

# **Slot Machine Gambling in Maryland**

**Testimony of**

**Professor Robert E. Carpenter**

**before the**

**Committee on Ways and Means,  
Maryland House of Delegates**

**August 19, 2003**

Madam Chair, members of the committee; I want to thank you for the opportunity to present the results of some of my research on the economic issues and implications of introducing slot machine gambling to Maryland. I'd also like to thank my colleague, Professor Don Norris, for his kind introduction.

Before I begin my briefing, it is important for me to reiterate that my research, the inferences that I draw from it, and my briefing today, represent only my views and are not necessarily those of my colleagues at UMBC or in the University System of Maryland.

While I'm going to summarize the implications of my paper, I've also had the opportunity to do some additional thinking about slots and I'll introduce some new ideas and issues that I hope you will find useful in your deliberations. I think it is also important to state that I plan to focus on the positive economic issues associated with slots, and not the normative issues about the desirability of slot machine gambling as public policy.

I want to start by briefly talking about the underlying economics driving much of the issue...that is the size of the current and forecast budget gaps in Maryland. As you heard during the July 17 Ways and Means Committee hearing, the budget gaps in Maryland are quite large and are likely to persist for the next several years. The source of the gaps are multi-faceted, but include declining tax revenues as overall macroeconomic growth in the United States has slowed and a reduction in the capital gains component of the personal income tax as the value of stocks has declined. Large forecast increases in Medicaid spending and increases in K-12 education spending (as part of the Thornton Commission legislation) have increased forecast long-run spending commitments at the same time that revenues have declined.

The revenue generated by slots is hoped to ease the pain of this budget problem by limiting the need to raise taxes or lower spending on services, and at the same time help to fund the State's growing commitments to both its youngest citizens and its oldest, and thus reduce the potential for conflict between the generations in the competition for economic resources. The larger point, however, is that we have a structural budget problem in Maryland that has both short run and long-run components. And so I want to turn now to the potential impact that slot machines will have on the State's budget in both the short and the long run.

Estimating the correct value of the license was a large part of the controversy over slots last year. Senate Bill 322 would have brought in \$15 million in one time application fees. Clearly, a fee this small would not have helped the short run budget situation in Maryland in any meaningful sense. Funds also accrue to the state through its cut of the VLT revenues. The low upfront fees were justified on the grounds that the State would receive a relatively large share of the revenues. In Senate Bill 322, that share would have been 46%. While the state in fact faces a tradeoff between charging a lower upfront fee and receiving a larger share of the revenues, I felt that the license fee proposed would have transferred hundreds of millions of dollars of value from the people of the state to the casino's owners. I want to spend a few minutes explaining my analysis.

To evaluate the slot legislation proposals and to estimate the value of the license I conducted a fundamental financial exercise. The details are contained in my paper, but I'll summarize the main results.

I projected out the cash flow the casinos would receive from slots using the cut provided for in Bill 322, and I calculated their present value under a variety of scenarios and assumptions. It's important to understand what a present value is. The license allows the casinos to generate income from slots over a 15 year period. Therefore much of the payoff to the investment is received in the future. But dollars received tomorrow aren't worth as much as dollars received today, and calculating a present value serves to put future dollars on a comparable basis with today's dollars.

To put those dollars on a comparable basis I looked at a number of different discount rates using my own assumptions (which turned out to be quite conservative) as well as scenarios based on information provided by the Magna Corporation to the State Senate and the KPMG report commissioned by the Department of Management and Budget, and Senate Bill 322. Those discount rates represent estimates of the cost of financial capital and are a weighted average of the cost of debt and the cost of equity financing that would be used for the project. I used a standard methodology that can be found in any finance textbook.

The results of my analysis appear as Table 1 in my paper, and are also part of your handout. You can see that I examined 5 different scenarios using 5 different estimates of the discount rate. It is worth noting that I used a higher discount rate (and thus assumed a higher cost of financial capital to the casinos) than those rates that were implicit in the KPMG report or the Magna Corporation presentation. Higher costs of financial capital result in smaller present values, and so my estimates of the value of the license, given my assumptions, would tend to understate the license value. To estimate that value, I calculated what is called the net present value of cash flow, which is equal to the cash flow from slots minus the cost of the investment. One of the most basic concepts in finance is the idea that projects with a NPV greater than zero will generate returns to investors that are greater than they require, and so should be undertaken by the firm. The implication of this statement is important. The NPV of the cash flows from slots is equal to the value of the license. You can see in column 5 of the table that my estimates of the NPV of the project are quite large, ranging from \$276 to \$810 million. That means, as your intuition had no doubt told you long ago, that a license to run slot machine casinos in Maryland is quite valuable.

