



INDEPENDENT FISCAL OFFICE

**Second Floor, Rachel Carson State Office Building
400 Market Street
Harrisburg, Pennsylvania 17105**

February 28, 2017

Mr. Glenn Pasewicz
Executive Director
Joint State Government Commission
108 Finance Building
Harrisburg, PA 17120

Dear Mr. Pasewicz:

Act 7 of 2016 directs the Joint State Government Commission (JSGC) to conduct a study and issue a report related to various aspects of the Pennsylvania horse racing industry. The act also requires the Independent Fiscal Office (IFO) to provide technical assistance related to the report. Based on discussions with the JSGC, the IFO agreed to provide analysis and text necessary to address the statutory requirement that the report include “a determination of the economic return to the Commonwealth, racetrack operators, horsemen, breeders and other stakeholders on the investment of gaming assessments collected under the act of July 5, 2004 (P.L.572, No.71).”

The attached document is provided consistent with the agreement between the JSGC and the IFO related to Act 7. An initial draft of this document was submitted to your office on February 2, 2017. Clarifying questions related to the draft were subsequently forwarded to the IFO and the IFO provided responses that same day. The attached final version of the analysis was submitted to your office electronically on February 20, 2017.

The IFO also provided assistance related to the cost effectiveness of the Pennsylvania equine research laboratory and the potential cost savings of combining the horse racing, casino gaming and lottery into one entity. These pieces were not stand-alone and the intent was that the IFO submissions would be integrated into work completed by the JSGC.

Please do not hesitate to contact me if you have any questions related to this submission.

Sincerely,

Matthew J. Knittel
Director

Enclosure

Introduction

Act 7 of 2016 directs the Joint State Government Commission (JSGC) to make “a determination of the economic return to the Commonwealth, racetrack operators, horsemen, breeders and other stakeholders on the investment of gaming assessments collected under the act of July 5, 2004 (P.L.572, No.71).” The act also directs the Independent Fiscal Office (IFO) to provide technical assistance. Based on discussions with the JSGC, the IFO has agreed to provide the analysis for this section of the report.

The specified act of July 5, 2004 (Act 71) is known as the Race Horse Development and Gaming Act of 2004, and it legalizes slot machine gaming in Pennsylvania. The act levies a 55.0 percent tax rate on the gross terminal revenue from slot machines. Gross terminal revenue is equal to total wagers less payouts less any promotional play.¹ The Pennsylvania Race Horse Development Fund (PRHDF) receives a maximum of 12.0 percent of gross terminal revenues from slot machines. For calendar year 2016, the transfer of slots monies to the PRHDF was \$235.7 million.

Act 7 requires a determination of the *economic return* to the Commonwealth and other parties from *the investment of gaming assessments*. For the purpose of this analysis, the IFO assumes that the investment of gaming assessments refers only to the annual transfer to the PRHDF, since that interpretation is consistent with the broader scope of this report (i.e., horseracing). The IFO also assumes that the term “economic return” implies that the analysis should quantify the net amount of economic activity that is attributable to gaming assessments that are deposited into the PRHDF, and then ultimately disbursed to racetracks and horsemen.² The combination of these two elements implies that the analysis should isolate the economic impact attributable solely to the flow of tax revenues into and out of the PRHDF.

The analysis of tax revenue flows is different than typical industry studies (horseracing and others) that are static.³ Most industry studies are broad and attempt to provide an economic “snapshot” of an industry. These snapshots attempt to quantify the size of the industry, or the economic footprint, through the tabulation of various metrics such as total sales, total output (gross domestic product or value added), jobs and compensation paid.

¹ Pennsylvania Gaming Control Board (PGCB), 2015 Racetrack Casino Benchmark Report, pg. 3, http://gamingcontrolboard.pa.gov/files/reports/2015_Pari-Mutuel_Benchmark_Report.pdf.

² Horsemen is a general term that includes breeders, owners, trainers, jockeys, drivers and other individuals who directly participate in the racing industry.

³ For example, see The Innovation Group, “Economic Impact Study: Pennsylvania Equine Racing Industry,” March 2011; Hall, Arthur P., “The Economics of Restoring Live Horse Racing and Greyhound Racing in Kansas,” February 2016; and Bowen, Eric *et.al.*, “The Economic Impact of the Thoroughbred and Greyhound Racing Industries on West Virginia’s Economy 2012,” January 2014.

By contrast, Act 7 of 2016 requires a determination of the economic return attributable to the PRHDF transfer. This analysis must therefore determine (1) the entities who ultimately receive the PRHDF transfer and (2) the manner in which the funds are used. As discussed later, a key element that determines the economic return is the amount of the transfer that remains in the state.

The analysis must also attempt to quantify monies that flow into the state due to the PRHDF transfer. For that purpose, it is necessary to make an explicit assumption regarding the status of the horseracing industry in the absence of the PRHDF transfer. Due to the size of the transfer and the fact that it currently supplies nearly 90 percent of total prize money, it is likely that the industry would be greatly diminished without those funds. For the purpose of this chapter, the analysis assumes that the industry would not be viable without the transfer. It is noted that outcome need not occur; it is also possible that the industry would contract significantly. This simplifying assumption is made to make the analysis tractable and straightforward. Policymakers can determine whether it is reasonable or requires modification.

The remainder of this chapter proceeds as follows. The first section addresses the PRHDF and presents historical data on the transfer and a discussion of the entities who receive those monies. The second section presents data on all types of horse race wagers and discusses how those wagers flow to patrons, racetracks and horsemen. The third section discusses expenditures on concessions, lodging and other gaming by resident and non-resident patrons of the six Pennsylvania racetracks. The fourth section discusses wagers made by Pennsylvania residents on races hosted in other states. The final section combines and summarizes the four sections and discusses the overall economic impact of the PRHDF transfer. This section also considers other possible uses for the transfer to offer alternative scenarios that provide context for the computed economic return.

Pennsylvania Race Horse Development Fund

Act 71 of 2004 enacts a 55.0 percent tax on the gross terminal revenue (GTR) from slot machine gaming in Pennsylvania. Slots tax revenues are dedicated to various purposes:

- 1) property tax relief (34.0 percentage points of the 55.0 percent tax rate),
- 2) distributions to counties and municipalities in the area where the casino is located (4.0 percentage points),
- 3) an Economic Development Fund used for economic development projects in the Commonwealth (5.0 percentage points) and
- 4) the Pennsylvania Race Horse Development Fund (PRHDF) (roughly 11 percentage points, with a maximum rate of 12.0 percent).

