Legalizing Video Slot Gaming in Maryland: A Business Analysis

by Jeffrey C. Hooke and Thomas A. Firey

MTEF

The Maryland Public Policy Institute

About the Authors

Jeffrey C. Hooke is chairman of the Maryland Tax Education Foundation, and also is managing director of Hooke Associates, LLC, an investment bank based in Vienna, Virginia.

Previously, he was a director of Emerging Markets Partnership, a $4 billion private equity partnership; a principal investment officer of the World Bank Group; and an investment banker with Lehman Brothers and Schroder Wertheim, respectively, two prominent securities firms based in New York.

He is the author of three books: *The Emerging Markets* (2001), *Security Analysis on Wall Street* (1998), and *M&A: A Practical Guide to Doing the Deal* (1996). Each of those works is published by John Wiley & Sons of New York.

Thomas A. Firey is a senior fellow of the Maryland Public Policy Institute, and also is the managing editor of *Regulation* magazine, a publication of The Cato Institute (www.cato.org.) He is the editor of *Maryland 2002-2003: A Guide to the Issues*, a publication of The Maryland Public Policy Institute.

The authors thank Thomas Hemphill of The George Washington University and Peter VanDoren of The Cato Institute for their insights, suggestions, and provocative questions regarding this project.

Legalizing Video Slot Gaming in Maryland: A Business Analysis

by Jeffrey C. Hooke and Thomas A. Firey

Published by
The Maryland Public Policy Institute
P.O. Box 195
Germantown, Maryland 20875-0195
(240) 686-3510
www.mdpolicy.org

Maryland Tax Education Foundation
7504 Maple Avenue
Chevy Chase, Maryland 20815
(301) 762-3784
www.marylandtaxeducation.org

Copyright © 2003

Nothing written here is to be construed as an attempt to aid or hinder the passage of any bill before the Maryland General Assembly.

SUMMARY

In this report, the authors examine several possible market designs that Maryland could adopt if it were to allow video slot machine gaming in the state. Specifically, we project what revenue the state would receive under each market design, and what other advantages and drawbacks are implicit in the designs.

Our findings indicate that, if the state elects to adopt slot gaming, it should auction off a small number of slot operating licenses via a "Reverse Auction" whereby potential private sector operators (including state horse tracks) vie for the licenses by offering to retain the smallest portion of the win. Under that design, our modeling shows the state would receive $1.6 billion annually from gaming. (We do not calculate the social costs and losses in tax revenue from other sectors that Maryland would experience if slots were legal.)

Aside from the Reverse Auction, we examine the strengths and weaknesses of several other market designs, including a "Cash Auction," a "Shadow Auction," and a model similar to that proposed in Senate Bill 322 from the 2003 session of the General Assembly. We consider three ownership paradigms: state ownership of the slot facilities (located either adjacent to horse tracks or in prime commercial areas), exclusive ownership of the facilities by state racetracks, and ownership by non-track private sector operators who would place the facilities in prime commercial areas.

FINANCIAL SUMMARY OF SLOT MARKET DESIGNS

(In Millions of Dollars)

Design	Location of Facilities	Up-front State Costs or Revenue (Costs in Parentheses)	Annual State Revenue Before Inflation	Present Value to State Over 20 Years at 10% Discount Rate
1. Reverse Auction Successful bidders are those who accept smallest share of win (projected at 21.5%)	Commercial Areas	-0-	1,606.8	13,679.6
2. Canadian Model A State condemns land adjacent to tracks, builds its own facilities, and subcontracts slots management.	Adjacent to Racetracks	(522.4)	1,507.6	12,312.6
3. Canadian Model B State builds its own facilities in prime commercial areas and subcontracts slots management.	Commercial Areas	(522.4)	1,704.3	13,987.3
4. Cash Auction Slot licenses auctioned for cash up-front; the state stipulates that the winning bidders receive 39% of win.	Commercial Areas	1,500.0	1,309.2	12,646.0
5. Shadow Auction Investment bank sets the share of win allocated to tracks (which we project at 23.7%), in exchange for no-fee licenses.	Inside Racetrack Properties	-0-	1,410.8	12,010.9
6. SB 322 (2003) No-fee licenses awarded to tracks, and the tracks receive 39% of the win.	Inside Racetrack Properties	-0-	1,186.3	10,100.0

LEGALIZING VIDEO SLOT GAMING IN MARYLAND: A BUSINESS ANALYSIS

The question of whether to allow video terminal "slot" gaming at Old Line State horse tracks[1] was the most controversial issue of the 2002 General Assembly. Maryland's horseracing industry had long lobbied for the games and even become a significant contributor to candidates who might be receptive to the idea. However, slots failed to gain traction in Annapolis until 2002 when Maryland's budget deficit and the decision to increase state funding of public education prompted lawmakers to search for a new source of government revenue.

Incoming governor Robert Ehrlich took the lead in the 2002 debate, initially proposing to allow four state horse tracks to install a total of 10,500 machines. In exchange, the state would receive $350 million from the tracks in up-front licensing fees and 63.9 percent of the net revenue (known in industry parlance as the "win") from the games. Track owners, however, balked at the fees and size of the state cut of the win, prompting Ehrlich to increase the number of machines to 11,500 and decrease both the licensing fee and the state share of the revenue.

The Ehrlich legislation ran into strong opposition from a coalition of social conservatives who opposed the machines on moral grounds, non-horseracing entertainment venues that worried the tracks would receive an unfair advantage in the competition for entertainment dollars, community groups concerned about externality costs from gaming, a variety of opponents who claimed the state was offering track owners too good of a deal[2], and lawmakers who refused to adopt slots legislation unless it was coupled with increases on other taxes. Ultimately, the legislature rejected Ehrlich's proposal but voted to study the idea after the session and, perhaps, consider new slots legislation in 2004.

Since the close of the 2003 session, Maryland's budget woes have continued; according to a just-released Department of Legislative Services report, state spending will grow at an annual rate of between six and nine percent over the next several years while state revenue will grow by between two and four percent annually. Because extensive spending reduction is difficult to carry out politically, Maryland's current budget situation enhances the likelihood that Annapolis will adopt some form of video terminal gaming in order to generate additional state revenue.

