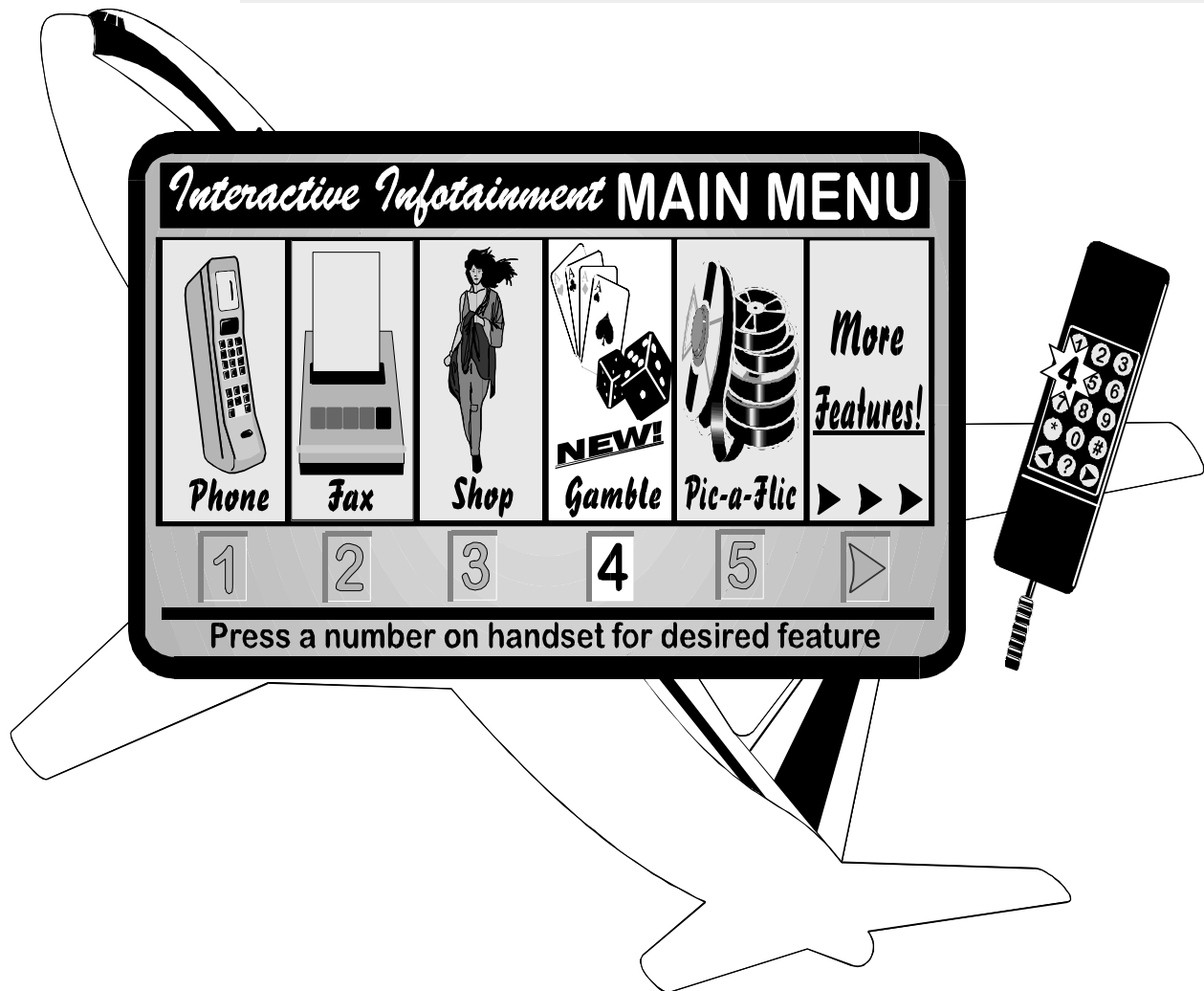


VIDEO GAMBLING IN FOREIGN AIR TRANSPORTATION

Safety Effects

Competitive Consequences

Bilateral Issues & Legal Framework



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**APPENDIX: President's Letter Expressing Support for a
Gambling Study Commission**

EXECUTIVE SUMMARY

WHY THIS STUDY WAS DONE

The Gorton Amendment, section 205 of the Federal Aviation Administration Authorization Act of 1994,¹ added the following provision to the United States Code:

An air carrier or foreign air carrier may not install, transport, or operate, or permit the use of, any gambling device on board an aircraft in foreign air transportation.²