This chapter focuses on the final item. Slots revenues deposited into the PRHDF augment horseracing purses (or winnings), provide health and retirement benefits to horsemen and support the horse breeding industry in the Commonwealth. The monies flow to equine owners, racetracks, breeders and other horsemen (jockeys, drivers, trainers and other support personnel).

Table A displays slots tax revenue from each casino deposited into the PRHDF for calendar years 2010 through 2016. Deposits peaked in 2011 (\$277.0 million), but have declined nearly every year since then to the current level of \$235.7 million. Much of the downward trend is likely attributable to competition from new casinos located in Ohio, Maryland and New York.

Table A
Slots Tax Collections Transferred to the Pennsylvania
Race Horse Development Fund 2010 - 2016

Casino	2010	2011	2012	2013	2014	2015	2016 ¹
Parx	\$47.5	\$43.4	\$42.6	\$39.4	\$37.7	\$39.5	\$39.7
Presque Isle	20.3	19.3	16.8	14.0	12.5	12.2	11.6
Mohegan Sun Pocono	26.8	26.9	25.8	23.5	22.7	22.5	22.1
The Meadows	29.7	28.6	27.6	24.6	22.8	23.0	22.1
Harrah's Philadelphia	35.4	30.9	28.8	25.0	22.8	22.7	20.9
Mount Airy	17.1	16.8	16.6	15.2	14.7	14.5	14.1
Hollywood	30.2	28.7	27.0	24.6	22.4	22.5	21.7
Sands Bethlehem	30.8	31.1	32.2	30.6	29.2	31.0	31.0
Rivers	28.8	31.7	31.2	30.3	28.9	28.7	25.0
SugarHouse	4.3	19.7	21.1	19.3	18.2	18.1	17.0
Valley Forge	0.0	0.0	4.0	6.7	7.7	8.1	7.5
Lady Luck Nemaquin	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>1.2</u>	<u>2.8</u>	<u>3.1</u>	<u>3.0</u>
Total	271.0	277.0	273.7	254.4	242.3	246.1	235.7

Note: figures in dollar millions.

¹ Collections are net of refunds for certain promotional items purchased by the casino.

Source: 2010-2015 data from Pennsylvania Gaming Control Board (PGCB), 2015 Pari-Mutuel Statistical Summary. 2016 data from the PGCB website, Slots Revenue FY 2016/2017.

Disbursements from the PRHDF

Table B displays the types of disbursements from the PRHDF to the horseracing industry from 2010 to 2016. For 2016, certain line items were unusually large (restricted receipts account) or reflect only six months of data due to timing issues (State Racing Fund). The final column adjusts the actual data for 2016 to more accurately reflect the future disbursements that could be expected, and that column is used for the purpose of this analysis. Purses, breeding funds and health and pension benefits receive the majority (87 percent) of disbursements from the PRHDF. The subsections that follow provide a brief description of the disbursement and utilization of those funds.

Table B
Disbursements from the PRHDF 2010 - 2016

	2010	2011	2012	2013	2014	2015	2016	2016 Adj ¹
Purses	\$157.1	\$181.3	\$177.3	\$165.6	\$178.8	\$193.9	\$141.4	\$158.2
PA Breeding Fund	16.2	18.6	18.2	17.1	18.4	20.2	14.8	16.6
PA Sire Stakes Fund	7.6	8.8	8.6	8.0	8.7	9.3	6.7	7.5
PA SBDF ²	7.6	8.8	8.6	8.0	8.7	9.3	6.7	7.5
Health & Pension Benefits	12.2	11.4	11.4	11.2	11.1	11.2	11.0	12.3
State Racing Fund	0.0	0.0	0.0	0.0	4.2	0.0	6.7	10.9
General Fund	68.8	46.9	45.9	22.8	0.0	0.0	0.0	0.0
Farm Products Show Fund	0.0	0.0	2.5	2.5	0.0	0.0	0.0	0.0
Restricted Receipts Account	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>17.7</u>	<u>17.7</u>	<u>0.0</u>	<u>45.4</u>	<u>19.7</u>
Total	269.5	275.8	272.5	252.9	247.6	243.8	232.8	232.8

Note: figures in dollar millions.

¹ Assumes that \$25.759 million in agricultural-related programs from Act 25 of 2016 applies to the previous (2015) calendar year and reduces the 2016 figure for the restricted receipts account by that amount. Increases the State Racing Fund line item to reflect a full year of deposits for drug testing and promotional costs. The remainder is redistributed proportionally among the other line items so that the total amount

² Pennsylvania Standardbred Breeders Development Fund.

Source: 2010 - 2014 data from the Pennsylvania Gaming Control Board (PGCB), 2015 Pari-Mutuel Statistical Summary. 2015 and 2016 data are from the Pennsylvania Department of Revenue. All data are net of promotional expense refunds.

Purses

Purses are the prize monies awarded to owners of horses that participate in race events. They vary in size based on the type of race, placement of the horse (the top five finishers typically receive a share of the total purse) and policy of the racetrack. Purses are funded by PRHDF disbursements (87 percent of purses earned in 2016) and a portion of total wagers.

To determine the economic return from the PRHDF transfer, the analysis must identify the individuals or entities who receive those funds and how they are used. For 2016 (adjusted amount from Table B), the analysis makes the following assumptions for PRHDF purse disbursements (\$158.2 million):

- 50 percent of purses is received by owners who are Pennsylvania residents, and 50 percent is received by owners who are non-residents;⁴

⁴ Data from the annual racetrack reports submitted to the Racing Commission for 2015 suggest that 44 percent of purses paid flowed to an owner who was a Pennsylvania resident. However, the owner on record with the Racing Commission may not be representative of the residency of all owners, such as a partnership with multiple owners. The analysis uses a somewhat higher share of Pennsylvania owners than suggested by the report data.

- owners retain 90 percent of purses, while 10 percent goes to jockeys, drivers and trainers;⁵ and
- 85 percent of all purses paid to jockeys, drivers and trainers is received by Pennsylvania residents, and 15 percent is received by out-of-state residents.⁶

Based on these parameters, the analysis assumes that the \$158.2 million of purse monies from the PRHDF are distributed as follows: \$84.6 million flows to Pennsylvania residents (\$71.2 million to owners, \$13.4 million to jockeys, drivers or trainers) and \$73.6 million flows to non-residents (\$71.2 million to owners, \$2.4 million to jockeys, drivers or trainers).