SLOT REVENUE POTENTIAL

When the 2003 General Assembly first convened, three slots proposals were floated: the governor's initial plan, a plan authored by Baltimore Del. Howard Rawlings, and a plan offered by the

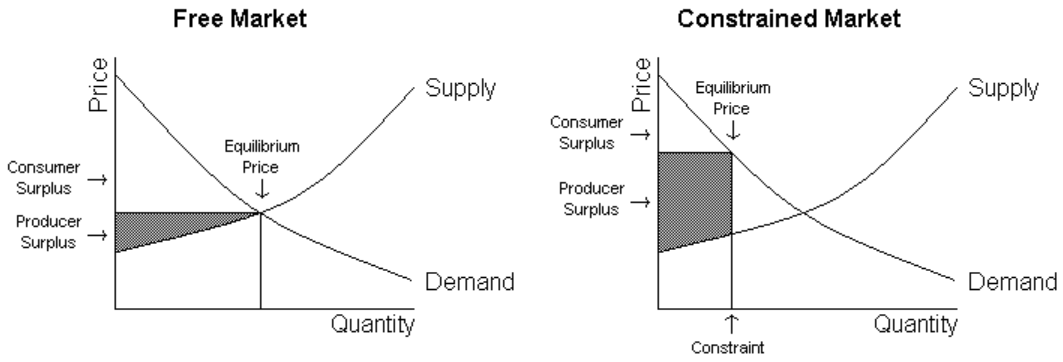
1. Aside from a few hundred machines on the Eastern Shore, slot gaming is prohibited in the state of Maryland.
2. See, e.g., "Are the License Fees Too Low?" written by Jeff Hooke and published by the Maryland Tax Education Foundation.

Maryland horseracing industry. Each of the proposals had merit, but none was the result of careful analysis of different video slot market designs. Such an analysis could determine the revenue potential for the state under each design as well as other benefits and drawbacks. This report provides that analysis.

Our report does not examine the social costs of video slot gaming.[3] This omission should not be interpreted as indicating the authors dismiss those costs; however, other reports[4] have examined that issue. This report also does not examine the question of whether the addition of slot revenue to state coffers is compatible with the ideals of good government – but that is an important question. Our report should in no way be understood to indicate support for or opposition to Maryland adoption of video slot gaming by either the authors or their supporting organizations.

Restricted marketplace The vast revenue potential for slots in Maryland is a result of laws banning or limiting the games in most locations in the United States. That barrier to supply, coupled with strong demand from people who enjoy gaming, creates a large producer surplus that equals tremendous profits for slot operators. If the legal barrier to slot gaming were to be removed, the producer surplus would drop, the price for consumers would fall, and the consumer surplus (which loosely translates to how much "extra enjoyment" consumers receive for their money) would increase. The consumer and producer surpluses in both a free and a constrained market are shown below:

PRODUCER SURPLUS IN FREE AND CONSTRAINED MARKETS



In considering whether to allow the games at a small number of venues, Maryland policymakers look to create and then capture "excess rents"—i.e., the excess profits that result from establishing "slot monopolies" to produce an equilibrium price different than what it would be in a free market. The government's ability to establish several slot gaming monopolies and then tax the resulting producer surplus gives it the ability to generate and extract enormous rents that are sent to

3. Given concerns about the social costs and other externalities of gaming, state policymakers should consider adopting Del. Rawlings' excellent idea that a slot facility must receive a vote of approval from its "host" county before it can begin operation. Policymakers should also award the host county a portion of the tax revenue generated from the slot facility as compensation for externality costs.
4. See, e.g., "Video Slot Gaming in Maryland: Weighing the Costs and Benefits," written by Thomas A. Hemphill and published by The Maryland Public Policy Institute.

state coffers. Game operators anxious to receive a portion of the slot revenue usually accept the state's manipulations because the suppliers profit along with the government. Indeed, the only "loser" from the market manipulations is the consumer.

For free marketers (including one of the authors of this paper), state legalization of slot gaming under constrained market conditions is philosophically troublesome. Free marketers believe that government should enact special taxes and manipulate the supply of a product only to the degree that externalities or other market failures are addressed appropriately. According to free marketers, the state should avoid manipulating markets to produce rents that accrue either to suppliers or the state itself. Unfortunately, rent creation is a common activity of government, and is especially prevalent in Annapolis.

Antecedents Despite that philosophical qualm, the authors have undertaken this study in order to determine how Maryland could best benefit from the legalization of video slot gaming. Specifically, we look at six different slot market designs and model the financial results for both the state and the slots facilities' private operators under each design.

For the purpose of this study, the authors assumed that Maryland would attempt to maximize the rents by licensing five slot facilities dispersed throughout the state in accordance with Maryland's population distribution. We envisioned two facilities located in the Maryland suburbs of Washington, D.C., one in the Baltimore metropolitan area, one in Western Maryland, and one on the Eastern Shore. Those locations may be at horse tracks, but they do not have to be—it is up to policymakers to decide if they should physically link slot gaming to horseracing.[5]

To enhance rents, the authors assumed that the number of machines at each location is limited, and the state would guarantee no further expansion of gaming for a period of years. We hypothesize that the three Washington-Baltimore facilities have 3,000 machines each and the Western Maryland facility has 1,500 machines. The Eastern Shore facility operates 1,000 machines year-round but expands to 3,000 machines during the three-month "beach season." That distribution is summarized in Table 1 and further explained in Appendix A.

TABLE 1: Hypothetical Distribution of Slot Facilities and Machines

Location	Number of Machines
Baltimore Metro Area	3,000
Washington Metro Area #1	3,000
Washington Metro Area #2	3,000
Western Maryland	1,500
Eastern Shore	1,500*
	12,000

* The Eastern Shore has 3,000 slots for three months of the year and 1,000 for the remaining nine months, producing a weighted average of 1,500 machines.

5. Those who support placing slots at Maryland horse tracks argue that the games would provide new revenue to the flagging horseracing industry. If the state elects to allow slots at locations other than the tracks, Maryland could still help the industry by giving the tracks (or various groups associated with Maryland horseracing) a cut of the state revenue from the machines.

To carry out the analysis, we projected the annual gross revenue per machine for each of the five locations by using data from slot operations in other states and then adjusting those data in accordance with Maryland's demographics. We produced two sets of projections for each location: one under the assumption that the slot facilities would be located in or adjacent to horse tracks, and the other under the assumption that the facilities would be in prime commercial areas. Those projections are shown in Table 2 and further explained in Appendix A.