But the license fee was set at only \$15 million dollars in total. Deducting the \$15 million dollars from the projects NPV provides an estimate of the transfer of project value to the casinos owners from the people of the state of Maryland. My estimates of the transfer of value were quite large, ranging from \$261 million to \$795 million dollars...dollars that could have potentially been used to solve the states short-run budget problems.

In my paper, I stress limits of my analysis and its interpretation. I want to emphasize two things, however. First, there is also something called a "real option" attached to these licenses. The value of the real option is very difficult to determine, and I did not try, but it is related to the idea that once these licenses are awarded to the owners of a tracks, it is quite likely that they will be renewed upon expiration. I looked at only the first 15 years of cash flow from slots. I did not estimate the prospective value of cash flows past year 15, even though it is quite likely that the casino owner would receive them. Not accounting for this real option would tend to understate

my estimate of the value of the license. Second, while my analysis has its limitations, I believe that a proper interpretation is that the terms of Senate Bill 322 would have sold an asset worth several hundred million dollars for \$15 million, and would have left a great deal of money on the table.

(As a side point, you should insist that any analysis undertaken to evaluate the revenue implications of slots use the same methodology and examine the entire stream of cash flows generated by the project over time, the KPMG report did not. You should also insist that you be provided with an estimate of the present value of those cash flows.)

I want to turn now to the long-run budgetary impact of slots. This may be the single most important topic that I discuss today, as many other issues are related directly to it. It is critical to recognize that not all spending on slot machines represents new spending; some spending is reallocated from other activities. Reallocated spending occurs when Marylanders cut their spending on goods and some services, like the lottery or dining out, for example, and instead spend on slots. New spending occurs when out-of-staters travel to Maryland to play slots, or Marylanders stay home to play the slots instead of traveling to another state. The reason that this issue is important is that when a dollar is reallocated to slots from the lottery or a restaurant meal, the state will gain some revenues from its cut of slots, but it will lose the lottery revenue or the sales tax revenue.

So then, what is the state's return per dollar of spending reallocated to slots? For this, we need a simple calculation, which you can see in your handout. Suppose that the payout of slot machines is 91.6% (This number comes from a 2003 DBED report, Table 1). This means that the slot machine returns 91.6 cents per dollar gambled on average, leaving revenues of 8.4 cents to be divided between the casino and the state. Senate Bill 322 would give the state 46% of this 8.4 cents, or 3.86 cents. The important point here is that the state's return on reallocated slot machine spending is lower than the sales tax rate.

It is also worth thinking about the types of spending that are likely to be reallocated to slots. Economic theory would predict that much of the reallocated spending will come from close substitutes for slots. One very close substitute for slot machine gambling is gambling on the lottery. But to the extent that this spending is reallocated towards slots, the state's return per dollar spent is much lower than the lottery, which I understand to be roughly 50%. To the extent that slots draw spending away from the lottery, the state's return per dollar spent gambling will be much lower than its return on the lottery.

It's also very, very important to recognize that the state's incentives will be quite different from those of the tracks' owners regarding new and reallocated spending. Spending reallocated toward gambling represents entirely new revenues for the owners of the casinos. But spending reallocated toward gambling does not represent new revenues for the state. This difference in incentives can be important. For example, the state might prefer that advertising dollars be directed primarily at gamblers in out of state markets because that is where the return, in terms of new spending, is the highest. In contrast, because casino owners do not have to worry about new versus reallocated spending, only total spending, they might prefer to allocate advertising dollars in local markets. So the casinos owners' incentives are to generate spending on slots, but the

state's incentive is to generate new spending on slots. There may be other many other areas where the incentives between the two partners diverge. I don't think we've thought carefully about them, but I think we need to.

More importantly, there hasn't been a great deal of discussion about what proportion of new versus reallocated spending that we might expect. The only study I've seen is a 2003 DBED report, which seems to indicate that a only a small proportion of spending in the prospective Maryland casinos would constitute new spending (approximately 22-30 percent). That is, 70-78 percent of slot machine spending would be reallocated. Unfortunately, I cannot speak to the construction of these estimates, as the methodology is not clearly explained.

The bottom line is that slot machine casinos will generate revenues for the state's budget. Some of these revenues will represent new spending, and will be useful for addressing the budget crunch faced by the state, but it is possible that most of it will not. I think this is a critical issue to get a handle on from the perspective of the state's long term budgetary planning, and I believe that you should absolutely insist that you be provided with more information and better estimates about the breakdown between new and reallocated spending that will take place at the casinos.