Breeding Funds

Revenues from the PRHDF are disbursed to three breeding funds: The Pennsylvania Breeding Fund, the Standardbred Breeders Development Fund (SBDF) and the Pennsylvania Sire Stakes Fund. For 2016 (adjusted amount), these breeding funds received \$31.6 million of disbursements from the PRHDF. The Pennsylvania Breeding Fund enhances the thoroughbred breeding industry by offering monetary awards to breeders, stallion owners and owners of winning Pennsylvania-bred horses. The SBDF and Pennsylvania Sire Stakes Fund are targeted to the Standardbred breeding industry. The SBDF provides monetary incentives to owners of winning stallions and broodmares registered and residing in Pennsylvania, while the Sire Stakes Fund provides monetary awards to breeders for a series of races that feature horses sired by a registered Pennsylvania stallion. It is assumed that through these monetary awards and incentives, Pennsylvania breeders are the ultimate beneficiaries of these disbursements from the PRHDF.

The analysis assumes that 90 percent of PRHDF disbursements made to one of the three breeding funds flows to a Pennsylvania resident.⁷ For 2016, \$28.5 million of disbursements would flow to Pennsylvania residents, and \$3.2 million would flow to non-residents.

Health and Pension Benefits

The PRHDF also makes disbursements to provide health and pension benefits for members of horsemen's organizations that represent owners and trainers at racetracks at which the licensed racing entity operates. The horsemen's organizations include:

- The Pennsylvania Harness Horsemen's Association offers comprehensive insurance and retirement savings to its members, and includes owners, trainers and other horsemen.⁸ Member tracks for this association include Mohegan Sun at Pocono Downs and Harrah's Philadelphia.

⁵ Based on IFO discussions with various industry representatives.

⁶ Based on IFO discussions with various industry representatives.

⁷ A membership list of the Standardbred breeding funds suggests that 90 percent of its members have a Pennsylvania address.

⁸ Pennsylvania Harness Horsemen's Association. "About." <http://www.phha.org/about.html>.

- The Meadows Standardbred Owners Association offers benefits to owners, drivers, trainers, grooms and other horsemen who race at The Meadows.⁹
- The Pennsylvania Thoroughbred Horsemen’s Association (PTHA) offers health benefits and pension plans to members that exceed a specified level of racing activity at Parx.¹⁰
- The Pennsylvania Horsemen’s Benevolent Protective Association (HBPA) is a non-profit organization that offers several forms of medical coverage, along with health insurance and pension benefits to trainers at Penn National and Presque Isle Downs.¹¹

For 2016 (adjusted amount), disbursements from the PRHDF to members of these organizations for the purpose of health and pension benefits was \$12.3 million. The analysis assumes that 85 percent (\$10.5 million) of these funds flows to Pennsylvania residents, and 15 percent (\$1.8 million) flows to non-residents.¹²

All Other Funds

For 2016 (adjusted amount), disbursements to all other funds were \$30.6 million. These amounts provide funds for the Farm Show and Pennsylvania fairs, the Racing Commission, the Animal Health and Diagnostic Commission and the Pennsylvania Veterinary Laboratory. Somewhat more than half of these funds provide direct support to the racing industry. The analysis assumes that 95 percent (\$29.1 million) of these funds flows to Pennsylvania residents, and 5 percent (\$1.5 million) flows to non-residents.

Summary

Table C provides a summary of the \$232.8 million in PRHDF disbursements that flow to Pennsylvania residents and non-residents. The total split is as follows:

- \$152.7 million to residents: \$84.6 million from purses, \$28.5 million from breeding funds, \$10.5 million from health and pension benefits and \$29.1 million from all other funds; and
- \$80.1 million to non-residents: \$73.6 million from purses, \$3.2 from breeding funds, \$1.8 million from health and pension benefits and \$1.5 million from all other funds.

⁹ Meadows Standardbred Owners Association. “Membership Benefits.” <http://www.themsoa.com/membership-benefits/>.

¹⁰ Pennsylvania Thoroughbred Horsemen’s Association. “Health and Pension.” <http://patha.org/about-the-ptha/health-and-pension/>.

¹¹ Pennsylvania Horsemen’s Benevolent Protective Association. “Member Benefits.” <http://www.pahbpa.com/member-benefits/>.

¹² This assumption is based upon available data pertaining to membership requirements of these organizations. These funds may leak from the state as profits of multi-state insurance companies and retirees who move out of state.

Table C
PRHDF Disbursements – Residents and Non-Residents (2016)

	Purses	Breeding Funds	Health & Pensions	Other	Total
PA Residents	\$84.6	\$28.5	\$10.5	\$29.1	\$152.7
Non-PA Residents	<u>73.6</u>	<u>3.2</u>	<u>1.8</u>	<u>1.5</u>	<u>80.1</u>
Total	158.2	31.6	12.3	30.6	232.8

Note: figures in dollar millions.

Source: Totals based on data from the PGCB website, Slots Revenue FY 2016/2017. PA and non-PA resident splits based on estimates from the Independent Fiscal Office (IFO).

The final step in the analysis of PRHDF disbursements determines the amounts that are spent in Pennsylvania by the residents and non-residents who receive the funds. For that purpose, the analysis assumes that:

- 95 percent of funds that flow to Pennsylvania horsemen (owners, jockeys, drivers and trainers) is spent in-state, and 5 percent is spent out-of-state; and
- 60 percent of funds that flow to non-resident horse owners is spent in Pennsylvania, and 40 percent is spent out-of-state.¹³

Table D provides a summary of the flow of PRHDF distributions to residents and non-residents, and the amounts that are spent in Pennsylvania. In the final section, the analysis will use these “direct spending” figures to determine the economic return on gaming assessments. Based on the parameters discussed above, the analysis assumes that \$189.7 million (81.5 percent) of PRHDF disbursements is spent in Pennsylvania, and \$43.0 million (18.5 percent) flows outside of the state.

Table D
Spending of PRHDF Disbursements (2016)

	In Pennsylvania		Out-of-State	
	PA Residents	Non-Residents	PA Residents	Non-Residents
Purses	\$80.4	\$42.7	\$4.2	\$30.8
Breeding Funds	27.1	0.0	1.4	3.2
Health & Pension Benefits	10.5	0.0	0.0	1.8
Other	<u>29.1</u>	<u>0.0</u>	<u>0.0</u>	<u>1.5</u>
Total	147.0	42.7	5.6	37.3

Note: figures in dollar millions.