As a result of the Gorton Amendment, the United States today prohibits gambling on flights to or from this country that are operated by a foreign air carrier, as well as on all international flights of U.S. carriers and all commercial flights within U.S. airspace.³

Congress' intent in amending the law to encompass foreign-carrier flights to or from the United States was to ensure equal treatment of U.S.-flag and foreign-flag carriers and avoid putting U.S. airlines at a competitive disadvantage in providing international passenger service.⁴ Prior to the amendment, a foreign airline could offer gambling on board its flights to or from the U.S. while existing law precluded our airlines from doing likewise. Instead of authorizing U.S. airlines to offer gambling on their international flights, however, Congress chose to prohibit gambling on all foreign-carrier flights to or from this country. During Senate deliberations,⁵ concern was expressed that a different approach, such as allowing U.S. carriers to offer gambling on their international flights when outside U.S. airspace,⁶ might be more appropriate for ensuring equal treatment at some future time. Consequently, the Gorton Amendment also directed the Secretary of Transportation to complete a study of:⁷

- ▶ The aviation **safety effects** of gambling applications on electronic interactive video systems installed on board aircraft for passenger use, including an evaluation of the effect of such systems on the navigational and other electronic equipment of the aircraft, on the passengers and crew of the aircraft, and on issues relating to the method of payment.

¹Public Law 103-305 (Aug. 23, 1994).

²49 U.S.C. 41311(a).

³Gambling is prohibited on international flights of U.S. carriers and on commercial flights within U.S. airspace under previously enacted legislation, popularly known as the Gambling Devices Transportation Act (also as the Johnson Act), codified in 15 U.S.C. 1171 *et. seq.*

⁴Congressional Record (Senate - June 9, 1994, pp. S6663-S6664).

⁵Congressional Record (Senate - *Ibid.*, and Aug. 8, 1994, p. S10954).

⁶Permitting gambling on commercial flights *within* the airspace of the United States is *not* at issue.

⁷Sec. 205 (b), *op. cit.*



- ▶ The **competitive implications** of permitting foreign air carriers only, but not United States air carriers, to install, transport, and operate gambling applications on electronic interactive video systems on board aircraft in the foreign commerce of the United States on flights over international waters, or in fifth freedom city-pair markets.
- ▶ **Whether gambling should be allowed on international flights**, including proposed legislation to effectuate any recommended changes in existing law.

RESULTS IN BRIEF

The Department is not at this time recommending any changes to the law prohibiting gambling in foreign air transportation. Rather, we will monitor foreign airlines' implementation of gambling along with related developments and, depending on those developments, recommend legislative changes that we find are appropriate for assuring U.S. airlines remain competitive in providing international passenger services. Insofar as other nations allow, foreign airlines will continue to have the opportunity to offer video gambling on flights other than those to or from the United States; some foreign carriers have expressed an intent to do so. U.S. airlines, meanwhile, can continue to install interactive entertainment systems on their aircraft fleets, though they remain prohibited from offering video gambling as an entertainment feature. Should gambling on their international flights be authorized in the future, implementing the gambling feature would entail adding a software program to their installed systems.

By monitoring foreign carriers' progress and experience with video gambling, the Department believes that much of the uncertainty presently surrounding gambling aboard aircraft will be alleviated, enabling a more informed determination of whether to authorize gambling on international flights and how such gambling should be regulated. In this regard, our decision not to recommend any change in the law at this time is based on the following factors:

Congress is Concerned about Gambling's Impact

- ▶ The Congress is deliberating proposals for a comprehensive study of gambling's impact on the nation. The proposals, which have bipartisan support and are endorsed in principle by the Administration (*see p. 14 and Appendix*), reflect growing concerns over the socio-economic costs resulting from the rapid spread of legalized gambling during the past several years. The Department is reluctant to recommend an enlargement of gambling's presence until those concerns are authoritatively examined. If approved, the proposed study would also provide information useful for determining the need to regulate gambling aboard aircraft and the appropriate scope of any regulatory scheme, particularly with respect to the issue of "problem" and "pathological" gambling behavior and the effectiveness of the existing federal-state regulatory framework.

Competitive Harm is Prospective

- ▶ The adverse competitive impact on U.S. airlines as a consequence of the current gambling ban is *potentially* quite significant, assuming that *all*



foreign airlines are able to provide video gambling and elect to do so. Whether, when and to what extent foreign carriers will implement on-board gambling is not known, however. As of the end of March 1996, no international airline offered video gambling and, to our knowledge, introduction of gambling games was imminent for only one foreign carrier -- as a trial on a single aircraft.

