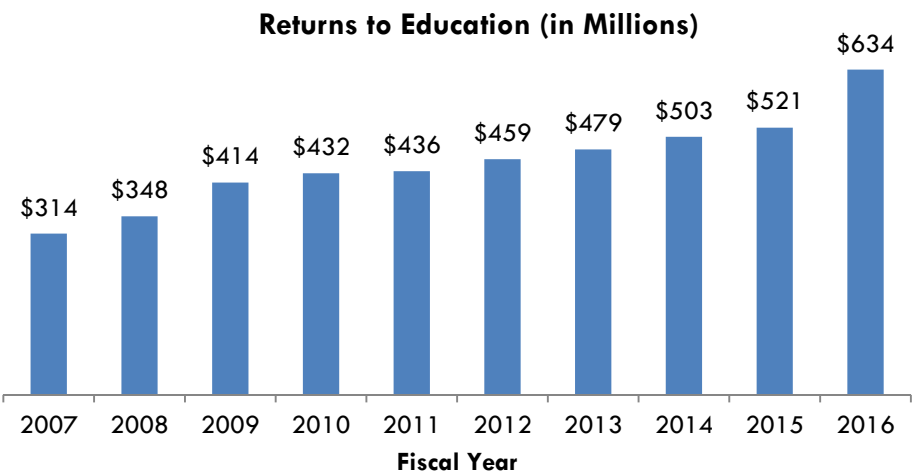


Source: Program Evaluation Division based on financial data from the NC Lottery.

Exhibit 4 shows NC Lottery returns to the State increasing in each of its 10 years of complete operations.

### Exhibit 4

Lottery Returns to the State Have Increased Every Year Since the NC Lottery Began



Source: Program Evaluation Division based on financial data from the NC Lottery.

**Revenues generated by the Lottery are based on ticket sales related to two basic types of games: (1) instant scratch-off games and (2) draw games.** Appendix B in this report provides a history of NC Lottery ticket sales by game for the 10 full years of operations (Fiscal Years 2007–2016). Instant scratch-off games generated \$1.6 billion of the Lottery’s operating revenues in Fiscal Year 2016 and accounted for about 68% of total ticket sales. The Lottery launches approximately 50 new instant scratch-off games annually. These games are available at price points of \$1, \$2, \$3, \$5, \$10, \$20, and \$30 tickets with multiple play styles and designs. Examples of some of the current instant scratch-off games available for sale by NC Lottery retailers are shown in Exhibit 5.



## Exhibit 5: Examples of Instant Ticket Games Sold by the NC Lottery



Source: Program Evaluation Division based on the NC Lottery website.

Draw games generated sales of \$766 million in Fiscal Year 2016 and represent the remaining 32% of operating revenues. Some draw games are multi-state, such as Powerball, Mega Millions, and Lucky for Life, whereas some are only in-state (Pick 3, Pick 4, and Cash 5 with an EZ Match additive). Appendix C provides a brief description of the games currently offered by the NC Lottery.

The NC Lottery has a history of actively managing operations to increase net revenue. For example, various scratch-off and draw games are introduced annually. In addition, a subscription program offering online sales of Powerball, Mega Millions, and Carolina Cash 5 was launched in December 2013, and Play at the Pump was introduced in January 2015. Play at the Pump allows players to purchase Powerball, Mega Millions, or Carolina Cash 5 tickets through debit purchase at the gas pump at about 200 locations. The NC Lottery also plans to begin offering Keno games during 2017. Exhibit 6 provides a representative overview of revenue-generating activities that have been employed by the NC Lottery since its inception.

## Exhibit 6

### Timeline of Revenue-Generating Activities Undertaken by the NC Lottery

<b>2006</b>	March 2006 – First day of ticket sales; scratch ticket games offered at \$1, \$2, and \$5 price points.
	May 2006 – Powerball added.
	October 2006 – Carolina Pick 3 and Carolina Cash 5 added; \$10 instant ticket game added.
<b>2007</b>	July 2007 – Session Law 2007-323 removes requirement to return 35% to education by making it a guideline, allowing the Lottery to increase the prize payout for instant tickets beginning in January 2008.
<b>2009</b>	April 2009 – Carolina Pick 4 added.
	October 2009 – \$20 instant ticket game added.
<b>2010</b>	January 2010 – Mega Millions added.
<b>2013</b>	December 2013 – Subscription program launched.
<b>2014</b>	September 2014 – All or Nothing in-state draw game added.
<b>2015</b>	January 2015 – Play at the Pump program introduced, selling Powerball, Mega Millions, and Carolina Cash 5 at certain gas station pumps.
	September 2015 – \$30 instant ticket game added.
<b>2016</b>	February 2016 – Lucky for Life, a multi-state draw game, added.

Source: Program Evaluation Division based on data from the NC Lottery.

The NC Lottery operates with about 260 employees located across six regional offices in Asheville, Charlotte, Greensboro, Greenville, Raleigh, and Wilmington.<sup>7</sup> Lottery retailers, such as gas stations, convenience stores, and grocery stores, directly sell tickets to consumers. There were 6,874 active retailers selling lottery tickets across the state as of December 10, 2016.

The NC Lottery is governed by a 9-member North Carolina State Lottery Commission.<sup>8</sup> Five members are appointed by the Governor, two by the President Pro Tempore of the Senate and two by the Speaker of the House of Representatives. Members serve staggered five-year terms.

<sup>7</sup> The majority of Lottery employees work in the Raleigh Central Office. Employees work in one of nine divisions: sales, administration, security, brand management, MIS/gaming, human resources, audit and legal, finance, and the executive team.

<sup>8</sup> N.C. Gen. Stat. § 18C-111.

There is also a Joint Legislative Oversight Committee on the North Carolina State Lottery.<sup>9</sup> The Committee consists of 14 members: seven members of the Senate appointed by the President Pro Tempore of the Senate, at least one of whom is a member of the minority party, and seven members of the House of Representatives appointed by the Speaker of the House of Representatives, at least one of whom is a member of the minority party. Terms on the Committee are for two years and begin on the convening of the General Assembly in each odd-numbered year.

In summary, the NC Lottery has grown to become a \$2 billion business since beginning operations in 2006. Total revenue and subsequent returns to the State for education purposes have increased every year over 10 full years of operations. However, it is essential that the NC Lottery continues to examine its operations by reviewing revenue-generating strategies and efforts to reduce costs, thereby providing the maximum benefit to the State. This evaluation provided an opportunity to examine the ways in which the NC Lottery can continue to increase the amount of funds it returns to the State for educational purposes. The following findings and recommendations detail strategies meant to aid the Lottery in pursuing its mission.

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## Findings

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### **Finding 1. The NC Lottery's performance is slightly above average when compared with other states.**

Two significant performance metrics used in the lottery industry are per capita sales and per capita net revenues returned to the State. Details for each state's performance and ranking on these metrics are provided in Exhibit 7.<sup>10</sup> As shown, in Fiscal Year 2015 the NC Lottery ranked 18<sup>th</sup> and 14<sup>th</sup> on these two measures, respectively.<sup>11</sup> As stated in its 2015 Strategic Plan, the NC Lottery's goal is to be ranked among the top 12 lottery states in both of these categories within the next five years.

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<sup>9</sup> N.C. Gen. Stat. § 120-295.

<sup>10</sup> The Program Evaluation Division's primary source for data on other states was La Fleur's World Lottery Almanac, 2016 Edition. It contains self-reported data compiled from surveys sent to all lottery organizations. La Fleur's is considered an authoritative source for lottery data.

<sup>11</sup> Fiscal Year 2015 data is the most recent data available for these two performance measures at the time of this evaluation. All 44 lottery states reported per capita sales data. The Program Evaluation Division excluded from its per capita returns to the state rankings nine lotteries that also received revenue from video lottery terminals or casinos in order to measure returns to the state solely derived from traditional lottery tickets sales (Wyoming was also excluded; it did not report any returns to the state for Fiscal Year 2015 because it only began lottery operations in August 2014). Therefore, North Carolina ranked 14<sup>th</sup> out of 34 states when being compared to other states on returns from traditional lottery ticket sales.