Source: Estimates by the IFO.

¹³ Industry sources noted that horses typically race and stable near the same track for much or most of the racing season.

Flow of Wagers in the PA Race Horse Industry

Pennsylvania residents and non-residents place wagers on horse races hosted by one of the six Pennsylvania racetracks. These wagers are referred to as live handle. Residents may also place wagers on horse races in other states, and some of those monies flow out of state. The analysis considers both types of wagers to determine the economic return from the transfer of slots revenue to the PRHDF.

Live Handle on Pennsylvania Horse Races

Live handle can be divided into five types of wagers: on-track, off-track, phone/internet, in-state export and out-of-state export. On-track handle is wagers placed on Pennsylvania races at the racetrack where the race takes place. Off-track handle is wagers placed at off-track wagering (OTW) facilities located in the Commonwealth. Phone/internet handle is wagers placed over the phone or through the internet with an entity that is located within the state (although the wager may originate from out of state). In-state export handle is wagers placed on Pennsylvania races that are simulcast to other racetracks located inside the Commonwealth.¹⁴ Out-of-state export handle is wagers on Pennsylvania races that are simulcast to racetracks or OTW facilities located outside of Pennsylvania.

Prior to Act 71 of 2004, purses were paid using proceeds from the live racing handle. It is widely recognized that larger purses attract superior competition, which typically increases the total wager pool. Purses increased significantly following the passage of Act 71, and the influx of slots revenue from the PRHDF transfer appears to have had a direct impact on the live racing handle. Table E displays the live racing handle for Pennsylvania horse races since the start of the PRHDF transfer. In 2006, a very modest amount (\$3.0 million) of slots revenue was added to the \$52.9 million available from the live handle purse to yield a total purse amount of \$56.0 million. Over the next three years, purses earned increased to \$151.7 million (\$99.7 million from slots) in 2007, \$201.1 million (\$155.1 million from slots) in 2008 and \$230.5 million (\$188.6 million from slots) in 2009.¹⁵ The rapid growth in purses coincided with an increase in total live racing handle from \$580.3 million (2006) to \$765.0 million (2009). Nearly all of the increase was attributable to out-of-state export, or wagers made by non-residents at facilities

¹⁴ Simulcast wagering occurs when a racetrack exports their live racing signal to other racetracks.

¹⁵ Purses earned is the total amount of prize money available to pay to winning horses before a race takes place. These amounts are slightly different than the purses paid which represents the subsequent distribution of prize monies actually paid to winning horses. Source: PGCB 2013 Pari-Mutuel Benchmark Report, pg. 9. http://gamingcontrolboard.pa.gov/files/reports/2013_Pari-Mutuel_Benchmark_Report.pdf.

located in other states through simulcast wagering. Purses earned peaked in 2009, but live racing handle continued to expand through 2013 (\$807.6 million). Since then, live racing handle has contracted every year to \$681.4 million in 2016.

Table E
Live Handle and Purses Earned on Pennsylvania Horse Races

Year	Live Racing Handle					Purses Earned			
	On-Track	Off-Track	Phone/Internet	In-State Export	Out-of-State Export	Total	From Slots	From Handle	Total
2006	\$41.3	\$27.5	\$13.8	\$42.1	\$455.5	\$580.3	\$3.0	\$52.9	\$56.0
2007	40.9	24.2	14.7	42.4	503.1	625.3	99.7	51.9	151.7
2008	43.6	22.0	13.9	44.2	605.5	729.3	155.1	46.0	201.1
2009	44.7	20.1	12.7	43.3	644.1	765.0	188.6	41.9	230.5
2010	40.5	17.6	11.3	39.5	660.7	769.6	159.1	37.3	196.4
2011	38.3	15.0	8.5	34.3	594.2	690.3	178.7	34.1	212.7
2012	40.7	14.5	8.1	33.9	679.7	777.0	175.5	33.6	209.0
2013	37.0	11.6	7.7	31.9	719.5	807.6	166.9	30.8	197.8
2014	32.9	9.8	9.3	29.1	683.9	765.0	177.1	27.6	204.8
2015	30.6	8.5	7.8	25.0	650.3	722.1	194.2	24.2	218.3
2016	27.4	6.2	6.4	21.3	620.1	681.4	145.4	22.6	168.1

Note: figures in dollar millions.

Source: 2006 - 2015 from the PGCB, 2015 Pari-Mutuel Statistical Summary. Figures for 2016 based on preliminary data from the PGCB.

To estimate the economic return from the PRHDF transfer, the analysis separates the amount of live handle attributable to Pennsylvania residents and non-residents. To facilitate that split, the analysis uses the following assumptions for wagers made in 2016:

- Pennsylvania residents comprise 90 percent of wagers at all racetracks and off-track betting facilities in Pennsylvania. This assumption includes on-track, off-track and in-state export handle in Table E.
- Pennsylvania residents comprise three-quarters of wagers placed by phone or internet on Pennsylvania races. Phone/internet wagers are a small portion of total live handle and this assumption has a minor impact on the overall results.
- All out-of-state export handle is attributable to non-residents.¹⁶

¹⁶ It is likely that some small amount of out-of-state export is attributable to Pennsylvania residents who place bets on Pennsylvania races while out of state. To the extent this occurs, the analysis will overstate the non-resident inflows and the net economic return from the PRHDF transfer.

Based on these parameters, the analysis assumes that \$54.2 million (8.0 percent) of the \$681.4 million in total live handle is from Pennsylvania residents and \$627.2 million (92.0 percent) is from non-residents. It is necessary to identify the origin of all wagers because roughly 80 percent of wagers is returned to bettors in the form of winnings. Hence, most wagers that originate from out-of-state remain in that location.

Flows from Live Racing Handle

Table F tracks the flow of the total live racing handle to resident and non-resident bettors, owners and other horsemen. The table allocates wagers to winnings, state tax (both Pennsylvania and other states), tote expense (defined below), non-Pennsylvania and Pennsylvania racetracks and horsemen. The text that follows provides a brief discussion of the categories from Table F and the assumptions used to determine the amounts that are ultimately spent in Pennsylvania or out of state.