TABLE 2: Annual Revenue (Win) per Location
(365 days per year)
Amounts in Millions

	Non-Racetrack Location	Located in/adjacent to Racetrack Properties
Baltimore	$ 602.3	$ 547.5
Washington #1	722.7	657.0
Washington #2	547.5	492.8
Western Maryland	136.9	123.2
Eastern Shore	136.9	123.2
	$2,146.3	$1,943.7

Using those numbers and the assumption that the state slots licenses are for a period of 20 years, along with other assumptions that are standard in a business analysis of this sort (see Appendix A), we modeled the financial results of each slot gaming market design. We identified one preferred design, the Reverse Auction, along with five alternatives.

The following pages describe our findings for the Reverse Auction design and the alternative designs. The order of the alternative designs does not represent the authors' order of preference.

Methodology The financial analysis presented in this report uses projection techniques that are widely accepted by corporate appraisers, corporate valuation experts, and corporate financiers. The principal assumptions behind the revenue per machine, slots facility operating expenses, and required capital investments are clearly identified in the accompanying tables pursuant to guidelines established by the American Institute of Certified Public Accountants.

All of the principal assumptions are corroborated by verifiable data obtained from audited filings with the U.S. Securities and Exchange Commission, audited reports from various state gaming commission websites, statistics from the U.S. Census Bureau, and selected newspaper and magazine articles. To complement the data, the authors interviewed selected industry participants and analysts. Appendix B offers a listing of those sources.

TABLE 3: Financial Summary of Slot Market Designs[a]
(Millions)

Design	Location of Facilities	Up-front State Costs or Revenue (Costs in Parentheses[b])	Annual State Revenue Before Inflation	Present Value to State Over 20 Years at 10% Discount Rate[c]
1. Reverse Auction Successful bidders are those who accept smallest share of win (projected at 21.5%)	Commercial Areas	-0-	1,606.8	13,679.6
2. Canadian Model A State condemns land adjacent to tracks, builds its own facilities, and subcontracts slots management.	Adjacent to Racetracks	(522.4)	1,507.6	12,312.6
3. Canadian Model B State builds its own facilities in prime commercial areas and subcontracts slots management.	Commercial Areas	(522.4)	1,704.3	13,987.3
4. Cash Auction Slot licenses auctioned for cash up-front; the state stipulates that the winning bidders receive 39% of win.	Commercial Areas	1,500.0	1,309.2	12,646.0
5. Shadow Auction Investment bank sets the share of win allocated to tracks (projected at 23.7%), in exchange for no-fee licenses.	Inside Racetrack Properties	-0-	1,410.8	12,010.9
6. SB 322 (2003) No-fee licenses awarded to tracks, and the tracks receive 39% of the win.	Inside Racetrack Properties	-0-	1,186.3	10,100.0

a. The summaries exclude social costs borne by the state. They also exclude likely decreased tax revenues from restaurant, bars and other leisure-time venues as patrons transfer some of their entertainment spending to slot gaming. Those tax losses could be signficant; see "Slot Machine Gambling in Maryland: An Economic Analysis," written by Robert E. Carpenter and published by the Maryland Institute for Policy Analysis & Research.

b. The state's investment of $522.4 million in the two Canadian Model designs would likely be lender-financed on a non-guaranteed project basis, meaning minimal upfront cash outlays by the state. The slots employees would be private contractors.

c. Ten-year U.S. Treasury Bonds yield 4%; estimated return of U.S. stock market is 11%, estimated annual return to equity investors in Alternatives 1 and 4 is 20%. The 21.5% and 23.7% "win" allocations for the tracks are corroborated by N.Y. State tracks, which settled for 20% of the win.

PREFERRED DESIGN: THE REVERSE AUCTION

Under the Reverse Auction design, Maryland uses market forces to extract the excess rents from video slot gaming. That is accomplished by inviting many potential gaming operators – including horse tracks and casino corporations – to bid on each of the five licenses, and each license allows its holder to construct the slot facility in any commercial location within the geographic area covered by the license. The bids are in the form of the lowest percentage of the machines' gross revenue (referred to as the "win" in industry parlance) that the operator will take in exchange for the license. From that percentage (which is referred to as the "hold"), the operators cover their operating expenses, capital costs, and profits. For this and all the other designs, we assumed the state covers the cost of the actual slot machines because slots legislation from the 2003 General Assembly included that provision.

The chief advantage of the Reverse Auction design is its use of market forces to determine and extract the excess rents. Participants in the auction are willing to bid until the rents are all but gone because they prefer to have a license that awards few rents to having no license at all. Hence, the bidders reveal to the state exactly how much of the "win" is excess profits.

A second advantage to this design is that it does not require the auction participants to pay any money "up-front." That allows for a variety of firms—from "deep-pocketed" casino entertainment companies to private equity firms, to Maryland horse tracks—to participate in the auction on a near-even footing.

Modeling results According to our projections, the three large metropolitan facilities will attract winning bids of around 21.5 percent because that produces an acceptable return on investment for the operators once expenses are covered. Hence, 78.5 percent of the "win" from the slot machines goes to the state. Meanwhile, on the Eastern Shore and in Western Maryland, the winning bid will be around 50.0 percent because the number of machines allotted to those locations and the population from which they draw regular customers is considerably smaller than the metropolitan locations. Together, under our financial projections, the state receives a total of $13.7 billion in present value over the 20-year life of the five licenses. The annual revenue calculations are shown in Table 4.

The winning bids for the three metropolitan facilities enable the operators to realize a 20.0 percent annual return on investment. (By way of comparison, Proctor & Gamble's return on equity investment in 2002 was 8.2 percent and the 10-year U.S. Treasury Bond yields 3.8 percent.) Our 21.5 percent conclusion for the metropolitan tracks is corroborated by recent negotiations in New York State, where racetrack owners accepted a 20 percent hold in exchange for receiving free slot machine monopolies.