In addition to its impact on the state's return from slots, this idea that much of the spending at the casinos might be reallocated spending also has important implications for the choice of where to build them. The state's interest is to maximize the amount of new and not reallocated revenue generated by slot machine gambling. To do so, the casinos must be placed in locations that will maximize the number of new dollars spent. In practical terms this might mean placing the casinos in locations that will draw new out-of-state tourists or that are easy for out-of-state tourists to reach. I hope that you will note that I emphasize new out-of-state tourists, as the distinction between new and reallocated spending also applies to tourists who would have visited Maryland anyway, but now play the slots instead of shopping and dining at the Inner Harbor, for example.

Where might these locations be? To determine that will require more study. But let me suggest that the optimal location might be near Maryland's borders with other states and near other states' population centers. If the number of Maryland visitors to other states' casinos is extremely large, it also may make sense to consider placing slot machine casinos on the road between Baltimore and Dover Downs, for example. But I want to emphasize that once you recognize the distinction between new and reallocated spending on slots, then you must also recognize that there is an optimal location for a casino in terms of capturing new spending. That optimal location is not necessarily at the state's existing tracks, especially to the extent that those tracks are deep within the state.

When thinking about the choice of locations for the casinos, I think it is useful to recall why they were slated to be placed at the racetracks in the first place. Slots, in part, are explicitly designed as industrial policy on a small scale, to prop up the state's historic, but declining racing industry. I am an immigrant to Maryland, and I don't understand or appreciate the racing industry like a native. I am from automobile country, however, and I believe that I understand the implications of declining industries as well as anyone. We want to save what the market would otherwise destroy.

Economists generally don't like subsidies to prop up declining industries, as subsidies distort the allocation of resources. If the racing industry requires a subsidy, then economic efficiency argues that those resources, over time, should be redeployed to other uses with higher returns. There are some exceptions to this general principle, which typically require the industry to have large spillovers or rely on considerations of equity. Education, industries vital to national defense, and the rural delivery of mail are examples of such exceptions. Unfortunately, employing a large number of people or having a historic tie to an area are not necessarily justifications for a government subsidy, as autoworkers in Michigan, miners in West Virginia, and steelworkers in Pennsylvania know all too well. I understand the argument. Other states do subsidize their racing industry, which makes it difficult for Maryland tracks to compete on an even basis, and may ultimately lead to a migration of racing from Maryland to states that offer those subsidies. I heard precisely the same arguments applied to the auto industry as a young adult in Michigan. Those arguments, however, aren't good economic arguments because they lead immediately to the question, how many of the state's other industries should receive similar subsidies, and how costly are those subsidies?

So, it's also worth thinking about the size of the subsidy. I estimated that the subsidy would start at around \$77 million per year and because it is linked to revenues, would grow over time. The Magna Corporation estimated that the subsidy would be just over \$76 million dollars in their presentation to the Senate. I'll use the lower figure. The Maryland horse industry states that it employs 20,000 people; it is not clear, however, whether these jobs are full time, or whether they are limited to only direct employment. In any case, the subsidy is \$3800 per job, per year. I may have been conservative with my estimate of the size of the subsidy per job. A 1999 study from the University of Maryland College Park states that there are 8576 full time equivalent jobs in the racing industry. That lower figure suggests the size of the subsidy is \$8900 per job, per year. I do not know what the average salary of an individual in the racing industry might be, but it would not surprise me to find that \$8900 was a large fraction of it.

The fact that there is no economic justification for a subsidy to the racing industry and the fact that to maximize the state's returns, the tracks might not be the best location to generate new spending, as distinct from reallocated spending, suggests that you should consider decoupling the plan from the racetracks to maximize the state's financial return from slots. Indeed, when I first started thinking about slots my position was that by tying the locations to the tracks, it both weakened the state's bargaining position in terms of setting the price for the license and the state's cut of the gambling proceeds and transferred some of the value of the project to the owners of the tracks, because they now owned the scarce resource: the casino's location.

Furthermore, linking the casinos to the tracks so strongly, so explicitly, and so early in the process not only gave them a strong bargaining position, but also gave the track owners almost no incentive to reveal their true valuation of slots, and gave the state almost no ability to force them to reveal it. Indeed, it would not be good business for the tracks to do so. (In fact, some of the recent proposals to auction the licenses are mechanisms designed precisely to force prospective casino operators to reveal their valuation of the project.)

My position hasn't changed. I think it's critical that the legislature consider alternative locations for the casinos. If the state goes with the tracks, then there are at least two middlemen between the revenues generated by the machines and the people of the state: the track owners, and most probably the manager that the track owners will hire to run the business. Each middleman needs his cut. I think it's important for everyone to recognize that.

Should the state then own the casinos, as some have proposed? That is an interesting question for you to consider. Here is what economics has to say about it. The economic case against state ownership of the means of production is that state firms and the managers of them do not face market incentives. Those market incentives are necessary to provide an efficient allocation of resources and for the managers of the firm to exert their best efforts to maximize profits. Moreover, the larger the number of state firms, the larger the size of the state relative to the private sector, and the larger is the potential for a restrictions in economic freedom as the state seeks to limit competition by protecting its own firm.