Table F
Flow of Wagers Placed on Pennsylvania Horse Races (2016)

	On-Track	Off-Track	Phone/ Internet	In-State Export	Out-of- State Export	Total Live Handle
Returned to Bettors	\$21.9	\$5.0	\$5.1	\$17.0	\$496.1	\$545.1
State Pari-Mutuel Tax ¹	0.6	0.1	0.1	0.5	14.0	15.3
Tote Expense	0.1	0.0	0.0	0.1	1.6	1.7
PA Horsemen (Purses) ²	1.6	0.4	0.4	1.2	8.2	11.7
PA Racetracks ³	3.2	0.7	0.7	2.5	16.6	23.8
Out-of-state Tracks / Horsemen ⁴	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>83.7</u>	<u>83.7</u>
Total Wagers	27.4	6.2	6.4	21.3	620.1	681.4

Note: figures in dollar millions.

¹ Out-of-state export is not taxed in Pennsylvania. However, the analysis assumes that it is taxed in the state in which the bet was placed at the Pennsylvania estimated blended tax rate (2.25 percent).

² Horsemen include owners, trainers, jockeys, drivers, etc.

³ Pennsylvania racetracks include off-track betting facilities in Pennsylvania since racetracks own those facilities.

⁴ Includes all out-of-state betting facilities and out-of-state horsemen (which refers to horsemen at racetracks in other states).

Source: Estimates from the IFO based on conversations with various industry representatives.

Amounts Returned to Bettors

Most wagers flow back to bettors in the form of winnings, and the analysis assumes that 80 percent of the live handle is returned to bettors.¹⁷ These amounts have no impact on the computation of the economic return from the PRHDF transfer.

State Pari-Mutuel Tax

Wagers made at a facility located in Pennsylvania or facilitated by such an entity (i.e., phone or internet wagers) are subject to the state pari-mutuel tax.¹⁸ Hence, Pennsylvania taxes all live racing handle except out-of-state export. The analysis uses the following effective tax rates:

- Pennsylvania levies different rates of tax based on the type of bet placed, and the analysis assumes an effective state tax rate of 2.25 percent on all taxable handle. This effective tax rate is confirmed by the ratio of total pari-mutuel tax to total taxable handle (discussed below).
- Although Pennsylvania does not tax out-of-state export, it is likely that the state of origin does. It is not possible to determine the state from which a bet originates. Therefore, the analysis assumes that out-of-state export is also taxed at an effective rate of 2.25 percent, and those monies are remitted to other states.

Based on these tax rates, approximately \$1.4 million in tax revenues flows to the Commonwealth and \$14.0 million flows to other states.¹⁹

Tote Expense

Several firms calculate and provide odds for horse races that are updated as new wagers are made. Those firms receive a share of gross wagers as remuneration. Based on conversations with the Pennsylvania Racing Commission and racetracks, the analysis assumes that the tote expense is roughly 0.25 percent of live racing handle (roughly \$1.7 million).²⁰ One-half is assumed to remain in Pennsylvania because certain racetracks employ local workers to make these computations.

Income to Pennsylvania Racetracks and Horsemen

For on-track, off-track, phone/internet and in-state export wagers, the amount of wagers retained by racetracks or distributed to horsemen is the residual (17.5 percent, \$10.7 million) after the deduction of amounts returned to bettors (80 percent), state tax (2.25 percent) and tote expense (0.25 percent). For out-of-state export, (out-of-state bets

¹⁷ This parameter is based on conversations with staff of the Pennsylvania State Horse Racing Commission and published take-out rates for certain Pennsylvania racetracks. The take-out rate is the share of wagers not returned to bettors.

¹⁸ The pari-mutuel tax rate in Pennsylvania is “1.5% of the amount wagered each racing day on win, place or show wagers and 2.5% of the total amount on an exotic wager, including an exacta, daily double, quinella and trifecta wager.” 3 Pa.C.S. § 9334 (b).

¹⁹ Approximately \$7 million in Pennsylvania pari-mutuel taxes is also collected from wagers made in Pennsylvania on out-of-state races. Those amounts are discussed in a later section.

²⁰ Discussions with industry officials suggest that tote expenses range from 0.15% to 0.50% of total wagers.

made on Pennsylvania races), out-of-state racetracks or OTW facilities where the bet is placed typically retain a material portion of the wager, while the Pennsylvania racetrack that hosts the race receives a host fee. Based on discussions with industry officials, the analysis assumes that the host fee is four percent of the handle. For these types of wagers, the amount retained by the out-of-state entity is the residual (13.5 percent, \$83.7 million) after all other deductions, and only the four percent host fee (\$24.8 million) flows into the state.

The total amount retained by racetracks or distributed to horsemen from all live handle is \$35.5 million (\$10.7 million plus \$24.8 million). The split of those monies between racetracks and horsemen varies across racetracks. Based on discussions with industry representatives, the analysis assumes that two-thirds of those monies is retained by Pennsylvania racetracks (\$23.8 million) and one-third is distributed to horsemen (\$11.7 million).

Amounts Spent in Pennsylvania

Having determined the income flows, the analysis tracks the amount of funds spent in Pennsylvania. For this purpose, only the monies that flow into the state from non-residents is tracked. The analysis assumes that the 20 percent of resident wagers that is not returned to bettors does not represent a net economic gain or loss, but would simply be redirected towards some other form of in-state entertainment, perhaps even other gaming options if horseracing was not available.²¹ Based on the assumptions discussed previously, Table G shows that resident wagers retained by racetracks or distributed to horsemen is \$9.5 million. If combined with pari-mutuel tax from Table F, then the total is \$10.9 million. If redirected towards some other form of in-state entertainment, those monies would likely have a similar net impact on the Pennsylvania economy.

The inflow from non-residents is \$26.0 million, largely due to the four percent host fee from out-of-state export. The analysis assumes two-thirds of that amount is retained by racetracks (\$17.5 million) and 90 percent (\$15.7 million) is spent in Pennsylvania. The residual amount flows out of state as profits (e.g., dividend payments to shareholders of a multi-state corporation) or possibly as payments to service providers that are located in other states (e.g., advertising firms). The residual one-third (\$8.6 million) flows to horsemen and most of that amount (\$6.7 million) is assumed to be spent in Pennsylvania based on the resident and non-resident horsemen assumptions discussed in the previous section.

²¹ If the analysis simply attempted to quantify the size of the industry, then these monies would be included.