TABLE 4: Annual Financial Results Under Reverse Auction Design

Three Metro Facilities	Millions	%
Annual Revenue		
9,000 slots x $570 (avg.) win per machine per day	$1,872.5	
Likely Betting Tax (78.5%)	(1,469.9)	
Revenue to Licensees (21.5%)	402.6	100.0%
Cash Operating Costs		
9,000 slots x $75 per machine per day	(246.4)	
EBITDA	156.2	38.8%
Depreciation	(39.9)	
EBIT	116.3	
Income Taxes @ 40%	(46.5)	
Net Income	$ 69.8	
Total Investment (3 x $116.1 million)	$ 348.3	
Annual Return on Investment		20.0%
Two Rural Facilities		
Annual Revenue		
3,000 slots (daily avg.) x $250 (avg.) win per machine per day	$273.8	
Likely Betting Tax (50%)	(136.9)	
Revenue to Licensees (50%)	$136.9	

CANADIAN MODEL

In Canada, the government owns several gaming facilities and uses the resulting income to augment other government revenue. Maryland could adopt the Canadian Model and either (A) acquire land adjacent to horse tracks through its power of eminent domain and construct slot facilities there, or (B) build the facilities in prime commercial locations.

Under this design, the state raises capital for land acquisition, facilities construction, and other start-up costs through the private markets on a non-guaranteed project basis so as to minimize the need for Maryland to make large up-front cash outlays. The state then subcontracts management to an established gaming firm through a bid process, and the sub-contractor employs workers for the facility.

Design A allows the state to respond to skeptical citizens who argue that, if Maryland permits slot gaming, that gaming should be placed in the racetrack environment because "gambling is already there." However, because the slot facilities would be located next to the tracks on land obtained through eminent domain, this design does not lock the state into a poor negotiating position with a handful of track owners.

The Canadian Model has the obvious advantage that the state does not have to construct some mechanism to extract the excess rents, other than the rents that accrue to the subcontracting operator.

Modeling results In evaluating the Canadian Model, we modeled both scenarios: Design A in which the facilities are located adjacent to horse tracks, and Design B in which they are in prime commercial areas. Design A produced a total present value of revenue of just over $12.3 billion over 20 years, while Design B produced a total present value of nearly $14.0 billion over the same timeframe. The annual revenue calculations are shown in Tables 5 and 6.

It is not surprising that our modeling of Scenario B produces a slightly higher return for the state than our preferred alternative, the Reverse Auction. Part of the reason for that difference is tax arbitrage: Because the private track owners under the Reverse Auction have to pay federal income tax, the federal government receives a "cut" of the slots revenue. That, in turn, produces an expense for the private owners, who will lower their bids for the slot licenses accordingly and thus slightly reduce the state's revenue. The Canadian Model enables a significant portion of the slots revenue to avoid federal income taxation, with much of the money saved from the I.R.S. instead going into state coffers. (On the other hand, state ownership of the slot facilities removes them from property tax rolls.)

Another reason that Maryland receives a slightly higher return under Canadian Model B than under the Reverse Auction design is because the state assumes more risk. If the slots venture proves unprofitable over either the short- or long-term (an unlikely scenario, but possible), Maryland is saddled with the costs. We call for a number of measures to mitigate those risks (e.g., employees are hired by the management contractor instead of the state, the facilities are financed using money leveraged on a non-guaranteed basis from the private markets), but Maryland is still taking on more risk under the Canadian Model than under the private ownership paradigms that

we consider. In exchange for assuming that risk, Maryland receives a slightly higher return on investment under the Canadian Model than under the Reverse Auction design.

TABLE 5: Annual Financial Results Under Canadian Model, "Adjacent-to-tracks" Design

Three Metro Facilities	Millions
Annual Revenue	
9,000 slots x $517 (avg.) win per machine per day	$1,698.3
Management Fee (2.5%)	(42.5)
Revenue to State before Operating Costs	1,655.8
Cash Operating Costs	
9,000 slots x $75 per machine per day	(246.4)
EBITDA	1,409.4
Depreciation	(39.9)
Operating Income to the State	$1,369.5
State's Investment (3 x $116.1 million) in 3 Facilities	$ 348.3
Two Rural Facilities	
Annual Revenue	
3,000 average slots x $225 (avg.) win per machine per day	$246.4
Management Fee (2.5%)	(6.2)
Revenue to State before Operating Costs	240.2
Cash Operating Costs	
3,000 x $75 per machine per day	(82.1)
EBITDA	158.1
Depreciation	(20.0)
Operating Income to State	$138.1
State's Investment in 2 facilities	$174.1

Drawbacks The increased business risk to the state is one important drawback of the Canadian design. Because Maryland does not possess any particular expertise in video slot gaming, the state's business decisions in this venture will not be as expert as, say, the decisions of managers at MGM-Grand or Harrah's. That shortcoming will not doom the venture to insolvency, but it does increase the risk that state-owned video slot gaming will not achieve overall returns as high as under a private ownership model.

There are several other drawbacks to the Canadian Model that center around the philosophical implications of Maryland "going into the casino business"—and doing so as a monopoly. With government as the sole supplier of slot gaming and holding the power to shape and manipulate the gaming marketplace, the state will have enormous opportunity (and incentive) to gouge slot

consumers. Moreover, Maryland would suffer severe conflict-of-interest problems if any grievances arising from slot gaming were to be filed in state courts. Further, the provision of slot gaming is hardly a fundamental function of government, and the historical record of government entry into "business" is marked with countless financial failures, poor decisions, and incidents of considerable disservice to consumers. The use of eminent domain to seize land for slot facilities either adjacent to horse tracks or in prime commercial areas is allowed by the courts, but is hardly in keeping with the ideal of "public use" and is likely to draw political opposition. Finally, government entry into the gaming industry creates new opportunities for the improper granting of largesse to the politically well connected—the same problem that plagued the 2003 Senate Bill 322.

TABLE 6: Annual Financial Results Under Canadian Model, "Prime Commercial Area" Design

Three Metro Facilities	Millions
Annual Revenue	
9,000 slots x $570 (avg.) win per machine per day	$1,872.5
Management Fee (2.5%)	(46.8)
Revenue to State before Operating Costs	1,825.7
Cash Operating Costs	
9,000 slots x $75 per machine per day	(246.4)
EBITDA	1,579.3
Depreciation	(39.9)
Operating Income to the State	$1,539.4
State's Investment (3 x $116.1 million) in 3 Facilities	$ 348.3
Two Rural Facilities	
Annual Revenue	
3,000 average slots x $250 (avg.) win per machine per day	$ 273.8
Management Fee (2.5%)	(6.8)
Revenue to State before Operating Costs	267.0
Cash Operating Costs	
3,000 x $75 per machine per day	(82.1)
EBITDA	184.9
Depreciation	(20.0)
Operating Income to State	$ 164.9
State's Investment in 2 facilities	$ 174.1

CASH AUCTION

Under the Cash Auction design, Maryland awards the licenses to the bidders that offer the most up-front cash to the state as a "licensing fee." Each license allows its holder to construct the slot facility in any commercial location within the geographic area covered by the license, and the terms of the auction stipulate that the operators receive 39 percent of the win (following the precedent set by the 2003 Maryland Senate Bill 322). The bidders would be subject to a rigorous pre-qualification procedure to ensure that they can make such an outlay.