## Exhibit 7: NC Lottery Ranked 18<sup>th</sup> Out of 44 States in Per Capita Sales and 14<sup>th</sup> Out of 34 States in Per Capita Returns to the State from Traditional Lottery Ticket Sales, Fiscal Year 2015

State (Year of Inception)	Population (in millions)	Traditional Ticket Sales (in millions)	Returns to State (in millions)	Per Capita Sales	Sales Rank	Per Capita Returns	Returns Rank
Massachusetts (1972)	6.8	\$ 5,005.7	\$ 985.9	\$ 736.1	1	\$ 145.0	1
<b>Georgia (1993)</b>	<b>10.2</b>	<b>3,903.5</b>	<b>980.5</b>	<b>382.7</b>	<b>2</b>	<b>96.1</b>	<b>3</b>
New York (1967)	19.8	7,251.0	Includes VLTs	366.2	3	-	-
New Jersey (1970)	9.0	3,027.3	960.0	336.4	4	106.7	2
Connecticut (1972)	3.6	1,144.0	324.4	317.8	5	90.1	4
Ohio (1974)	11.6	3,665.0	Includes VLTs	315.9	6	-	-
Pennsylvania (1972)	12.8	3,819.6	1,060.9	298.4	7	82.9	5
Maryland (1973)	6.0	1,760.9	Includes VLTs	293.5	8	-	-
<b>South Carolina (2002)</b>	<b>4.9</b>	<b>1,401.7</b>	<b>343.5</b>	<b>286.1</b>	<b>9</b>	<b>70.1</b>	<b>8</b>
Michigan (1972)	9.9	2,771.9	799.4	280.0	10	80.7	6
Florida (1988)	20.3	5,583.3	1,496.4	275.0	11	73.7	7
Rhode Island (1974)	1.1	243.1	Includes VLTs	221.0	12	-	-
Illinois (1974)	12.9	2,837.8	743.9	220.0	13	57.7	10
<b>Virginia (1988)</b>	<b>8.4</b>	<b>1,843.9</b>	<b>533.8</b>	<b>219.5</b>	<b>14</b>	<b>63.5</b>	<b>9</b>
New Hampshire (1964)	1.3	281.1	74.3	216.2	15	57.2	11
<b>Tennessee (2004)</b>	<b>6.6</b>	<b>1,368.5</b>	<b>347.8</b>	<b>207.3</b>	<b>16</b>	<b>52.7</b>	<b>13</b>
<b>Kentucky (1989)</b>	<b>4.4</b>	<b>886.9</b>	<b>236.1</b>	<b>201.6</b>	<b>17</b>	<b>53.7</b>	<b>12</b>
<b>North Carolina (2006)</b>	<b>10.0</b>	<b>1,972.2</b>	<b>521.2</b>	<b>197.2</b>	<b>18</b>	<b>52.1</b>	<b>14</b>
Maine (1974)	1.3	253.1	54.7	194.7	19	42.1	17
Vermont (1978)	0.6	111.8	22.8	186.3	20	38.0	19
Missouri (1986)	6.1	1,127.4	271.3	184.8	21	44.5	16
Delaware (1975)	0.9	149.8	Includes VLTs	166.4	22	-	-
Texas (1992)	27.5	4,529.7	1,242.7	164.7	23	45.2	15
Indiana (1989)	6.6	1,040.7	242.7	157.7	24	36.8	20
California (1985)	39.1	5,524.9	1,364.5	141.3	25	34.9	21
Arkansas (2009)	3.0	408.7	72.8	136.2	26	24.3	26
Idaho (1989)	1.7	210.2	45.1	123.6	27	26.5	23
Arizona (1981)	6.8	750.0	176.0	110.3	28	25.9	24
Iowa (1985)	3.1	324.8	74.5	104.8	29	24.0	27
West Virginia (1986)	1.8	180.0	Includes VLTs	100.0	30	-	-
Minnesota (1990)	5.5	546.9	135.5	99.4	31	24.6	25
Wisconsin (1988)	5.8	574.6	167.6	99.1	32	28.9	22
Colorado (1983)	5.5	538.0	128.0	97.8	33	23.3	28
Louisiana (1991)	4.7	452.5	184.8	96.3	34	39.3	18
Kansas (1987)	2.9	250.0	Includes casinos	86.2	35	-	-
Nebraska (1993)	1.9	160.0	37.1	84.2	36	19.5	31
Washington (1982)	7.2	600.3	141.3	83.4	37	19.6	29
Oregon (1985)	4.0	318.3	Includes VLTs	79.6	38	-	-
New Mexico (1996)	2.1	137.0	41.1	65.2	39	19.6	30
South Dakota (1987)	0.9	51.2	Includes VLTs	56.9	40	-	-
Montana (1987)	1.0	52.3	12.4	52.3	41	12.4	33
Oklahoma (2005)	3.9	171.6	60.9	44.0	42	15.6	32
North Dakota (2004)	0.8	27.0	6.7	33.8	43	8.4	34
Wyoming (2014)	0.6	17.5	Not reported	29.2	44	-	-
<b>Averages</b>				<b>\$ 185.2</b>		<b>\$ 48.1</b>	

Note: States in bold are neighboring states to North Carolina that were used in a subgroup comparison.

Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.

The Program Evaluation Division compared the NC Lottery's performance to a subgroup of five other states with similar games and characteristics.<sup>12</sup> These states were Georgia, Kentucky, South Carolina, Tennessee, and Virginia. North Carolina and the neighboring states in the subgroup are displayed in bold in Exhibit 7. North Carolina ranked last among these states in per capita sales and in per capita net revenues returned to the state in Fiscal Year 2015.

The ways in which North Carolina's performance compares to other states reflects the differential approaches of lotteries and behavior of buyers as well as state policies governing the types of games offered. For example, Video Lottery Terminals (VLTs) account for large portions of lottery net revenue in some states. Potentially, VLTs could improve performance in North Carolina, but the NC Lottery does not offer this type of game. See Finding 4 for details about VLTs as an option to increase NC Lottery sales and returns to the State.

In summary, the performance of the NC Lottery is slightly above average when compared with other states. In Fiscal Year 2015, the NC Lottery ranked 18<sup>th</sup> (out of 44) and 14<sup>th</sup> (out of 34) respectively on two significant performance measures: (1) per capita sales and (2) per capita net revenues returned to the state. These rankings indicate room for growth and improvement.

## **Finding 2. Expanding the retailer network could increase lottery revenue.**

Lottery retailer density and per capita sales are correlated. In Fiscal Year 2015, the 10 states with the highest per capita sales all had a higher retailer density than North Carolina.<sup>13</sup> The Massachusetts State Lottery ranked first in per capita sales and had the highest retailer density with 1 retailer per 825 residents. The lottery industry best practice for retailer density is 1 retailer per 1,200 residents because ticket availability to potential buyers increases likelihood of sales. As shown in Exhibit 8, the 10 states with the highest per capita sales had an average retailer density of 1 retailer per 1,173 residents. Appendix D in this report contains retailer density information for all 44 lottery states.

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<sup>12</sup> All six states in the subgroup offer the same lottery games with two exceptions: only two states (Georgia and Kentucky) offer "Fast Keno" and only three states (Kentucky, South Carolina, and Virginia) offer "Win for Life." North Carolina began offering the "Lucky for Life" draw game in Fiscal Year 2016.

<sup>13</sup> In the lottery industry, "retailer density" refers to the measure of the number of residents in a state or county per each retail location selling lottery tickets.

### Exhibit 8: Each of the Top 10 State Lotteries in Per Capita Sales Had Higher Retailer Density than the NC Lottery, Fiscal Year 2015

Per Capita Sales Rank	State	Per Capita Sales (in millions)	2015 Population	Total Retailers	Retailer Density	Retailer Density Rank
1	Massachusetts	\$ 736.1	6,794,422	8,240	1: 825	1
2	Georgia	382.7	10,214,860	8,644	1: 1,182	10
3	New York	366.2	19,795,791	18,000	1: 1,100	8
4	New Jersey	336.4	8,958,013	7,183	1: 1,247	13
5	Connecticut	317.8	3,590,886	2,854	1: 1,258	14
6	Ohio	315.9	11,613,423	9,801	1: 1,185	11
7	Pennsylvania	298.4	12,802,503	9,076	1: 1,411	24
8	Maryland	293.5	6,006,401	4,536	1: 1,324	20
9	South Carolina	286.1	4,896,146	3,825	1: 1,280	16
10	Michigan	280.0	9,922,576	10,747	1: 923	4
<b>Averages of Top 10 States</b>		<b>\$ 361.3</b>	<b>9,459,502</b>	<b>8,291</b>	<b>1: 1,173</b>	
<b>18</b>	<b>North Carolina</b>	<b>\$ 197.2</b>	<b>10,042,802</b>	<b>6,901</b>	<b>1: 1,455</b>	<b>26</b>

Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.

Retailers in North Carolina are less plentiful than in any of the top 10 states ranked by per capita sales. North Carolina ranked 26<sup>th</sup> in retailer density in Fiscal Year 2015 with a ratio of 1 retailer per 1,455 residents. As shown in Exhibit 9, the NC Lottery ranked fifth in retailer density among six similar neighboring states.