However in this case, the state does not seek an economically efficient level of gambling, and there is no plan to open up the market to the private sector. Indeed, the state seeks to tightly restrict and regulate gambling, which is implicitly recognition that there are social costs attached to it (and I'll say more about this presently). In addition, if the state chooses to own and run the casinos, it has the effect of cutting out the tracks as one of the middlemen, middlemen who would receive 39% of the revenues. It is unlikely that the state would exhibit managerial inefficiencies that large. It is likely that the tracks would have subcontracted out the management of the casinos to professionals in the gaming industry. The State of Maryland could do that as well, and the since the structure of the management contract is linked to profitability, the management consultant will face market incentives. Lastly, because the management consultant might be easier to replace and does not own the casino location or facility, they have a much greater incentive to meet the state's wishes regarding casino operations. Because the tracks would own the land and the facilities, they would be much more powerful partners. State ownership of the casinos would have the potential to generate greater revenues for the state (because it's management partner would receive a smaller share of the revenues), and it also would limit, but not eliminate the problem of new versus reallocated spending, because the state would keep a greater share of the 8.4 cents remaining in the machine after payouts to gamblers. I think this issue is quite complicated as it depends on many factors not currently known, but it is worth further discussion and analysis.

I would like to say a few words about competition in the market for slots. The state will allow just a few outlets for slot machine gambling, in effect becoming a monopolist within the state. But other states also allow slot machine gambling and some have at least tentative plans to try. So, the market structure for slots is really oligopolistic. That's a market with just a few, interdependent sellers. It's clear from reading the annual report of Dover Downs that they recognize this interdependency, and the potential for their profits to be adversely affected by other states' entry into gaming.

What will be the response of the other providers of gambling services when Maryland enters this market, and what will be the effect on the market? One likely outcome is that competition will force the casinos to cut their prices. How do you cut the price of slots? By simply increasing the

payout to gamblers. But it is important to remember that cutting the price of playing slots will reduce the state's returns from slots, and further reduce the state's return from reallocated dollars below the sales tax rate.

It seems clear that there is already competition for slot machine gamblers. Table 1 of the 2003 DBED report (reproduced in your handout) shows that there is very little dispersion in the payout ratios between slot machines in Delaware and West Virginia, suggesting that they are competing on the basis of price, among other things.

Before concluding I would like to say just a few words about the social costs of gambling. The National Research Council has produced estimates suggesting those costs are \$900 per problem gambler, per year. I estimated that there may be roughly 37,000 problem gamblers in Maryland. To put this number into perspective, that is significantly larger than the average attendance at a Baltimore Orioles home game. If each imposes social costs of \$900 per year, that amounts to over \$33 million per year. In addition, I may have been very conservative with my estimate of the number of problem gamblers in the state. The Baltimore Sun reports that the Department of Legislative Services estimated that the state may have more than 70,000 pathological gamblers, suggesting social costs of \$63 million per year. To be sure, some portions of these costs no doubt already exist, and it is the marginal costs of slots that have to be considered in determining their net benefits. But there are three important points to make. First, the costs of pathological gambling are potentially quite large. Second, little if anything is known about the additional social costs that would be introduced by slots. Third, to weigh the additional costs of slots against their benefits, we have to know what those additional costs are. We don't.

I want to conclude with one more important set of figures. Slot machines are not a cure-all for the budgetary problems of states. The Magna Corporation's presentation to the senate contains a table showing six states that combine horse tracks with slots, and eight states that allow riverboat or land based casinos. I examined a report by the Center on Budget and Policy Priorities that contained estimated state budget deficits for FY 2004. Of the 14 states that allowed gambling, 8 had information about the size of their deficits. The estimated deficits for those states averaged 14.6% of the state's budget. The average estimated deficits for all states reporting information was 12.9 to 17.9 percent of the state's budget. I think that the correct conclusion to draw is that states allowing gambling aren't weathering the current fiscal storm appreciably better than states that don't.

It's clear that Maryland faces a structural problem with its budget. The question we face is to what extent slot machines can contribute to that problem's solution, what the best slots plan might be, and ultimately whether the benefits of slot machines exceed their costs. There's no doubt that a license to run slot machine casinos is very valuable. There is also no doubt that slot machines will generate revenues for the state. But it is by no means clear how much of this revenue will be new and how much will be reallocated, and so the total increase in state revenues due to slots may not be as large, and thus as helpful, as we might think. The bottom line is that we need to pay very careful attention to the underlying economics attached to slot machine gambling to come to the best decision about it. Thank you for the opportunity to brief you on this important issue.