To ensure professionalism, maximize proceeds, and minimize bid rigging, the auction of each license is conducted on the state's behalf by a nationally recognized investment bank. To reduce the possibility of collusion by potential bidders, there is a period of six months between each auction.

Modeling results To project the winning bids, we looked at recent sales of semi-monopoly gaming licenses in large metropolitan areas elsewhere in the United States. Those sales prices should be indicative of what potential gaming operators would bid for in a cash auction. We found several good comparisons, which are listed below. Note that slot machines represent about 75 percent of a casino's profit.

> ***Rosemount, Illinois (May 2002)*** Through an auction conducted by New York investment banker Credit Suisse First Boston, a group of individual investors led by Donald Flynn sold their casino license to MGM-Mirage for $615 million. The license allowed only 1,200 slots and 60 table games (vs. a Maryland license that allows 3,000 slots but no table games). At the time, Illinois permitted casinos to hold portions of the win on a graduated basis; on average, the hold ratio was similar to the 39 percent that we use in our version of this market design. (The Illinois legislature ultimately blocked the sale.[6])
>
> ***Detroit, Michigan (Nov. 2000)*** Two businessmen, Ted Gatzaros and Dimitrois Papas, sold their 40 percent interest in a Detroit casino license (obtained for free) to the Sault Ste. Marie Chippewa Tribe (which operates five casinos) for $265 million. A 100 percent interest would therefore be valued at $663 million. The license permitted 2,200 slots and 100 table games in a state that allows a higher hold rate for the private operators than the 39 percent we assume in our design.

6. In order to maximize the value of the licenses, and hence the size of the bids, legislation authorizing the auction should stipulate that the licenses are fully transferable.

Lawrenceburg, Indiana (Jan. 2001) In this example, the buyer acquired an operating casino from owners who obtained the operating license for free. The value of the license is essentially the difference between the purchase price and the construction cost of the casino and related improvements.

Argosy Gaming bought 42.4 percent of the Lawrenceburg riverboat casino for $368 million (indicating that 100 percent was worth $876 million). The sellers of the minority interest were Conseco, Inc. (29.0 percent) and Centauer, Inc. (13.5 percent). Assuming a $70 million cost for the riverboat and $60 million for the hotel and parking lot, the value of the license was on the order of $750 million (i.e., $876 million purchase price minus $130 million construction cost), mainly because of the riverboat's monopoly power in the populated Cincinnati market. The riverboat has 2,246 slots and 95 table games, but Indiana has a lower betting tax than what we have assume in this design.

Using those examples, we projected the winning bids for licenses for the five Maryland slot locations. Those bids are shown in Table 7.

TABLE 7: Projected Cash Auction Proceeds Given Recent Examples

Location	Millions
Baltimore	$ 475
Washington #1	525
Washington #2	350
Western Maryland	75
Eastern Shore	75
	$1,500

Besides considering recent sales of gaming licenses, we estimated what cash buyers would pay for the projected income of the slots monopolies. Gaming stocks trade publicly at seven- to 12 times earnings before interest, taxes, depreciation, and amortization (EBITDA). Gaming firms acquire other gaming properties at eight- to 10 times EBITDA.

To be conservative, our analysis assumes potential buyers value Maryland properties at seven times EBITDA. From this amount, we deducted a 35 percent "start-up discount" for risks of the unknown; and $522.4 million to cover up-front costs.

Given those numbers and assumptions, our modeling indicates the five Maryland licenses have a total cash value of $1.8 billion. That calculation is depicted in Table 8.

Given the design of this market, we should expect that revenues for the state would be lower than under either the Reverse Auction or Canadian Model B. Because of the up-front cash require-

ment, fewer bidders are eligible to bid, which slightly decreases the auction's ability to extract excess rents. Also, the state's demand for up-front payment of the licensing fees (instead of just a tax spread out over the life of the licenses) increases the risk for the private operators, and that increased risk results in lower bids.

Drawbacks Similar to the Reverse Auction, the chief advantage of the Cash Auction is that it uses market forces to extract excess rents. However, the Cash Auction has several drawbacks. The most significant problem is that the pool of potential bidders is much smaller than in the Reverse Auction; fewer firms can leverage the capital needed in order to pay the license fees. Moreover, the need for the winning bidders to use money from capital markets to pay the up-front fees cuts into the state's "take" of the revenue because a portion of the slot rents has to be shared with investors in order to leverage the capital.

TABLE 8: Projected Cash Auction Bids Using Prospective Income Method

	(Millions)
Annual Revenue of Five Facilities	$2,146.3
Betting Taxes @ 61%	(1,309.2)
Operating Costs (12,000 x $75 per day)	(328.5)
EBITDA	$ 508.6
Value Multiple	x 7.0
Gross License Value before Deduction	$3,560.2
Apply 35% Start-up Discount	x 0.65
	$2,314.0
Deduct Upfront Costs	(522.4)
Total Cash Value of 5 Licenses	$1,791.6

SHADOW AUCTION

In a Shadow Auction market design, Maryland elects to award the slot licenses to the racetracks. In return, the state assesses a betting tax set with an eye to the licenses' market value so as to extract excess rents. To set the betting tax, the state hires a nationally recognized investment-banking firm to determine the appropriate rate. The firm could not have any corporate gaming clients so as to avoid any potential conflicts of interest.

Modeling results For the three large metropolitan slots facilities, our modeling indicates the Shadow Auction results in a 23.7 percent hold rate for the tracks. That number is slightly more than the 21.5 percent hold rate we projected under the Reverse Auction design because racetrack slots have lower wins per day than slots at facilities in prime commercial areas. Hence the tracks will need to keep slightly more of the revenue to have an acceptable rate of return on investment. Under our Shadow Auction projections, the annual return on investment for the tracks is an attractive 20.0 percent. (In New York State, racetrack owners accepted 20 percent of the win in exchange for free slot monopolies.)