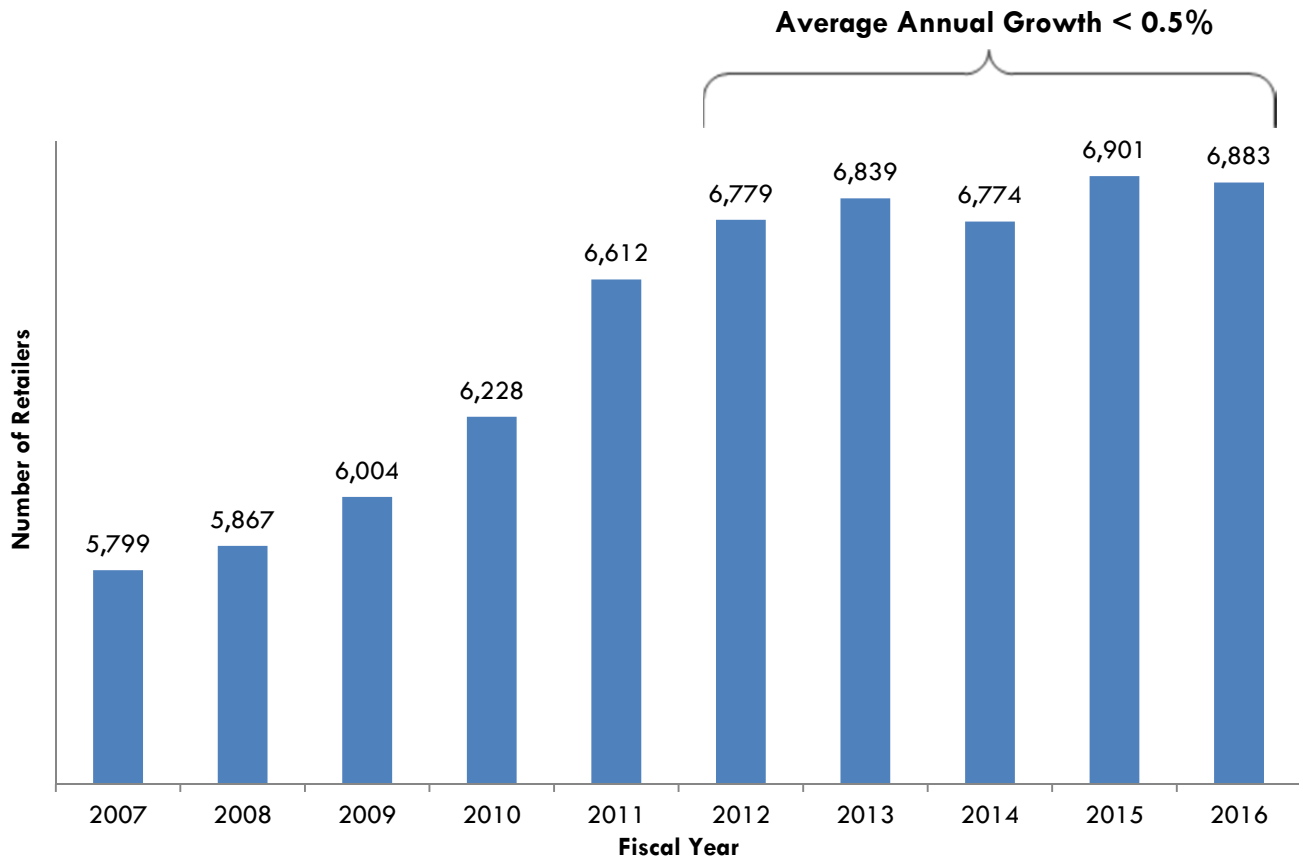
### Exhibit 9: NC Lottery Ranked Next to Last in Retailer Density among Six Neighboring States that Have Lotteries, Fiscal Year 2015

Retailer Density Rank	State	Retailer Density	2015 Population	Total Retailers
1	Georgia	1: 1,182	10,214,860	8,644
2	South Carolina	1: 1,280	4,896,146	3,825
3	Tennessee	1: 1,320	6,600,299	5,000
4	Kentucky	1: 1,413	4,425,092	3,131
<b>5</b>	<b>North Carolina</b>	<b>1: 1,455</b>	<b>10,042,802</b>	<b>6,901</b>
6	Virginia	1: 1,579	8,382,993	5,309
<b>Average of Six Neighboring States</b>		<b>1: 1,372</b>		

Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.

**Although the NC Lottery actively recruits new retailers, it has not significantly increased its retailer network over the last five years.** Average annual growth over the last five years has been less than 0.5%. Exhibit 10 shows the number of retailers as of June 30 for each year from Fiscal Years 2007–2016.

### Exhibit 10: Number of NC Lottery Retailers Has Not Significantly Increased During the Last Five Years



Source: Program Evaluation Division based on data from the NC Lottery.

In order to increase its retailer network, the NC Lottery plans to focus in 2017 on recruitment and contracting of chain accounts and non-traditional business establishments. Specifically, the Sales Division of the NC Lottery plans to take the following actions:

- expand the Play at the Pump program;
- pursue sales at Alcoholic Beverage Control (ABC) locations;<sup>14</sup>
- pursue Cherokee retailers (which requires boundary approval);
- focus on recruitment of non-traditional retail locations;
- conduct bi-annual recruiting blitz during 1<sup>st</sup> and 3<sup>rd</sup> quarters;
- include sales representative recruitment goal of nine new retailers as part of their annual appraisals; and

<sup>14</sup> House Bill 895, An Act to Authorize the Installation and Operation of Lottery Ticket Vending Machines in ABC Stores, was introduced in 2015 but was not enacted.

- include regional manager goal of increasing their region's retailer base by 1 to 3% by the end of each fiscal year as part of their annual appraisals.

The Program Evaluation Division examined best practices in other states related to increasing ticket sales. Specific to ABC locations, at least 36 of the 44 lottery states sell tickets in liquor stores. In these states, 8.6% of the retailer network is located in liquor stores. If the NC Lottery were able to install self-service lottery machines that sell both instant ticket and draw games in the 427 ABC stores in North Carolina, the Program Evaluation Division estimates additional operating revenues of about \$32 million annually with about \$8.6 million annually going to the NC Education Lottery Fund.<sup>15</sup>

In addition to the pursuits the Lottery plans to undertake, the Program Evaluation Division found that other lottery states are using the following methods to boost their retailer networks.

**Expand to other retail locations such as airports.** A trend among state lotteries during the past five years is opening locations in airports. About half of the 44 state lotteries in the United States have airport locations. The top-selling retailers for the Georgia Lottery, generating more than \$7 million in yearly sales since opening in 2006, are the two lottery ticket kiosks at Atlanta's Hartsfield-Jackson International Airport. Miami's airport reported annual lottery ticket sales of \$3 million and Chicago's O'Hare International Airport reported annual lottery ticket sales of \$2.4 million. Lottery sales at other major airports have averaged between \$1 million and \$2 million annually.

Although other states report high ticket sales numbers in airports, the volume of passengers varies by location. Atlanta's airport had 101.5 million passengers in 2015, compared to 44.9 million passengers at Charlotte Douglas International Airport and 9.9 million passengers at Raleigh-Durham International Airport. Lottery Sales Division personnel have contacted airports in Charlotte, Raleigh-Durham, and Wilmington but have not been successful in reaching sales agreements.

**Increase use of self-service vending machines.** The NC Lottery reported it had about 1,100 vending machines but plans to expand to 1,500. To control the limited quantity of expensive vending machines, the Lottery requires retailers to have ticket sales of at least \$500 per week or the machine is removed. Over the last three years, 65 vending machines have been removed because of low-volume sales. The NC Lottery concluded in its vending machine criteria statement:

*We understand corporate retailer recruitment is the quickest way to expand our retailer base. Retailers understand the tremendous sales potential of the category but are finding it difficult to integrate the category into their sales and marketing plans. This new technology will be a catalyst in our recruitment efforts and adds better protection and safeguards for the product with reduced labor and will better position*

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<sup>15</sup> Average lottery ticket sales for self-service machines that sell both instant and draw tickets in Fiscal Year 2016 was \$75,656. This average multiplied by the 427 ABC stores in 2016 is \$32.3 million. The 2016 percentage transferred to the Education Lottery Fund was 26.5%. This percentage multiplied by \$32.3 million is \$8.6 million.



*the NCEL to encourage retailers to integrate lottery as part of their service and sales plan.<sup>16</sup>*