Table G
Live Handle to Pennsylvania Racetracks and Horsemen in 2016

	On-Track	Off-Track	Phone/Internet	In-State Export	Out-of-State Export	Total Live Handle
To PA Racetracks and Horsemen						
From PA Residents	\$4.3	\$1.0	\$0.8	\$3.3	\$0.0	\$9.5
From Non-PA Residents	<u>0.5</u>	<u>0.1</u>	<u>0.3</u>	<u>0.4</u>	<u>24.8</u>	<u>26.0</u>
Total	4.8	1.1	1.1	3.7	24.8	35.5
Spent in						
Non-Resident Flows Only	Pennsylvania		Out-of-State		Total	
To Racetracks	\$15.7		\$1.7		\$17.5	
To Horsemen	<u>6.7</u>		<u>1.9</u>		<u>8.6</u>	
Total	22.4		3.7		26.0	

Note: figures in dollar millions.

Source: Estimates from the IFO based on conversations with various industry representatives.

Sources of Taxable Handle and Tax Revenues

The final category of wagers is wagers made in Pennsylvania on races hosted by a race-track located in another state. Those wagers are subject to the state pari-mutuel tax and when combined with live racing handle (except out-of-state export) equals total taxable handle. As shown by Table H, taxable handle has declined in every year since 2006, largely due to the contraction in wagers made in Pennsylvania on out-of-state races.

It is unclear what would happen to these wagers if horseracing was not available in Pennsylvania. It is possible those wagers could increase as residents redirect bets on Pennsylvania races to out-of-state races. Alternatively, general interest in horseracing could decline and reduce bets placed on out-of-state races. This analysis implicitly assumes those effects offset and does not attempt to model those outcomes.

**Table H
Pennsylvania Taxable Handle**

Year	Wagers on PA races¹	Wagers on Non-PA races	Taxable Handle	Pari-Mutuel Tax Revenues
2006	\$124.7	\$851.1	\$975.9	\$10.8
2007	122.2	812.0	934.2	11.6
2008	123.8	700.3	824.1	10.9
2009	120.9	613.0	733.8	15.0
2010	108.9	512.8	621.7	12.1
2011	96.1	459.1	555.3	10.1
2012	97.3	425.7	522.9	12.5
2013	88.0	392.5	480.6	11.0
2014	81.1	346.4	427.5	9.8
2015	71.8	309.6	381.4	8.5
2016	61.3	n.a.	n.a.	9.1

Note: figures in dollar millions.

¹ Includes all on-track, off-track, phone/internet wagering, and in-state export live handle wagers.

Sources: Pennsylvania Gaming Control Board (PGCB). 2015 Pari-Mutuel Statistical Summary. Pennsylvania State Accounting System. Estimate for 2016 based on data from the PGCB.

Other Spending by Racetrack Patrons: Concessions, Lodging and Gaming

In addition to wagers, racetrack patrons also spend monies on food and beverages, lodging and casino games when they visit racetracks. Those expenditures have an economic impact on the state economy and the analysis must determine whether those monies are attributable to residents or non-residents. If attributable to residents, the analysis assumes that those monies would have been spent on other forms of entertainment in the state (e.g., movies, sporting events, lottery tickets) if horseracing was not available. Under either scenario, the net impact on the state economy would likely be similar. In contrast, the analysis treats spending by non-residents as a true economic gain that would not otherwise occur without the PRHDF transfer and a robust horseracing industry.

Concessions (Food and Beverages)

Based on data supplied by racetracks and annual reports submitted to the Racing Commission, the analysis uses the following estimates for food and beverage purchases made by racetrack patrons for CY 2016:

- Food and beverages purchased at concession stands and restaurants connected directly to the six racetracks in Pennsylvania: \$5.2 million.²²
- Food and beverages purchased at OTW facilities in Pennsylvania: \$2.8 million.²³
- Food and beverages purchased at restaurants located near racetracks from patrons choosing to dine outside of the racetrack: \$1.3 million.²⁴

Data are not available to inform the split of food and beverage purchases between residents and non-residents. The analysis uses an estimate that is likely on the upper end of a range that could be assumed to be attributable to non-residents (20 percent). Therefore, the analysis assumes that residents account for \$7.4 million and non-residents account for \$1.9 million of total food and beverage purchases (\$9.3 million) made by racetrack patrons.

²² The estimate is based on data provided by four racetracks. Food and beverage sales at other racetracks were estimated based on (1) per capita sales from racetracks that supplied data and (2) reported annual attendance at those racetracks.

²³ This estimate is based on data provided by two (out of four) racetracks with OTW facilities. Food and beverage sales at other facilities were assumed to have the same ratio of sales to wagers that take place at the facility.

²⁴ Data are not available for this estimate. The analysis assumes that other restaurants receive one-quarter of the total amount spent at Pennsylvania racetracks.

Lodging and Accommodations

In 2015, 721,000 patron visits were reported by the six Pennsylvania racetracks.²⁵ The analysis assumes that 10 percent of patrons are out-of-state residents and one-third require overnight lodging. If, on average, there are two patrons to a room and the average cost of a room is \$150 per night, then \$1.8 million is spent on lodging by non-residents annually.

Slots and Table Games

Many racetrack patrons will also spend monies on slots and table games during their visits to racetracks. However, it is difficult to isolate the net impact that horseracing may have on slots and table games activity. For example, although racetrack patrons may visit a casino after their races conclude, casino patrons (i.e., those in attendance whose primary purpose is to play slots or table games) may also venture to the racetrack and make wagers. For certain racinos, the data reveal that average gross terminal revenue from slots is higher on racing days, but much of that outcome could be due to the fact that nearly all racetracks host races on the high-volume day of Saturday, which may skew a simple comparison of daily averages. Similar to the seasonal impact on tourism, any analysis would need to control for this “day-of-the-week” effect.

Like food and beverage purchases, the analysis identifies slots and table games activity that could be due to racetrack patrons. For non-residents, that spending would be included as part of the economic return from the PRHDF transfer since the analysis assumes those monies would not flow into the state without a robust horseracing industry. For residents, the analysis assumes that incremental racetrack patron spending on slots and table games would occur regardless, and would be spent on some form of in-state entertainment. It is possible that those individuals simply redirect all of their spending at a racino to slots and table games exclusively if horseracing was not available.

A regression analysis was used to identify the net impact that horseracing may have on slots activity. Separate analyses were performed for several racinos and casinos (no racetrack). The analyses controlled for the day of the week and produced mixed results. More detailed data would be necessary to provide further clarity regarding the interaction between these different forms of entertainment.