Under this market design, the state's annual tax revenue is just over $1.4 billion, as depicted in Table 9. That results in a present real value of revenue for the state of just over $12 billion over the 20-year length of the licenses.

The Shadow Auction produces lower returns for the state than any of the other market designs that we have considered so far. The lower returns are largely a result of two factors: the track locations do not engender as much demand as the prime commercial areas, and the limiting of operators to the tracks means the Maryland slots market is deprived of gaming entertainment firms' ability to enhance revenue using their expertise and ability to leverage capital.

Drawbacks The Shadow Auction has two bothersome drawbacks. The first is the difficulty of establishing a trustworthy tax rate. That difficulty is underscored by last spring's controversy involving accounting giant KPMG's report to the state of Maryland on what would be an acceptable hold rate for tracks if slots were permitted. The KPMG report drew heated criticism for appearing to set the hold rate too high.

Moreover, even if the investment firm did create a "correct" hold rate, there would be considerable political pressure to alter it, with racetrack owners using their political leverage to push for a higher hold rate while a variety of special interests would demand more taxes on slots. In contrast, the Reverse and Cash Auctions set the taxes and fees through market processes that are less easily yielding to political pressure.

TABLE 9: Annual Financial Results under Shadow Auction Design
Slots Limited to Horse Tracks

Three Metro Facilities	Millions	%
Annual Revenue		
9,000 slots x $517 (avg.) win per machine per day	$1,698.3	
Likely Betting Tax (76.3%)	(1,296.2)	
Revenue to Tracks (23.7%)	402.1	100.0%
Cash Operating Costs		
9,000 slots x $75 per machine per day	(246.4)	
EBITDA	155.7	38.8%
Depreciation	(39.9)	
EBIT	115.8	
Income Taxes @ 40%	(46.3)	
Net Income	$ 69.5	
Total Investment (3x $116.1 million)	$ 348.3	
Annual Return on Investment		20.0%
Two Rural Facilities		
Annual Revenue		
3,000 average slots x $225 (avg.) win per machine per day	$246.4	
Likely Betting Tax (46.5%)	(114.6)	
Revenue to Tracks (53.5%)	$131.8	

2003 SENATE BILL 322

The final market design in this report is the 2003 General Assembly's Senate Bill 322, which gained passage in its originating chamber but died in a House of Delegates committee. This approach is best described as a "government stipulation regime" because, instead of using market forces or some other method to reveal the excess rents, the authors of the bill simply stipulated what percentage of the revenue the state receives and what percentage the operators—in this case, state horse tracks—receive. Under the legislation, the racetracks retain 39 percent of the win while Maryland receives 61 percent. The state would have paid for the slot machines.

Modeling results Because lawmakers stipulated the betting tax, it is easy to model the revenue using the assumptions that we have utilized throughout this report. According to our calculations, the state's 61 percent share of the slot revenue amounts to nearly $1.2 billion annually, with a resulting present value of $10.1 billion over the 20-year life of the slot licenses. The annual revenue is depicted in Table 10. Clearly, under this design, Maryland's returns are far below the other designs.

TABLE 10: Annual Financial Results Under S.B. 322

Three Metro Facilities	Millions
9,000 slots x $517 (avg.) win per machine period	$1,698.3
Two Rural Facilities	
3,000 average slots x $225 (avg.) win per machine	246.4
Total Annual Revenue of Five Facilities	1,944.7
% of Revenue Not Provided to Racetrack Owners (61%)	x 61%
Revenue Allocated to State, Horseracing Purses, etc. (61%)	1,186.3

Because S.B. 322 does not use market forces or in-depth analysis to determine the size of the excess rents, it is to be expected that this design would produce less revenue for the state (and more for the operators) than any of the other market designs we have examined. The legislation does not extract all of the rents—a fact that is reflected in comparision with the numbers for each of the auction schemes, but which is probably most apparent in the Cash Auction projection where bidders are willing to pay $1.5 billion up-front in addition to the taxes that S.B. 322 would have assessed.

Drawbacks The obvious drawback of this approach is its failure to determine and extract the excess rents. The bill's authors did little research in determining those rents, and their sole fact-finding hearing consisted of testimony from track owners – hardly the appropriate source for determining the rents. The resulting legislation severely underestimated the rent amounts as compared to the projections in this report.

CONCLUSION

As our modeling shows, the adoption of video slot gaming in Maryland would result in the creation of an industry with annual gross receipts of between $1.5 billion and $2 billion. A large portion of those receipts represents excess rents resulting from the state-imposed legal barrier to the supply of slot gaming. Those large sums of money indicate the need for the state to consider carefully what video slot market design it will adopt, or else the state will end up awarding excessive riches to a lucky (or politically well connected) few.

In our opinion, the Reverse Auction design is far superior to the other models that we consider in this report. The Reverse Auction harnesses market forces to reveal the excess rents, allows the most potential slot operators to enter the auction for the machines, and is a transparent system for awarding the licenses.

However, we realize that political considerations may press lawmakers to adopt slots but require that they be placed in, or adjacent to, horse tracks to "keep gambling where it already takes place." If forced to this "second best" situation, the authors disagree on what market design is preferable. One author recommends the Canadian Model A because it provides the highest returns to the state (assuming successful implementation) and avoids paying excess rents to racetrack owners. The other author recommends the Shadow Auction out of concern over the implications of the state "going (further) into the gambling business."

The authors hope that this report proves useful to state decision-makers as they contemplate video slot machine legalization in the 2004 session of the General Assembly.

APPENDIX A
Principal Assumptions

Our report uses a number of basic assumptions in order to model the revenue under various market designs. This appendix offers an explanation of those assumptions; the information sources underlying the assumptions are listed in Appendix B.

Distribution of machines The authors assume that, in order to maximize rents, the state licenses slot facilities and machines in accordance with the distribution shown in Table 11:

TABLE 11: Hypothetical Distribution of Slot Machines and Facilities

Location	Number of Machines
Baltimore Metro Area	3,000
Washington Metro Area #1	3,000
Washington Metro Area #2	3,000
Western Maryland	1,500
Eastern Shore	1,500*
	12,000

* The Eastern Shore facility has 3,000 slots for the three-month "beach season" and 1,000 for the remaining nine months, producing a weighted average of 1,500 machines.