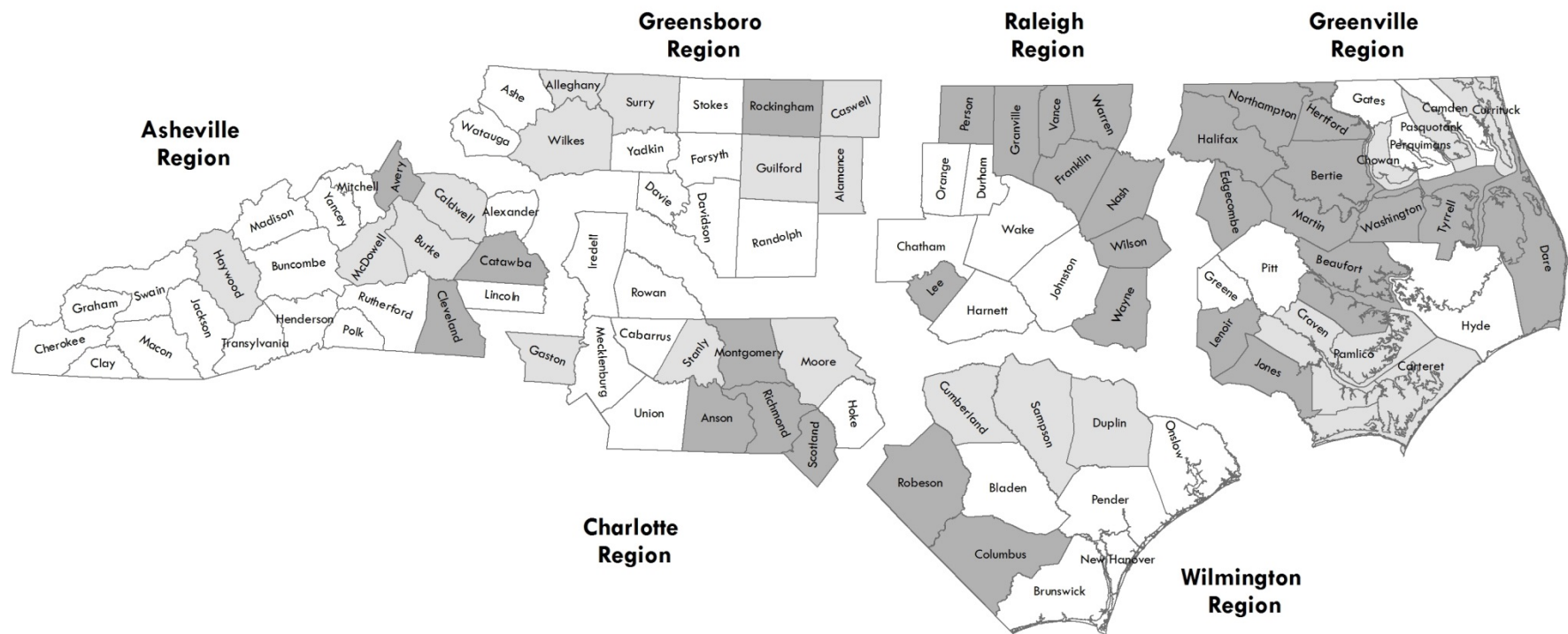
**Focus on recruiting new retailers in counties that are well below the state average and 1:1,200 best practice standard.** Exhibit 11 is a map of North Carolina counties that depicts how widely lottery retailer market penetration varies across the State. Based on 2016 data, the NC Lottery would need to add 1,573 retailers in order to achieve the best practice standard of 1:1,200 residents.<sup>17</sup> The Program Evaluation Division estimates that reaching that best practice level could result in about \$144 million being added to the NC Education Lottery Fund assuming the Fiscal Year 2016 rate of return to the State of 26.5% is maintained.

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<sup>16</sup> NCEL's policy: *Instant Ticket Vending Machine (ITVM), Lottery to Go (LTG), and Lottery Vending Machine (LVM) Criteria and Placement.*

<sup>17</sup> The total number of retailers necessary to achieve the lottery industry best practice standard of 1 retailer per 1,200 residents would be 8,456 retailers (state population of 10,146,788 divided by 1,200). The number of lottery retailers as of June 30, 2016 in North Carolina was 6,883. Therefore, 1,573 (8,456 minus 6,883) additional retailers would be needed.

Exhibit 11: Lottery Retailer Market Penetration Varies Across the State



Source: Program Evaluation Division based on data from the NC Lottery.

In summary, expanding the retailer network could increase lottery revenue. The NC Lottery's retailer density of 1 retailer per 1,455 residents is below the industry best practice standard of 1 retailer per 1,200 residents. North Carolina also has lower density than each of the top 10 lottery states in sales per capita. Lower density equates to lower market penetration, meaning there are not as many retailers that sell lottery tickets in an area. Increasing the number of retailers that sell lottery tickets has the potential to increase revenue by making lottery products more readily available for purchase.

**Finding 3. Alternative approaches to the structure and amount of retailer compensation could yield additional revenue returned to the State.**

Lottery retailers in North Carolina receive a 7% commission on every lottery ticket they sell. This commission rate was established at the inception of the lottery in 2005.<sup>18</sup> In addition to the base commission rate, the Lottery Commission approved a retailer incentive program in 2010 that boosts the actual retailer compensation rate to 7.04%. This incentive program rewards retailers with additional money for selling a top/second tier prize in various games.<sup>19</sup> The 44 lottery states differ in how they define and provide retailer compensation but most states have some type of sales commission rate as a base and then add incentives to that base.

The average retailer compensation rate among the 44 lottery states is 6.28%, ranging from 4.89% in Ohio to 8.44% in Oregon. North Carolina is above average among the 44 lottery states both in terms of base commission rates and overall compensation rates. As shown in Exhibit 12, the states geographically adjacent to North Carolina have an average rate of 6.48%, slightly higher than the national average but still lower than North Carolina. A list of retailer compensation rates for all U.S. lottery states is available in Appendix E.

**Exhibit 12: Retailer Compensation in Adjacent States**

Rank	State	Retailer Compensation (in % of sales)	Instant Game Commission (in % of sales)	Draw Game Commission (in % of sales)	Ticket Sales (in millions)	Retailer Compensation (in millions)
1	South Carolina	7.05	7.00	7.00	\$ 1,401.7	\$ 98.8
2	Tennessee	7.04	6.50	6.50	1,368.5	96.3
3	Georgia	6.38	6.00	6.00	3,903.5	249.0
4	Kentucky	6.30	5.00	5.00	886.9	55.9
5	Virginia	5.64	5.00	5.00	1,843.9	103.9
<b>Averages of Adjacent States</b>		<b>6.48</b>	<b>5.90</b>	<b>5.90</b>	<b>\$ 1,880.9</b>	<b>\$ 120.8</b>
<b>2</b>	<b>North Carolina</b>	<b>7.04</b>	<b>7.00</b>	<b>7.00</b>	<b>\$ 1,972.2</b>	<b>\$ 138.7</b>

Source: Program Evaluation based on La Fleur's 2016 World Lottery Almanac.

<sup>18</sup> N.C. Gen. Stat. § 18C-142.

<sup>19</sup> In Fiscal Year 2010, the North Carolina State Lottery Commission approved a retailer incentive program wherein retailers would receive compensation for selling a top/second tier prize in the multi-state games Powerball and Mega Millions and a top tier prize in Carolina Cash 5. As of December 2011, the retailer incentive program was expanded to include instant ticket prizes of over \$1 million. As of February 8, 2016, the program was again expanded to include Lucky for Life. Total payments issued for the retailer incentive program for Fiscal Year 2016 were \$1.2 million.

**The amount of compensation retailers receive directly influences how much money is available to be transferred to the State.** The Program Evaluation Division estimates that if North Carolina's retailer commission rate had been 6% instead of 7% from the inception of the NC Lottery, an estimated additional \$157 million would have been available for the NC Education Lottery Fund, assuming all other expenses and conditions remained the same. Going forward, the Program Evaluation Division estimates a one-percentage-point shift in the retailer compensation rate could annually yield an additional \$23 million directed toward the education fund. The NC Lottery itself cannot adjust compensation structure because the retailer commission rate was set in statute.

**Several options are available to adjust the compensation amount that retailers currently receive.** First, the retailer commission rate could simply be decreased from 7% to 6% or even 6.5% and the NC Lottery could continue offering its current incentive package. Another option is to reduce the sales commission on self-service terminals while keeping other retailer commission rates the same, creating a tiered retailer rate. Alternatively, a tiered commission structure based on game type could be created. Finally, changing the incentives retailers receive in ways that offset a lower commission rate but ultimately yield a lower overall compensation rate could be explored. Below are examples of alternative approaches to retailer compensation undertaken by other lottery states.

**Georgia.** In 2011, Georgia lowered its overall retailer compensation rate from 7.1% to 6.4% by eliminating incentive programs that total 2% and adjusting sales commission from 5% to 6%. Georgia now provides a bonus program that adds 0.4% to overall compensation by offering retailers small amounts of free tickets. Following this change, the retailer density in Georgia remained the same, indicating that a decrease in compensation did not deter vendors from remaining or becoming lottery retailers.

**California.** California structures its retailer compensation in tiers based on vendor type. Self-service terminals receive a 4.5% sales commission, whereas over-the-counter retailers receive a 6% sales commission.

**Colorado.** Colorado differentiates its retailer compensation by game type. Retailers in Colorado receive a 7% sales commission on scratch games and a 6% commission on jackpot games. There is also a cashing bonus of 1% and a performance incentive bonus of 1% on all jackpot games if sales in a given period are larger than the same period in the previous year.<sup>20</sup>

In summary, the current retailer compensation rate in NC is relatively high when compared to all lottery states and North Carolina's geographic peers. Different options exist that could lower the retailer rate, which would in turn make more money available for the education fund. Georgia was able to transition to a lower retailer compensation rate without experiencing a drop in retailer density and without negatively influencing overall ticket sales.

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<sup>20</sup> The purpose of a cashing bonus is to cover an employee's time spent handling and cashing winning tickets at the retail store.

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**Finding 4. Additional options to promote the sales of lottery tickets could result in increased transfers to the NC Education Lottery Fund.**

Below are options whereby the NC Lottery could increase sales of lottery tickets and therefore increase transfers to the NC Education Lottery Fund assuming all expenses remain the same. These options are used by some other state lotteries in order to increase sales of their lottery tickets and increase returns to their respective states.