***Behavioral Risk is
Uncertain***

- ▶ Furthermore, while there is no evidence that on-board electronic entertainment systems increase safety risk from a *technical* standpoint, the potential for increased risk resulting from the *behavior* of certain passengers while gambling cannot be dismissed at this time, especially in light of concerns raised by the Association of Flight Attendants and other parties. On one hand, current flight-crew training requirements, along with the design and implementation of the gambling games promoted for use on aircraft today, would appear to minimize behavioral risks. On the other hand, no airline today has significant experience with video gambling, and the risk associated with the behavior of the problem or pathological gambler while aboard an airplane is not known. Indeed, both the incidence of pathological gambling among the current U.S. population and the costs imposed on the nation by pathological gambling behavior have yet to receive an adequate accounting. Pending evidence of *actual* competitive harm to U.S. airlines and better information on problem gambling, we are not persuaded that increasing the inventory of potential behavioral risks is warranted by authorizing on-board gambling at this time.

***Need for
Regulation is
Not Clear***

- ▶ In addition, allowing gambling on the international flights of U.S. carriers raises several policy and regulatory issues. It is not clear the extent to which, or by what means, regulation *should* occur. Airlines and gaming vendors stress that their gambling games are designed as simple, "fun" entertainment with low stakes, frequent pay-outs, and extended play. On the other hand, absent regulatory oversight, there may be no assurance that on-board gambling would remain benign, or that the integrity and fairness of the gambling games would be adequately safeguarded.

***KEY QUESTIONS
EXAMINED***

The Department's study focused on the following questions regarding the safety, competitive and legal implications of video gambling in foreign air transportation:

Safety Effects

Do on-board electronic entertainment systems, which house video gambling games as well as other customer services, present an increased *technical* risk for air travel safety, *i.e.*, are the systems structurally sound and compatible with all safety systems, components and related operations aboard an aircraft? Moreover, would gambling itself present any increase in *behavioral* safety risk, *i.e.*, would it cause a passenger to behave in a manner that might interfere with or disrupt the safety-related duties of the aircraft's flight crew?

***Competitive
Consequences***

In what manner and to what extent would the competitive position of U.S. airlines be harmed as a consequence of the existing U.S. gambling ban? How would their



competitive position be affected if the law were changed to permit gambling on foreign-carrier flights to or from the United States, or on the international flights of U.S. carriers as well?

***Bilateral Issues &
Legal Framework***

What issues are raised regarding our bilateral aviation relations with other nations when the United States prohibits gambling in foreign transportation by non-U.S. carriers? Likewise, what statutory or regulatory issues are presented by removing or easing the current ban on gambling in foreign air transportation?

***EFFECTS ON
SAFETY***

Technical Risk

The entertainment systems in operation today, including ones with a gambling feature, have been certificated as safe from a technical standpoint by the Federal Aviation Administration (FAA). FAA assesses technical risk in accordance with specific safety requirements and a well-established certification process. Under this process, an entertainment system proposed for installation on an aircraft is evaluated for electromagnetic interference with other equipment on the airplane, electrical power loading on the aircraft's power generation and distribution system, the potential for fire hazard, potential interference with emergency procedures and passenger evacuation, and other factors affecting the safe operation of the aircraft.

Behavioral Risk

Behavioral safety risk is addressed by FAA's flight-crew training requirements, which encompass behaviors ranging from passenger dissatisfaction with some aspect of an airline's service, to aberrant behaviors associated with fear of flying or other neuroses, and extreme behaviors that threaten the safety of occupants or the aircraft (*e.g.*, hi-jackers). The Department believes that the behavioral risk due to video gambling probably would be minimized given the scope of FAA's training requirements. We cannot, however, wholly discount the concerns cited by flight attendants and others regarding behavioral risk until adequate experience is gained with in-flight video gambling and the behavior of problem and pathological gamblers aboard aircraft.

***COMPETITIVE
CONSEQUENCES***

***Measuring
Competitive
Impact***

To measure competitive impact, the Department assessed the opportunities for foreign carriers to offer video gambling compared with the major U.S. airlines on flights involving the Atlantic and Pacific regions, assuming (1) the current U.S. gambling ban remains in force, (2) the law is changed to permit only foreign airlines to provide gambling on flights to or from the United States, or (3) the law is changed to allow gambling on the international flights of U.S. airlines as well as foreign-carrier flights to or from the United States. For analysis purposes, it was also assumed that all foreign-carrier passenger flights in the relevant markets offer video gambling. We then developed estimates of the revenue impact associated with these assumptions. Much of our analysis draws upon the results of a survey of U.S. international air travelers that was conducted at the Department's direction by Yankelovich Partners Inc., a nationally recognized consumer survey firm. We limited our analysis to routes involving the Atlantic and Pacific regions because they are the routes where we believe video gambling will be offered initially and because



the Department-directed survey was targeted to trans-Atlantic and trans-Pacific air travelers.