We assume that, in order to attract the highest bids from potential operators, the state sets the term of the licenses at 20 years and guarantees that no other slot facilities will be allowed to operate in the state over the first five or 10 years of the license.

Slot machine "win" per day Our analysis assumes that successful non-racetrack bidders choose to operate slot machines at commercial locations that are considerably more appealing than existing horse tracks. Accordingly, the non-racetrack win is higher than the racetrack win. Our projections for daily wins at both non-track and track locations are shown in Table 12.

TABLE 12: Assumed Wins Per Day

	Non-Racetrack Location	Located in/adjacent to Racetrack Properties
Baltimore	$550	$500
Washington #1	660	600
Washington #2	500	450
Western Maryland	250	225
Eastern Shore	250	225

For the Baltimore and Washington locations, the win per day is based on comparable wins for gaming facilities in suburban Chicago ($400 to $700) and downtown Detroit ($350 to $400), adjusted for the higher per capita number of people per machine in the Baltimore/Washington region (i.e., Baltimore/Washington is one machine for 724 people; Chicago, 1:610; Detroit 1:464). Since the Baltimore/Washington region has more people for each machine, logic suggests that slots located in the Maryland metropolitan area would have more use and would generate more revenue than in Chicago and Detroit.

The Western Maryland and Eastern Shore wins are based on results from comparable, less-urbanized locations in Delaware, Illinois, and West Virginia.

Annual revenue To determine the gross annual revenue "win" per machine, the authors examined win data from other states that have legalized slot gaming either at horse tracks or casinos, and then adjusted those data in accordance with Maryland demographics. The resulting projections are shown in Table 13.

TABLE 13: Annual Revenue (Win) per Location
(365 days per year)

	Non-Racetrack Location	Located in adjacent to Racetrack Properties (Millions)
Baltimore	$602.3	$547.5
Washington #1	722.7	657.0
Washington #2	547.5	492.8
Western Maryland	136.9	123.2
Eastern Shore	136.9	123.2
	$2,146.3	$1,943.7

Capital investment/up-front investment For the 3,000-machine facilities in the Maryland metropolitan region, our analysis assumes a 120,000 square foot building. To ensure a first-rate facility, this analysis assumes $60 million of construction, furniture, and fixturing costs (excluding slot machines, which will be provided by the state). At $500 per square foot, that is substantially more than shopping mall construction costs of $200 to $300 per square foot. The capital costs we project are almost double what Dover Downs spent on its 2,000 unit slot facility, and they are consistent with the estimate used by the New York Racing Commission, which projects a $100 million cost for a 4,500-machine facility at Aqueduct.

Slots locations need sizeable parking lots. To be conservative, this analysis assumes all customers arrive in cars (i.e., no buses), that there would be 3,000 customers at a time, that one parking space would be needed per customer (shopping malls assume one parking place for 2.5 customers, but slot facilities are auto-intensive), 350 square feet is needed for each parking space (including related infrastructure), 125 parking spaces per acre, 500 employees per shift arriving in cars, land cost of $300,000 per acre, and parking lot construction/paving cost of $2,200 per parking space.

Given those numbers, the Maryland metropolitan area facilities require 3,500 parking spaces covering 28 acres of land. The land cost is $8.4 million, and the parking construction cost is $7.7 million. The total parking lot cost is therefore $16.1 million.

To be conservative, our analysis assumes the local jurisdiction requires the slots facility owner to pay $30.0 million of related infrastructure costs (street interchanges, sewers, etc.). Our projected up-front investments are shown in Table 14.

TABLE 14: Up-Front Investments per Location

Location	Capital Expenses per Facility including Land	All Upfront Costs (Millions)
Baltimore	$106.1	$116.1
Washington #1	106.1	116.1
Washington #2	106.1	116.1
Western Maryland*	53.0	58.0
Eastern Shore	106.1	116.1
	$477.4	$522.4

*Assume 50% of large locations.

Start-up costs and write-off period The analysis assumes $10 million in start-up costs for a slots facility with 3,000 machines. The total upfront cost is $116.1 million for a 3,000-machine facility, including capital expenses.

Capital and start-up costs are amortized over an average of eight years ($107.7 million ÷ 8). Land is not depreciable and is therefore excluded.

Our models assume that 100 percent of the initial investment is equity. That is conservative, as the owners should have the capability for some mortgage and lease financing.

Operating costs of a slots facility To determine the facility operating costs, we used two sources of information: the experience of "racino" operators in nearby states and the projections of Maryland horse tracks as part of their lobbying for the machines last session.

> ***Publicly traded racinos*** As one guide, this analysis reviewed the cash operating margins (i.e., earnings before interest, taxes, depreciation, and amortization, or "EBITDA") of racino operators Dover Downs Entertainment and MTR Gaming, two publicly traded corporations. To ensure an "apples to apples" comparison, the analysis stripped out revenues and earnings attributed to hotel operations and horseracing; thus, the resultant expenses and cash income represent a "slots only" business. Furthermore, to show the actual cash

flow going to the slots operation, our analysis deducted betting taxes (which otherwise appear as both "revenues" and "expenses" in the audited financial statements).

Summary "slots only" results appear in Table 15. Note that Dover Downs and Mountaineer make EBITDA margins of 43.1 percent and 51.3 percent, respectively. Those high margins were achieved as their net slots revenues per machine were $120 and $105, respectively.

TABLE 15: Pro Forma Audited Results Without Hotel Revenues, Horseracing Revenues, and Slot Machine Betting Taxes

	2001 Dover Downs (Millions)	%	2002 Mountaineer (Millions)	%
Gross Slots Revenues	$180.1	–	$226.3	–[a]
Betting Taxes	92.3	–	127.4	–[b]
Net Slots Revenue	87.8	100.0%	104.3	100.0
Operating Expenses	(50.0)	56.9	(50.8)[c]	48.7
EBITDA	37.8	43.1	53.5	51.3
Deprec. & Amort.	(2.2)	2.5	(14.3)	13.7
EBIT	$35.6	40.5%	$39.2	37.6
Average Number of Slot Machines in Operation	2,000		2,722	
Net Slots Revenue per Day per Machine	$120		$105	
Cash Operating Expense per Day per Slot Machine	$ 68		$ 51	

(a) Excludes promotional allowances.
(b) 55% of slots win. In Delaware, the state pays for machines, but not in West Virginia.
(c) 100% of direct gaming cost (after betting taxes) and 90% of consolidated corporate expenses.