**Keno.** Keno is a quick draw game that is primarily offered in social establishments. It can be administered through the existing gaming system. Draw results are displayed at pre-determined intervals, between three and five minutes. Sixteen states offer Keno games as part of their state lotteries, including two neighboring states, Georgia and Kentucky. The NC Lottery plans to implement Keno at some point in 2017.

**Video Lottery Terminals (VLTs).** VLTs are electronic gaming devices located at age-restricted establishments. The devices are similar to slot machines. Eight states, including West Virginia, offer VLTs. VLTs represent about 87% of West Virginia's total lottery income.

**iLottery.** iLottery games are interactive instant and draw games played on the Internet that are also available for play on smartphones. They provide a digital version of instant scratch-off tickets. Only a few states offer iLottery games, with Michigan successfully launching its games in 2014.

Exhibit 13 provides images of a Keno play slip, a video lottery terminal, and a smartphone with iLottery. Exhibit 14 provides additional details about each of the three options described above.

## Exhibit 13: Keno, Video Lottery Terminals, and iLottery Represent Options that Could Increase Transfers to the NC Education Lottery Fund



Source: Program Evaluation Division based on Internet research.

## Exhibit 14: Details about Three Options that Could Increase Lottery Revenues

	Keno	Video Lottery Terminals	iLottery
Description:	Quick draw game that can be administered through the existing gaming system; results are displayed at pre-determined intervals, between 3 and 5 minutes	Electronic gaming program where video gaming or lottery machines are located at age-restricted establishments	E-Instant, interactive, and draw games available on computers and smartphones; it is a digital version of the scratch-off ticket
Implementation time:	6-9 months	12 months	8 months
Number of states that offer this option:	16	8	4
Statutory change needed, if any:	Allowed under current legislation	Electronic gaming would require new legislation and an additional gaming system	Allowed under current legislation
First year projected sales:	\$24 million	\$255 million	To be determined
Estimated return to the State	\$6 million	To be determined	To be determined
Comment:	NC Lottery plans to implement Keno during 2017	Similar to slot machines	Online lottery ticket sales represent an untapped market for state lotteries, potentially reaching out to younger generations of players

Source: Program Evaluation Division based primarily on data from the NC Lottery presented in March 2016 to the Joint Legislative Oversight Committee on the North Carolina State Lottery.

In summary, additional options with the potential to increase sales revenue and subsequent increased transfers to the NC Education Lottery Fund include authorizing Video Lottery Terminals and offering iLottery games online. These actions would create more retailers resulting in more opportunities for purchasing lottery tickets, and could potentially boost sales among younger generations of players.

**Finding 5. The NC Lottery could improve how it measures the effectiveness of its advertising expenditures.**

In Fiscal Year 2016, the NC Lottery's annual advertising expenditures totaled nearly \$20 million, or slightly less than 1% of total lottery ticket sales. Advertising activities focus on sharing information about available products using media such as television, radio, and print. The Lottery directs other funds, about \$4 million, or 0.17% of total sales, to marketing efforts that promote the Lottery through interactive events and other efforts to educate players about games. For the purposes of this evaluation, the Program Evaluation Division only examined the relationship between advertising expenditures and ticket sales.

In Fiscal Year 2015, North Carolina ranked 30<sup>th</sup> out of 44 states in advertising budget as a percentage of total ticket sales.<sup>21</sup> In the 44 states with lotteries, advertising budget as a percentage of ticket sales ranges from 0.2% to 3.6%, with Wyoming representing an outlier at 22.6%. At 1.0%, North Carolina is below the national average, which is 1.3%. Advertising represents an expense to the Lottery, and other state evaluations have examined advertising expenditures to determine whether more or less money should be spent in this category.

**The NC Lottery's advertising staff and its advertising consultant measure the efficiency and effectiveness of its media buys by considering market rates for comparable purchases and the positioning of media purchases at specific times in specific markets.** Unlike other consumer products that have clear substitutes, it is challenging to measure the influence of lottery advertising on lottery ticket sales. The NC Lottery noted that it is nearly impossible to produce models that predict sales in relationship to advertising dollars, meaning it is difficult to say \$1 of advertising sales will yield a given amount of dollars in ticket sales. It is also difficult to assess the effectiveness of advertising or its influence on sales. Academic literature corroborates the claim that measuring advertising effectiveness is challenging. However, the Lottery's advertising staff reported that they observed a negative effect on ticket sales when the advertising department significantly scaled back spending in a given market.

**Program Evaluation Division staff tested different types of regression models to assess the relationship between advertising expenditures and ticket sales.** The Program Evaluation Division constructed models with available lottery data to assess the relationships between the following variables: total advertising expenses and total ticket sales, instant ticket advertising and instant ticket sales, and specific advertising expenditures

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<sup>21</sup> Fiscal Year 2015 data was the most recent data for advertising budget as a percentage of sales that was available from La Fleur's at the time of this evaluation.

and ticket sales for several specific instant games.<sup>22</sup> Other variables in the models included

- prize percentage payout,
- unemployment rates from the Bureau of Labor Statistics,
- average retailer density,
- Gross Domestic Product per capita from the Bureau of Economic Analysis, and
- variables controlling for season and region.

All data were examined by fiscal year quarters from 2014–16 and by NC Lottery region, of which there are six.

**The advertising data available do not allow for an accurate assessment of the influence of advertising expenditures on ticket sales.** Although some of the models yielded significant statistical results for variables other than advertising, the nature of the results indicates that the data is not robust enough to accurately predict the relationship between advertising expenditures and ticket sales. Furthermore, the nature of the data leads to violations of model assumptions, meaning the results of the different models are not accurate. These results occurred even after efforts were made to transform and correct the variables.

**Measuring the relationship between advertising and ticket sales is difficult but is possible and should be pursued prior to any changes being made to the advertising budget.** It would take time and effort to enhance the level of data being collected by the NC Lottery in order to yield more meaningful statistical results. However, some states have produced viable statistical models and each of these states offers examples of what types of data would be needed.

**Florida.** The Florida Legislature's Office of Program Policy Analysis and Government Accountability (OPPAGA), which examines the Florida lottery on an annual basis, built a statistical model in 2014 using lottery data from 2006 to 2013 that established a relationship between advertising and ticket sales. OPPAGA aggregated and examined the data by month and market area for Florida's 10 markets. Additionally, the office used other predictor and control variables that accounted for seasonal effects, economic health, and other influential factors related to ticket sales. The office also produced a lag variable that accounted for the time that must lapse in between the airing of an advertisement and the purchase of a ticket.

Although OPPAGA found a statistically significant, predictive relationship between lottery advertising expenditures and lottery ticket sales, advertising only accounted for 1% of the variation in lottery sales in this model while six other factors—jackpot size, seasonality, market area, retailer density, general economic conditions, and the introduction of Powerball—explained over 80% of the variation in per capita lottery sales.

**Washington.** The Washington Legislature's Joint Legislative Audit and Review Committee (JLARC) looked at the extent to which advertising

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<sup>22</sup> The Program Evaluation Division examined instant ticket advertising expenditures because the NC Lottery prioritizes advertising these products.



influences lottery ticket sales. JLARC examined advertising expenditures in the 2009–11 biennium and concluded that advertising expenditures did not increase weekly ticket sales. However, JLARC did find that jackpot amounts and economic conditions influence ticket sales.

These findings demonstrate that capturing the effect of advertising on ticket sales is challenging. It does not suggest that a relationship between advertising and ticket sales does not exist. Both states conducted their analyses at a more granular level than is currently available with the NC Lottery's advertising data.

**Further analysis of the effects of advertising on lottery sales would benefit from more precise data.** If the NC Lottery wishes to explore the relationship between advertising expenditures and ticket sales, the advertising department (or an advertising consultant) needs to collect advertising expenditure data at the same level of granularity and precision that the NC Lottery tracks ticket sales. Presently, advertising expenditures are recorded at quarterly intervals, by media market, by media type, and by game or game suite. In contrast, ticket sales data are available at weekly and daily intervals, by store, by region, and by game. Therefore, raw advertising and sales data are incompatible for analytical review. Transforming ticket sales data to match advertising data (e.g., aggregating weekly data into quarters) attenuates or weakens the data. Because collection on this level of granularity would be costly for the advertising department, it could consider tracking detailed data for a sample of games.

In summary, the question of whether the NC Lottery is spending the optimal amount on advertising is unresolved. The relationship between expenditures on advertising and ticket sales needs to be measured at a more granular level over time in order for this expenditure to be properly managed.

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## Recommendations

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**While the Lottery has increased sales and transfers to the North Carolina Education Lottery Fund every year for 10 years, the following actions could further increase sales and efficiency and increase transfers to education.**

**Recommendation 1. The General Assembly should require the Lottery to establish targets for retailer growth and to annually report on its performance in meeting these targets.**

As reported in Finding 2, expanding the retailer network could increase lottery revenue. Increasing the number of retailers that sell lottery tickets has the potential to increase revenue by making lottery products more readily available for purchase. The NC Lottery ranked 26<sup>th</sup> in retailer density among the 44 lottery states in Fiscal Year 2015.