Due to this uncertainty and ambiguity of statistical results, the analysis does not attempt to quantify an exact magnitude of any “spillover effects” from horseracing to slots (and table games) through the use of statistical analysis. However, for non-residents who visit a Pennsylvania racino for the purpose of horseracing (i.e., they would not otherwise make the trip), and also play slots or table games, the monies retained by the

²⁵ Data from annual reports submitted by each racetrack to the Pennsylvania Horse Racing Commission. The figure represents total daily visits, and most patrons likely visit racetracks more than once per year. The analysis assumes the same attendance for 2015 and 2016.

casino would represent a net inflow to the state that could be attributed to horseracing. The analysis assumes that Pennsylvania casinos retain \$3 million of those bets for CY 2016 (a portion is remitted as tax to the Commonwealth), which implies total non-resident bets that are much higher because the slots and table games payout rates are relatively high.²⁶

²⁶ For example, if the slots payout rate is 90 percent and a casino retains \$3 million, then the total bets were $\$3 / (1 - 0.9) = \30 million. That amount represents roughly one-fifth of one percent of total bets for the six racinos for CY 2016.

Economic Impact Summary

This final section combines the findings from the previous sections contained in this chapter and discusses the economic return from PRHDF disbursements, as required by Act 7 of 2016. The first part derives a “direct spending” figure that can be attributed to PRHDF disbursements. That amount consists of two general parts: (1) PRHDF disbursements spent in the state and (2) the net inflows from non-residents due to horseracing. As noted, the analysis assumes that resident wagers not returned to bettors (20 percent of wagers) and spending on concessions, lodging, or gaming would be redirected to a different form of in-state entertainment that may have a slightly higher or lower economic impact.²⁷ In either case, those monies would be spent in Pennsylvania and have a positive impact on the state economy. Therefore, the net economic impact or return will be determined by the magnitude of leakages from PRHDF disbursements to out-of-state owners and other horsemen relative to non-resident monies that flow into the state in the form of retained wagers, host fees, concessions, lodging, and higher slots play.

Direct Spending Attributable to PRHDF Disbursements

Table I summarizes the direct spending in Pennsylvania discussed in prior sections based on the source of income. Only the portion of PRHDF disbursements that are spent in state and non-resident inflows that would not otherwise occur without horseracing are shown. Direct in-state spending (\$224.6 million) is as follows:

- PRHDF monies to horsemen (\$133.6 million, from Table D, sum of purses and health-pension benefits received by residents and non-residents and spent in Pennsylvania);
- PRHDF monies to incentivize horse breeding in Pennsylvania (\$27.1 million, from Table D);
- PRHDF monies to a state agency or fund that generally flow to the horseracing or agricultural industries (\$29.1 million, from Table D);
- Distributions to racetracks and horsemen from (1) non-resident live handle and (2) host fees (\$22.4 million from Table G) plus a small amount (\$0.8 million) from tote expense for a total of \$23.2 million;
- Non-resident purchases of concessions (\$1.9 million), lodging (\$1.8 million) and incremental slots play (\$3.0 million) for a total of \$6.7 million (from prior section).

²⁷ Technically, this would be determined by the “multipliers” applied to the redirected spending. This net impact is likely minor and cannot be determined without specifying the alternative use of those funds.

- Net purses from other states brought back to Pennsylvania by Pennsylvania owners racing in those states (\$5.0 million).

The final item was not discussed previously and is difficult to quantify. Similar to non-resident owners who win Pennsylvania purses, some Pennsylvania owners will also race in other states and bring a portion of their net purse (after expenses) home. If the disbursements from the PRHDF did not occur, it is possible that some of those owners would no longer compete in out-of-state races, and those net winnings would not flow into the state economy. Other Pennsylvania owners may continue to race in other states, regardless of disbursements from the PRHDF. The amount represents net purses that currently flow into the state, but would no longer occur without PRHDF disbursements to Pennsylvania owners. This amount is itemized separately to allow a re-computation of results under a higher or lower amount.

Economic Return from PRHDF Disbursements

The amounts from the top of Table I represent the direct spending, or the first round economic impact. That spending becomes income for the recipients, and some portion is re-spent, while other amounts are saved or paid in federal, state or local tax. In this manner, an initial \$1 of direct spending will translate into total spending that exceeds \$1. This phenomenon is referred to as the multiplier effect. A spending or output multiplier of 2.0 implies that \$1 in direct spending is projected to increase total spending or output by \$2 in the state economy as the funds are re-spent by those who receive them. The additional \$1 of spending activity reflects indirect and induced spending.²⁸ For example, the firms and individuals that spend these monies allocate their spending to various purposes:

- Owners purchase horses from breeders, veterinary care, pay for jockey/driver and trainer services, stable costs, and various licensing and race entry fees.
- Racetracks (including dining facilities) spend for personnel, facility maintenance, new construction and distributions of profits.

²⁸ Indirect effects result from businesses purchasing inputs from other businesses in the supply chain. Induced effects result from workers and business owners re-spending monies they receive as income.

Table I
Direct Spending Attributable to PRHDF Disbursements and Non-Residents for 2016

	Total	PRHDF Disbursements			Non-Resident Flows	
		Horsemen	Breeding Funds	Other/State ¹	Live Handle	Concessions and Other ²
Racetracks ³	\$23.1	\$0.0	\$0.0	\$0.0	\$16.5	\$6.7
Horsemen	140.3	133.6	0.0	0.0	6.7	0.0
Breeders	27.1	0.0	27.1	0.0	0.0	0.0
Other ¹	29.1	0.0	0.0	29.1	0.0	0.0
Non-PA Net Purse ⁴	<u>5.0</u>	<u>5.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Total	224.6	138.6	27.1	29.1	23.2	6.7

	Output Multipliers	Total Output
PA Specific Multipliers⁵		
Gambling Industries	1.87	\$43.3
Animal Production, Except Cattle-Poultry	1.65	273.3
Other Government Enterprises	2.28	66.3
Food Service-Drinking	2.17	<u>14.5</u>
Total		397.4

Possible Alternative Scenarios

Total PRHDF Disbursement	\$232.8
PA Specific Multipliers ⁶	
Elementary-Secondary Education	2.08
Infrastructure: Water and Sewer	1.83
Infrastructure: Highways and Streets	2.15
Tax Relief to Households	1.2 - 1.4

Note: figures in dollar millions.