Maryland track owners As a second guide, this analysis reviewed projected data prepared by Maryland racetrack owners and submitted to KPMG, an accounting firm hired by the state of Maryland to analyze racino gaming. Table 16 summarizes those data.

TABLE 16: Projected Maryland Slot Machine Facility

Results Prepared by Track Owners in March 2003

(Millions)

Net Revenue from Slots After Betting Taxes, Purse Allocations, etc.	$664.8	100.0%
Cash Operating Expenses	-350.8[a]	-52.8
EBITDA	314.0[a]	47.2%
Depreciation	?[a]	
EBIT	?[a]	
Number of Slot Machines in Operation	10,500[b]	
Net Slots Revenue per Day per Machine	$173	
Cash Operating Expense per Day per Machine	$ 91[a]	

a) The KPMG report did not segregate the track owners' assumed depreciation; thus, this analysis is unsure whether or not it is included in operating expenses. Note that the proposed Maryland legislation has the state paying for slot machines.

b) The KPMG analysis excluded the Western Maryland track and used 3,500 machines each for Pimilco, Laurel and Rosecroft.

The Maryland track owners sought $173 in net revenue per machine per day despite evidence that Dover Downs and Mountaineer made significant profits at $120 and $105 per day, respectively. At $173 per day, the Maryland track owners stood to generate huge profits under S.B. 322.

The tracks' EBITDA margin of 47.2 percent is consistent with the publicly traded racinos. The $91 per day cash operating cost is 34 percent higher than the Dover Down statistic ($68). The difference may reflect the higher cost of doing business in Maryland or the desire of track owners to downplay profitability.

Conclusion To formulate the amount a slots facility could earn under several market designs, this analysis assumes a cash operating expense per day per machine (in Maryland) of $75, with the state paying separately for the machines' cost and maintenance. The $75 is derived by combining the above data, with data from Maryland track owners weighted at 50 percent, data from Mountaineer weighted at 25 percent, and data from Dover Downs weighted at 25 percent.

APPENDIX B
Information sources

The principal assumptions underlying this report's modeling were derived from studying numerous information sources and interviewing gaming industry analysts and executives. Those sources include the following:

Slot facility revenue/win per day per machine:

- Gaming control board websites of Delaware, Illinois, Indiana, Michigan, and West Virginia.
- Interviews with officials from the Indiana, Michigan, and West Virginia gaming commissions.
- Securities and Exchange Commission filings of publicly traded gaming firms, including MTR Gaming (West Virginia) and Dover Downs Entertainment (Delaware).
- KPMG report dated March 17, 2003 for the state of Maryland.

Slot facility operating expenses:

- SEC filings of publicly traded gaming firms, including MTR Gaming and Dover Downs Entertainment.
- KPMG report for the state of Maryland.
- "Are the License Fees Too Low?" by Jeff Hooke, published by the Maryland Tax Education Foundation.
- Interview with Delaware racino executive.
- Interview with Wall Street security analyst specializing in gaming.

Capital expenditures required to construct a slots facility:

- SEC filings of publicly traded gaming firms, including MTR Gaming and Dover Downs Entertainment. Public companies like MTR and DDE disclose the costs of constructing slots facilities.
- Estimate for proposed Erie, Pennsylvania slots facility, which showed $25 million to $50 million for slots facility (MTR Gaming's 10-K Form, 2002).
- Interview with real estate developer regarding necessary acreage for a 120,000 square foot slots facility, cost of construction per square foot, cost of furniture and fixtures, and cost of related amenities.
- Press release of New York Racing Association announcing plans for partnership with MGM-Grand and costs of $100 million for 4,500-unit slots facility at Aqueduct racetrack.

Fair market prices of license for gaming monopolies:

- **Rosemont, Indiana—***Forbes* magazine article, interview with MGM-Grand executive, interview with Chicago newspaper reporter covering gaming issues.

- **Detroit, Michigan—***Detroit News* reports, interview with *Detroit News* reporter and *Michigan Gaming Law* newsletter editor.

- **Lawrenceburg, Indiana—**SEC filings of Argosy Gaming Corp.

- Prices of publicly traded gaming stocks are available from several data services. Using SEC filings, the authors calculated the relevant valuation ratios.

- Discount rates for future cash flows were derived from the Capital Asset Pricing Model as set forth in numerous finance textbooks, and crosschecked through discussions with, and readings from, corporate finance practitioners.

ABOUT THE SPONSORS

The Maryland Tax Education Foundation (MTEF) is a Maryland corporation established in 1998 to help the public understand tax and expenditure policies of state and local government in Maryland. MTEF finances research, analysis, and dissemination of information on taxation and spending. Contributions to MTEF are tax deductible to the extent allowed by law for 501 (c) (3) organizations.

MTEF has held five Budget and Tax Institutes attended by legislators, candidates for office, and the general public. It served an administrative function for Project $1.1 Billion Recovery, a citizen's group organized to educate the public about Peter Angelos' requested $1.1 billion tobacco legal fee. It performed a similar function for Project $1.5 Billion Recovery, a citizen's group founded to educate the public about the unfair arrangement regarding slot monopolies at Maryland racetracks. MTEF recently sponsored a study of public school teachers' compensation in Montgomery County.

MTEF can be found on the Web at *www.marylandtaxeducation.org*.

The Maryland Public Policy Institute (MPPI) is a nonpartisan public policy research and education organization that focuses on state policy issues. Our goal is to provide accurate and timely research analysis of Maryland policy issues and market these findings to key primary audiences.

The mission of The Maryland Public Policy Institute is to formulate and promote public policies at all levels of government based on principles of free enterprise, limited government, and civil society. The Institute is a member of the State Policy Network.

In order to maintain objectivity and independence, the Institute accepts no government funding and does not perform contract research.

The Maryland Public Policy Institute is recognized as a 501 (c) (3) research and education organization under the Internal Revenue Code.

MPPI can be found on the Web at *www.mdpolicy.org*.

Maryland Tax Education Foundation | 7504 Maple Avenue | Chevy Chase, Maryland 20815
www.marylandtaxeducation.org | (301) 762-3784

The Maryland Public Policy Institute | P.O. Box 195 | Germantown, Maryland 20875-0195
www.mdpolicy.org | (240) 686-3510