All efforts to expand the retailer network should be included in the annual report to the General Assembly. The first report should be submitted to the Joint Legislative Oversight Committee on the North Carolina State Lottery by November 1, 2017.

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**Recommendation 2. The General Assembly should direct the Lottery to examine the retailer compensation structure for all games and develop alternatives for rewarding the performance of retailers.**

As reported in Finding 3, reducing the compensation paid to NC Lottery retailers could yield additional revenue. North Carolina provides the 7<sup>th</sup> highest compensation rate paid to its lottery retailers among the 44 lottery states. By lowering the compensation paid to retailers, the NC Lottery could direct additional revenue to the North Carolina Education Lottery Fund.

The Lottery should hire an independent contractor to provide an analysis of whether a reduction in commission percentage might impact the number of retailers in both the short and long term. This report should include comments on why retailers participate in selling lottery tickets with particular attention paid to motivation derived from the commission compared to motivation derived from increased foot traffic in the store. As noted earlier, Georgia was able to transition to lower retailer compensation without a drop in retailers and without negatively affecting overall revenue. The results of this analysis should be provided to the Joint Legislative Oversight Committee on the North Carolina State Lottery by February 1, 2018.

**Recommendation 3. The General Assembly should direct the Lottery to provide a detailed business case for options to increase the sale of lottery tickets.**

As reported in Finding 4, additional options with the potential to increase sales revenue, and subsequently increase transfers to the NC Education Lottery Fund, include authorizing Video Lottery Terminals and offering iLottery games online. These actions would create more retailers, resulting in more opportunities for purchasing lottery tickets, and could potentially boost sales among younger generations of players.

The General Assembly should direct the NC Lottery to provide a detailed business case for options to increase the sale of lottery tickets to the Joint Legislative Oversight Committee on the North Carolina State Lottery by February 1, 2018. If interested in a particular option, the General Assembly could direct the Lottery to provide a detailed business case analysis that includes time frames for implementation and needed statutory changes, if any.

**Recommendation 4. The General Assembly should require the Lottery to develop tools to measure the increase in sales resulting directly from advertising expenditures and to annually report on its efforts to measure the effectiveness of expenditures for advertising.**

As reported in Finding 5, the NC Lottery needs to accurately measure the effectiveness of advertising on sales in order to manage this expenditure. Consideration should be given to the Program Evaluation Division's suggestion to collect advertising expenditure data at the same level of granularity and precision that the Lottery tracks ticket sales. Different methods and approaches exist to enable the NC Lottery to use more granularly-collected advertising data to assess the effect of advertising spending on ticket sales including commercially available off-the-shelf

software products. Better alignment of data would allow regression analysis models to measure the effectiveness of advertising and would provide justification for spending larger or smaller amounts on advertising. Alternatively, the Lottery could design targeted advertising interventions to observe what occurs when more funds or less funds are spent on specific advertising expenditures in an effort to assess the relationship between advertising expenditures and sales.

All efforts to measure the effectiveness of advertising should be included in the annual report to the General Assembly. The first report should be submitted to the Joint Legislative Oversight Committee on the North Carolina State Lottery by November 1, 2017. Annual reports would include the impact on sales of specific advertising campaign expenditures.

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## Appendices

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Appendix A: NC Lottery Revenues and Expenses, Fiscal Years 2007 through 2016 (in millions)

Appendix B: NC Lottery Ticket Sales by Game, Fiscal Years 2007 through 2016 (in millions)

Appendix C: Description of the Games Offered by the NC Lottery

Appendix D: Lottery Retailer Density in the United States, Fiscal Year 2015

Appendix E: Lottery Retailer Compensation in the United States, Fiscal Year 2015

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## Agency Response

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A draft of this report was submitted to the North Carolina State Lottery to review. Its response is provided following the appendices.

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## Program Evaluation Division Contact and Acknowledgments

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For more information on this report, please contact the lead evaluator, Jim Horne at [Jim.Horne@ncleg.net](mailto:Jim.Horne@ncleg.net).

Staff members who made key contributions to this report include Jeff Grimes and Emily McCartha. John W. Turcotte is the director of the Program Evaluation Division.

## Appendix A: NC Lottery Revenues and Expenses, Fiscal Years 2007 through 2016 (in millions)

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
<b>Operating Revenues:</b>										
Gross Sales	\$ 885.58	\$1,078.08	\$1,293.02	\$1,421.31	\$1,461.11	\$1,596.69	\$1,689.80	\$1,839.26	\$1,972.22	\$2,383.59
Less: Prize Tickets	(23.90)	(29.73)	(9.58)	(1.31)	(1.38)	(0.18)	-	-	-	-
Bad Debt/Bad Debt Recoveries	-	-	-	(0.41)	(0.15)	(0.06)	(0.09)	(0.05)	(0.01)	0.02
Fees and Licenses	4.52	4.78	4.66	4.86	5.06	5.38	5.30	5.43	5.27	5.36
<b>Total Operating Revenues</b>	<b>\$ 866.20</b>	<b>\$1,053.13</b>	<b>\$1,288.10</b>	<b>\$1,424.46</b>	<b>\$1,464.64</b>	<b>\$1,601.84</b>	<b>\$1,695.01</b>	<b>\$1,844.64</b>	<b>\$1,977.49</b>	<b>\$2,388.98</b>
<b>Operating Expenses:</b>										
Salaries, Wages, and Benefits	\$ 12.28	\$ 13.79	\$ 14.69	\$ 15.3	\$ 15.82	\$ 16.64	\$ 17.54	\$ 18.13	\$ 18.74	\$ 19.74
Lottery Prizes	451.79	588.49	731.69	835.30	863.00	961.56	1,024.44	1,135.05	1,231.24	1,491.03
Retailer Commissions	61.93	75.37	90.37	99.34	102.13	111.62	118.15	128.55	137.77	166.44
Retailer Incentives	0.00	0.00	0.00	0.39	0.59	0.61	0.78	0.83	0.98	1.15
Gaming Systems Services	14.32	17.29	20.60	22.64	23.48	26.03	27.26	30.34	28.68	40.64
Advertising	7.81	8.62	11.17	11.79	13.76	14.70	15.28	15.24	19.10	19.97
Marketing	0.95	1.22	1.75	2.24	2.36	2.51	3.54	3.60	4.18	3.98
Other Services (Note 1)	2.34	1.88	2.18	2.76	2.63	3.63	3.80	4.16	4.30	5.14
Furniture, Fixtures, and Equipment	1.43	0.24	0.25	0.38	0.93	0.76	1.31	1.32	0.98	1.49
Depreciation	0.39	0.38	0.54	0.58	0.62	0.46	0.35	0.44	0.57	0.67
Other General and Administrative Expenses	1.49	1.67	2.75	2.37	2.39	2.39	2.48	2.55	2.95	2.54
<b>Total Operating Expenses</b>	<b>\$ 554.73</b>	<b>\$ 708.95</b>	<b>\$ 875.99</b>	<b>\$ 993.09</b>	<b>\$1,027.71</b>	<b>\$1,140.91</b>	<b>\$1,214.93</b>	<b>\$1,340.21</b>	<b>\$1,449.49</b>	<b>\$1,752.80</b>
<b>Operating Income</b>	<b>\$ 311.46</b>	<b>\$ 344.19</b>	<b>\$ 412.11</b>	<b>\$ 431.37</b>	<b>\$ 436.93</b>	<b>\$ 460.93</b>	<b>\$ 480.08</b>	<b>\$ 504.43</b>	<b>\$ 528.00</b>	<b>\$ 636.18</b>

## Appendix A (Cont'd.): NC Lottery Revenues and Expenses, Fiscal Years 2007 through 2016 (in millions)

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
<b>Non-Operating Revenues (Expenses):</b>										
Investment Earnings and Other Revenue	\$ 8.54	\$ 8.90	\$ 4.25	\$ 2.70	\$ 1.18	\$ 0.52	\$ 0.42	\$ 0.67	\$ 0.41	\$ 1.19
Compulsive Gambling Contribution	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Alcohol Law Enforcement Gaming Enforcement	(0.70)	(0.70)	(0.80)	(0.80)	(0.80)	(1.00)	(1.00)	(1.00)	(0.97)	(2.10)
<b>Transfers to Education Lottery Fund:</b>										
1. Interest to Medicaid	-	-	-	-	(0.81)	-	-	-	-	-
2. Unclaimed Prizes to Medicaid	-	-	-	-	(8.56)	-	-	-	-	-
3. Unclaimed Prizes to Education Lottery Fund	(8.04)	(16.79)	(19.90)	(14.89)	(8.62)	(11.08)	(11.38)	(14.04)	(13.84)	(13.70)
4. Net Revenues to Education Lottery Fund	(306.32)	(331.52)	(394.03)	(417.31)	(418.25)	(448.39)	(467.13)	(489.09)	(512.59)	(620.57)
Miscellaneous Non-Operating Expenses (Note 2)	(3.95)	(3.07)	(0.64)	(0.06)	(0.06)	0.02	0.01	0.04	(0.01)	0.00
<b>Total Non-Operating Revenues (Expenses)</b>	<b>\$ (311.46)</b>	<b>\$ (344.19)</b>	<b>\$ (412.11)</b>	<b>\$ (431.37)</b>	<b>\$ (436.93)</b>	<b>\$ (460.93)</b>	<b>\$ (480.08)</b>	<b>\$ (504.43)</b>	<b>\$ (528.00)</b>	<b>\$ (636.18)</b>
<b>Net Income</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