¹ Includes transfers to the State Racing Fund and transfers to restricted receipts accounts to pay for various agricultural programs.

² Includes non-resident food, beverage, lodging and incremental slots play as a result of horseracing in Pennsylvania.

³ Includes the racetrack portion of the host fee, inflows from non-resident patrons and a portion of tote expenses.

⁴ Net purses from out-of-state races that no longer flow into Pennsylvania.

⁵ Multiplier source: U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II). December 2016.

⁶ These multipliers provide only general guidance regarding the potential impact on spending or output from other potential uses of the funds. Similar to PRHDF disbursements, an analysis would need to identify the recipients of the funds and the manner in which they would be used. Due to the complexity of those computations, this report does not attempt to compute the economic impact from those alternative uses.

Previous analyses of the horseracing industry have used a wide range of values for the output multiplier. Recent studies for Pennsylvania and other states include (state and output multiplier in parentheses): The Innovation Group (Pennsylvania, 2.13), The Pennsylvania State University (Pennsylvania, 1.86), West Virginia University (West Virginia, 2.1), The Innovation Group (New York, 2.2), New Mexico State University (New Mexico, 1.79) and Public Sector Consultants (Michigan, 1.58).²⁹

The analysis uses multipliers computed by the U.S. Bureau of Economic Analysis based on input-output data for 2007 and local industry data from 2015 (known as RIMS II, Type 2 multipliers).³⁰ The values for relevant Pennsylvania-specific output or spending multipliers are as follows: gambling industries, (1.87, used for inflows from non-resident wagers), animal production (1.65, used for breeding funds and amounts to horsemen), other government enterprises (2.28, used for regulation of the industry and other disbursements to agricultural industries) and food service-drinking establishments (2.17, used for non-resident concessions).³¹ The application of these multipliers yields \$397.4 million of total spending or output.

It is noted that this figure double counts certain sales transactions since it includes “intermediate” purchases that are also reflected in final sales. In order to derive the net impact on the state economy or gross domestic product, a value-added multiplier should be used. Those multipliers are as follows: gambling industries (1.06), animal production (1.03), other government enterprises (1.13) and food service-drinking (1.16). This analysis presents the results using the output multiplier because that multiplier has been used in previous industry studies such as the ones cited above.

²⁹ The Innovation Group. “Economic Impact Study: Pennsylvania Equine Racing Industry.” March 2011; The Pennsylvania State University. College of Agricultural Sciences. “Pennsylvania Horse Power: Pennsylvania Equine Economic Impact Study.” May 2003; Bowen, Eric et.al. “The Economic Impact of the Thoroughbred and Greyhound Racing Industries on West Virginia’s Economy 2012.” West Virginia University. College of Business and Economics. January 2014; The Innovation Group. “New York State Equine Industry Economic Impact Study.” 2012; Lillywhite, Jay M and Mark Wise. “Economic Impacts of Racehorse Ownership, Breeding, and Training on New Mexico’s Economy.” New Mexico State University. College of Agricultural, Consumer and Environmental Sciences. April 2009; Public Sector Consultants Inc. “Horse Racing in Michigan: An Economic Impact Study.” December 2002.

³⁰ U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II). December 2016. <https://bea.gov/regional/rims/rimsii/>.

³¹ As noted in the New Mexico study, agricultural animal production covers various types of activities. For that study, the authors used “animal production, except cattle and poultry” to estimate the impacts of racehorse ownership, breeding and training on the state economy. This analysis follows that convention. A gambling industry multiplier is not used because the monies have flowed through to the owners or other horsemen, and their purchases will be different than a casino.

Other Considerations

For the horseracing industry, the economic return from the PRHDF monies noted above fails to include other relevant factors that are difficult to quantify but warrant consideration by policymakers. They are as follows:

- The value of maintaining land in agricultural status.
- The value of maintaining an industry that supports small business owners such as breeders, trainers and veterinarians.
- The value of the industry as an outlet for hobbies and recreation. For many participants, horseracing does not provide their primary source of income. Some residents likely participate in the industry as a hobby, and may even incur losses on a regular basis.

Alternative Uses and Caveats

In order to supply context regarding the economic return from the PRHDF transfer or disbursements, it is useful to consider potential alternative uses of those funds. Other potential uses could include programs that already benefit from slots tax revenues such as homeowner property tax relief or local economic development. Alternatively, the funds could be used for a major program such as education.

Under these potential alternative uses, policymakers would need to weigh the inherent tradeoffs. For example, if the monies were used for elementary and secondary education, there would be no immediate leakage from the state economy. However, there would also be no inflows from non-residents engaging in a recreational activity.

Similar to the analysis of the PRHDF transfer, the economic impact from alternative uses would depend on (1) any immediate leakage from the state economy and (2) the size of the multipliers applied, which will also reflect leakage from the state economy over the long-term. Certain industries will have high multipliers if the monies are spent locally or local firms exist that can supply labor and inputs. Under the potential alternative uses, the full amount of the disbursements would be available since there is no immediate leakage and the recipients would be nearly all Pennsylvania residents. An analysis would then apply the relevant multiplier. Table I displays output multipliers for elementary and secondary education (2.08), certain infrastructure projects (1.83 and 2.15) and property tax relief to households (1.2 – 1.4).³²

³² These multipliers provide only general guidance regarding the potential impact on spending or output from other potential uses of the funds. Similar to PRHDF disbursements, an analysis would need to identify the recipients of the funds and the manner in which they would be used. Due to the complexity of those computations, this report does not attempt to compute the economic impact from those alternative uses.

The IFO concludes this section of the report with several cautionary notes. This analysis is best used to provide a general framework to conceptualize the PRHDF transfer made to the Pennsylvania horseracing industry. As demonstrated by the discussion in this chapter, quantifying the economic return from the PRHDF transfer is complicated and requires the use of many assumptions, and some assumptions are supported by data that are ambiguous. For example, ownership structures can be complex, and the residency of the individual on file with the Racing Commission may not be truly representative of the residency of actual owners. Finally, the share of the PRHDF transfer spent in state by non-resident owners could be higher or lower than the share assumed by this analysis. Given sufficient time and resources, an analysis might conduct a broad survey of owners to determine their characteristics and spending patterns. However, other horseracing studies that have relied on survey data have received very low response rates, and those responses are likely not representative of the overall industry.