### Summary of Transfers to Education Lottery Fund:

<b>Total Transfers (See line item details above)</b>	<b>\$ (314.36)</b>	<b>\$ (348.31)</b>	<b>\$ (413.93)</b>	<b>\$ (432.20)</b>	<b>\$ (436.24)</b>	<b>\$ (459.47)</b>	<b>\$ (478.51)</b>	<b>\$ (503.13)</b>	<b>\$ (526.43)</b>	<b>\$ (634.27)</b>
<b>Prior Period Adjustment</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(5.28)</b>	<b>-</b>
<b>Transfers to Education Lottery Fund (adjusted)</b>	<b>\$ (314.36)</b>	<b>\$ (348.31)</b>	<b>\$ (413.93)</b>	<b>\$ (432.20)</b>	<b>\$ (436.24)</b>	<b>\$ (459.47)</b>	<b>\$ (478.51)</b>	<b>\$ (503.13)</b>	<b>\$ (521.15)</b>	<b>\$ (634.27)</b>

### Notes:

(1) Other Services includes security, background checks, communications, legal, and travel.

(2) Miscellaneous Non-Operating Expenses include dividends received from the Multi-State Lottery Association and sales of surplus property.

Source: Program Evaluation Division based on financial data from the NC Lottery.

## Appendix B: NC Lottery Ticket Sales by Game, Fiscal Years 2007 through 2016 (in millions)

<b>Instant Games</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>
\$1	\$ 181	\$ 122	\$ 119	\$ 93	\$ 78	\$ 83	\$ 91	\$ 95	\$ 94	\$ 95
\$2	111	106	148	139	137	154	174	165	175	199
\$3	29	45	56	44	61	61	66	78	57	67
\$5	142	169	212	246	227	272	266	337	398	423
\$10	28	195	264	183	204	233	236	253	253	293
\$20	-	-	-	150	154	158	179	242	317	260
\$30	-	-	-	-	-	-	-	-	-	280
<b>Subtotal Instant Games</b>	<b>\$ 491</b>	<b>\$ 636</b>	<b>\$ 799</b>	<b>\$ 856</b>	<b>\$ 862</b>	<b>\$ 960</b>	<b>\$ 1,012</b>	<b>\$ 1,170</b>	<b>\$ 1,294</b>	<b>\$ 1,617</b>
Percent of Total Sales	55%	59%	62%	60%	59%	60%	60%	64%	66%	68%
<b>Draw Games</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>
Powerball	\$ 259	\$ 229	\$ 210	\$ 199	\$ 139	\$ 154	\$ 197	\$ 149	\$ 130	\$ 209
Mega Millions	-	-	-	26	73	86	54	75	61	58
Cash 5	37	59	60	61	58	58	64	65	54	286
Pick 4	-	-	16	57	65	92	104	113	123	126
Pick 3	90	147	209	223	258	248	259	261	278	53
Raffle	10	7	-	-	6	-	-	-	-	-
EZ Match	-	-	-	-	-	-	-	6	11	9
All or Nothing	-	-	-	-	-	-	-	-	20	13
Lucky for Life	-	-	-	-	-	-	-	-	-	13
Monopoly	-	-	-	-	-	-	-	-	1	-
<b>Subtotal Draw Games</b>	<b>\$ 395</b>	<b>\$ 442</b>	<b>\$ 494</b>	<b>\$ 566</b>	<b>\$ 599</b>	<b>\$ 637</b>	<b>\$ 678</b>	<b>\$ 669</b>	<b>\$ 678</b>	<b>\$ 766</b>
Percent of Total Sales	45%	41%	38%	40%	41%	40%	40%	36%	34%	32%
<b>Total Ticket Sales</b>	<b>\$ 886</b>	<b>\$ 1,078</b>	<b>\$ 1,293</b>	<b>\$ 1,421</b>	<b>\$ 1,461</b>	<b>\$ 1,597</b>	<b>\$ 1,690</b>	<b>\$ 1,839</b>	<b>\$ 1,972</b>	<b>\$ 2,384</b>

Source: Program Evaluation Division based on financial data from the NC Lottery.

## Appendix C: Description of the Games Offered by the NC Lottery

**Instant Tickets.** Instant tickets are games played by scratching the latex covering off of a play area and learning instantly if the ticket is a winner without having to wait for the results of a drawing. There are several ways to win on an instant ticket, such as matching like symbols, dollar amounts, or letters or ticket symbol matching a key symbol. Instant tickets offer a wide variety of themes and ticket prices ranging from \$1 to \$30.

**Powerball.** Players select 5 numbers ranging from 1 to 69 and one additional number ranging from 1 to 26 designated as the “Powerball.” To win the jackpot, players need to match all five lotto numbers and the Powerball. Jackpot prizes start at \$40 million, which increase in the event that no one matches all of the numbers. There are also nine secondary prizes ranging from \$4 to \$1 million. For an additional dollar, players can “Power Play” and have the opportunity to increase their winnings, except for the jackpot, by up to 10 times. When players match the 5 lotto numbers and power play the ticket, they automatically win \$2 million.

**Mega Millions.** Players select 5 numbers ranging from 1 to 75 lotto numbers and one additional number ranging from 1 to 15 designated as the “Mega Ball.” To win the jackpot, players need to match all five lotto numbers and the Mega Ball. Jackpot prizes start at \$15 million, which increase in the event that no one matches all the numbers. There are also eight secondary prizes ranging from \$1 to \$1 million. For an additional dollar, players can “Megaplay” and have the opportunity to increase their winnings, except for the jackpot, by up to five times. When players match the 5 lotto numbers and Megaplay the ticket, they multiply their winnings by 2, 3, 4, or 5 times the original amount.

**Lucky For Life.** Players select 5 numbers ranging from 1 to 48 and one additional number ranging from 1 to 18 designated as the “Lucky Ball.” The top prize is \$1,000 A Day For Life. To win the top prize, players need to match all five lotto numbers and the Lucky Ball. If a player matches the 5 lotto numbers only, the player wins a \$25,000 A Year For Life prize.

**Carolina Cash 5.** Players select 1 set of 5 numbers ranging from 1 to 41. Players win prizes by matching from two to five numbers and must match all five numbers drawn to win the jackpot. Drawings are held daily with jackpot amounts starting at \$50,000 that increase for subsequent drawings if no one matches all five numbers. On March 30, 2014, an EZ match add-on was created. This feature prints an instant “EZ” match number with a corresponding prize amount. If the EZ match number matches any of the pick 5 numbers, the player wins the corresponding prize instantly.

**Carolina Pick 4.** Players select a four digit number from 0000 to 9999 and choose if the numbers need to match the drawn number exactly or in any combination. Drawings for this game are conducted daily, once at midday and once in the evening. This game offers the opportunity to win a top prize of \$5,000 for each winning combination matching in the exact order drawn.

**Carolina Pick 3.** Players select a three digit number from 000 to 999 and choose if the numbers need to match the drawn number exactly or in any combination. Drawings for this game are conducted daily, once at midday and once in the evening. This game offers the opportunity to win a top prize of \$500 for each winning combination matching in the exact order drawn.

*Source: Program Evaluation Division based on the North Carolina Education Lottery's 2016 Comprehensive Annual Financial Report.*

## Appendix D: Lottery Retailer Density in the United States, Fiscal Year 2015

Rank	State	2015 Population	Total Retailers	Retailer Density
1	Massachusetts	6,794,422	8,240	1: 825
2	Rhode Island	1,056,298	1,235	1: 855
3	Vermont	626,042	691	1: 906
4	Michigan	9,922,576	10,747	1: 923
5	New Hampshire	1,330,608	1,318	1: 1,010
6	Oregon	4,028,977	3,939	1: 1,023
7	Maine	1,329,328	1,246	1: 1,067
8	New York	19,795,791	18,000	1: 1,100
9	Montana	1,032,949	889	1: 1,162
10	Georgia	10,214,860	8,644	1: 1,182
11	Ohio	11,613,423	9,801	1: 1,185
12	West Virginia	1,844,128	1,514	1: 1,218
13	New Jersey	8,958,013	7,183	1: 1,247
14	Connecticut	3,590,886	2,854	1: 1,258
15	Missouri	6,083,672	4,821	1: 1,262
16	South Carolina	4,896,146	3,825	1: 1,280
17	Iowa (FY14)	3,123,899	2,396	1: 1,304
18	Idaho	1,654,930	1,265	1: 1,308
19	Tennessee	6,600,299	5,000	1: 1,320
20	Maryland	6,006,401	4,536	1: 1,324
21	Wyoming	586,107	440	1: 1,332
22	Delaware	945,934	685	1: 1,381
23	South Dakota	858,469	620	1: 1,385
24	Pennsylvania	12,802,503	9,076	1: 1,411
25	Kentucky	4,425,092	3,131	1: 1,413
<b>26</b>	<b>North Carolina</b>	<b>10,042,802</b>	<b>6,901</b>	<b>1: 1,455</b>
27	Indiana	6,619,680	4,508	1: 1,468
28	Florida	20,271,272	13,586	1: 1,492
29	Wisconsin	5,771,337	3,710	1: 1,556
30	Illinois (FY13)	12,859,995	8,242	1: 1,560
31	Texas	27,469,114	17,403	1: 1,578
32	Virginia	8,382,993	5,309	1: 1,579
33	Arkansas	2,978,204	1,879	1: 1,585
34	Louisiana	4,670,724	2,926	1: 1,596
35	Nebraska	1,896,190	1,180	1: 1,607
36	Kansas	2,911,641	1,778	1: 1,638
37	North Dakota	756,927	445	1: 1,701
38	Minnesota	5,489,594	3,044	1: 1,803
39	California	39,144,818	21,630	1: 1,810
40	Colorado	5,456,574	2,973	1: 1,835
41	New Mexico	2,085,109	1,100	1: 1,896
42	Washington	7,170,351	3,755	1: 1,910
43	Oklahoma	3,911,338	1,827	1: 2,141
44	Arizona	6,828,065	3,051	1: 2,238
<b>Average of All 44 Lottery States</b>				<b>1: 1,412</b>

Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.



## Appendix E: Lottery Retailer Compensation in the United States, Fiscal Year 2015

Rank	State	Instant Game Commission (in % of sales)	Draw Game Commission (in % of sales)	Ticket Sales (in millions)	Retailer Compensation (in millions)	Retailer Compensation (in % of sales)
1	Oregon	5-10	5-10	\$ 318.3	\$ 26.9	8.44
2	Colorado	7.00	6.00	538.0	39.8	7.40
3	Michigan	6.00	6.00	2,771.9	203.6	7.35
4	Maryland	5.50	5.50	1,760.9	128.6	7.30
5	Rhode Island	5.00	8.00	243.1	17.3	7.12
6	South Carolina	7.00	7.00	1,401.7	98.8	7.05
7	Tennessee	6.50	6.50	1,368.5	96.3	7.04
<b>7</b>	<b>North Carolina</b>	<b>7.00</b>	<b>7.00</b>	<b>1,972.2</b>	<b>138.7</b>	<b>7.04</b>
9	West Virginia	7.00	7.00	180.0	12.6	7.00
10	Wisconsin	6.25	5.50	574.6	39.6	6.89
11	California	6.00	6.00	5,524.9	380.3	6.88
12	Arizona	6.50	6.50	750.0	51.0	6.80
13	Indiana	6.00	6.00	1,040.7	70.1	6.74
14	Oklahoma	6.00	6.00	171.6	11.4	6.66
15	Maine	7.00	5.00	253.1	16.7	6.60
16	New Mexico	6.00	6.00	137.0	8.9	6.53
17	Iowa	5.50	5.50	324.8	21.0	6.46
18	Delaware	5.00	5.00	149.8	9.7	6.46
19	Nebraska	5.00	5.50	160.0	10.2	6.39
20	Georgia	6.00	6.00	3,903.5	249.0	6.38
21	Kentucky	5.00	5.00	886.9	55.9	6.30
22	Washington	5.00	5.00	600.3	37.3	6.21
23	Vermont	5.75	5.75-6	111.8	6.9	6.17
24	Wyoming	N/A	6.00	17.5	1.1	6.10
25	Missouri	5.00	5.00	1,127.4	68.4	6.07
26	Minnesota	5.50	5.50	546.9	32.9	6.01
27	New York	6.00	6.00	7,251.0	434.7	5.99
28	Montana	5.00	5.00	52.3	3.1	5.94
29	Idaho	5.00	5.00	210.2	12.5	5.94
30	Kansas	5.00	5.00	250.0	14.8	5.92
31	New Hampshire	5.00	5.00	281.1	16.3	5.78
32	Massachusetts	5.00	5.00	5,005.7	286.7	5.73
33	Illinois	5.00	5.00	2,837.8	161.6	5.69
34	Arkansas	5.00	5.00	408.7	23.3	5.69
35	Virginia	5.00	5.00	1,843.9	103.9	5.64
36	Connecticut	5.00	5.00	1,144.0	64.3	5.62
37	New Jersey	5.00	5.00	3,027.3	169.4	5.60
38	Florida	5.00	5.00	5,583.3	312.0	5.59
39	Louisiana	5.00	5.00	452.5	25.3	5.59
40	South Dakota	5.00	5.00	51.2	2.8	5.49
41	Texas	5.00	5.00	4,529.7	248.6	5.49
42	Pennsylvania	5.00	5.00	3,819.6	203.2	5.32
43	North Dakota	N/A	5.00	27.0	1.4	5.07
44	Ohio	5.50	5.50	3,665.0	179.2	4.89
<b>Average of All 44 Lottery States</b>						<b>6.28</b>

Note: Retailer compensation includes commissions as well as bonus compensation for selling a winning ticket, cashing winning tickets, and sales incentives.

Source: Program Evaluation Division based on La Fleur's 2016 World Lottery Almanac.



March 10, 2017

John W. Turcotte, Director  
Program Evaluation Division  
300 N. Salisbury Street, Suite 100  
Raleigh, NC 27603

Dear Mr. Turcotte,

The North Carolina Education Lottery (NCEL) is pleased to have the opportunity to respond to the Program Evaluation Division's (PED) report entitled "Options for Increasing Lottery Proceeds to Education." According to our strategic plan, the mission of the NCEL is "to operate the lottery with the highest degree of integrity and security to maximize net revenue raised for the education programs identified by the legislature." As the only lottery in the United States that has achieved growth in each year of its existence, the NCEL appreciates the findings and recommendations from the PED to continue to maximize its return to education.

Finding One: "The NC Lottery's ticket sales and subsequent returns transferred to the State have steadily increased each year but its performance is slightly above average when compared to other states."

The NCEL is continually looking for ways to rank higher in both per capita sales and per capita net revenues; however, there are several factors to consider alongside these metrics. First, the NCEL is still a relatively young lottery compared to its peers. Taking the NCEL's age into consideration together with the ages of peer lotteries paints a clearer picture. Second, these measurements do not take year over year growth into consideration, and the NCEL performs well above average in year over year growth. Third, per capita sales and per capita net revenue do not take the restrictions placed upon the NCEL, including advertising restrictions, into consideration. For example, according to Chapter 18C of the North Carolina General Statutes, the NCEL may only spend 1% of its sales on advertising, and none of its advertising may have the primary purpose of enticing anyone to play the lottery. It is difficult to make a fair comparison between the NCEL and lotteries with little to no restrictions on their advertising based solely on per capita sales and per capita net revenue.

Finding Two: "Expanding the retailer network could increase lottery revenue."

The NCEL accepts this finding from the PED and looks forward to working with new retailers, particularly airports and county Alcohol Beverage Control boards.



Finding Three: "Alternative approaches to the structure and amount of retailer compensation could yield additional revenue returned to the state."

Ultimately, the decision to increase or decrease retailer compensation is a decision that must be made by the General Assembly, as retailer commissions are set by statute. It is worth noting that implementing the third finding in the report may make implementation of the second finding more challenging. The NCEL values its retail partners, and hopes to keep those relationships strong regardless of potential changes to the compensation structure by the legislature.

Finding Four: "Additional options to promote the sales of lottery tickets could result in increased transfers to the NC Education Lottery Fund."

The NCEL accepts this finding from the PED.

Finding Five: The NC Lottery could improve how it measures the effectiveness of its advertising expenditures."

It is difficult to show a direct correlation between advertising spend and sales, due so many external variables aside from television advertisements that may affect the consumer. In order to truly know what drives sales on a particular day in a particular location, every marketing element would have to be taken into account. However, it is worth noting that the NCEL's performance audit has found that the lottery's efficiency is strong. This is based upon the type of media that the lottery is able to obtain for the dollars spent. It is very challenging to make an accurate report of the effectiveness of advertising expenditures without spending a large amount of money that might otherwise go to the North Carolina Education Lottery Fund on studies. Without a large amount of detailed analysis from an experienced media measurement firm, the NCEL is still able to show examples of patterns and movement, but not direct correlations. While the PED focused on advertising spend, it is also important to note that advertising's content also has an impact on sales, and the statutory restrictions placed upon the NCEL's advertising messaging also have an impact on overall effectiveness.

In conclusion, the NCEL appreciates the findings from the PED, and if directed to do so by the General Assembly, will implement the recommendations contained in the PED's report in order to maximize lottery proceeds for education.

Sincerely,

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Alice Garland





March 10, 2017

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Program Evaluation Division  
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Raleigh, NC 27603

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Alice Garland