***Entertainment
Systems Are a
Competitive
Necessity***

Our analysis concludes that U.S. airlines will install electronic entertainment systems on their international fleets regardless of whether or not they are allowed to offer video gambling. If U.S. carriers did not install entertainment systems, an estimated 4 percent of their international traffic in the Atlantic and Pacific regions would shift to foreign carriers having entertainment systems. Since a 4-percent traffic shift would amount to an annual revenue loss of over \$490 million, U.S. airlines of competitive necessity will implement entertainment systems. We estimate the cost to install those systems on the U.S. international fleet serving the Atlantic and Pacific regions at about \$401 million, and that additional fuel costs due to the weight of the systems would amount to about \$43 million annually.

Given that both U.S. and foreign airlines will install entertainment systems for competitive reasons, we also conclude that the ability of foreign carriers to offer gambling could provide them with a substantial competitive advantage over their U.S. rivals. Specifically:

***Impact of Current
Gambling Ban***

- ▶ The absence of video gambling *per se* on U.S. airline international flights is not likely to have a material effect on the U.S.-carrier share of international passenger traffic in the Atlantic and Pacific regions. Passenger *fare* revenue, in other words, would not be significantly affected by the presence or absence of video gambling.
- ▶ However, if video gambling *is* offered, an estimated 18 percent of passengers will use it. Because the great majority of foreign-carrier flights in the Atlantic and Pacific regions do not involve flights to or from the United States, and therefore are not affected by the current U.S. gambling ban, foreign airlines have a potential new revenue source not available to their U.S. counterparts. We estimate the revenue from gambling aboard foreign-carrier flights (exclusive of those to or from the U.S.) at approximately \$480 million per year, some of which would be earned in direct competition with U.S. carrier service in fifth-freedom markets. This new revenue would be available to the foreign airlines to defray the cost of their entertainment systems, reduce fares where they have the flexibility to do so, or otherwise support their operations worldwide. In this respect, the current gambling ban may not provide a level competitive playing field for U.S. airlines.

***Foreign-Carrier
Flights to/from U.S.***

Further, if the U.S. law were changed to permit gambling only on foreign-carrier flights to or from this country, we estimate that foreign airlines could receive an additional \$112 million in gambling revenue per year. Again, some of this revenue would be earned on flights competing directly with U.S. airline service on which gambling would continue to be banned.



***U.S. Airlines’
International
Flights***

Finally, if U.S. airlines were allowed to offer video gambling on their international flights, we estimate they could earn \$300 million per year in gambling revenue from their international service in the Atlantic and Pacific regions combined. Net of direct operating expenses, which we estimate at approximately \$75 million per year, video gambling could yield net revenues of about \$225 million annually for U.S. carriers.

***BILATERAL
ISSUES &
LEGAL
FRAMEWORK***

The Gorton Amendment and the Department’s request for public comments on the issues of this study have engendered formal diplomatic protest to the Department of State concerning the regulation of foreign-airline conduct outside the territorial limits of the United States. Changing the law to allow gambling on foreign-carrier flights to or from the U.S. could be expected to eliminate this concern on the part of our bilateral aviation partners.

***Regulation
Needed?***

In principle, there are a variety of frameworks of gambling regulation and enforcement which could be applied to U.S. air carriers if gambling were authorized on their international flights. Before that authority were granted, however, certain issues would have to be addressed regarding how -- or even whether -- a given framework *should* be applied:

***Communication
By Wire***

- ▶ Since it is envisioned that gambling activities aboard aircraft would require the use of communications facilities, a decision to allow gambling in foreign air transportation must address whether 18 U.S.C. 1084, concerning wire communications, would or should apply. If applicable, it may be difficult to implement air-to-ground verification of credit card accounts for gambling activity, for example.

***Federal or State
Regulation***

- ▶ Under current Federal law, the regulation of gambling operations is largely left to the States. Pursuant to 49 U.S.C. 41713, however, a State is preempted from enacting or enforcing a law, regulation, or other provision related to a price, route, or service of a U.S. carrier. Thus, a decision to allow gambling must also address what entity, if any, would regulate the gambling operations and ensure the integrity of gambling devices on board U.S. aircraft.



CHAPTER 1: ON-BOARD VIDEO GAMBLING IN CONTEXT

Sometime this Spring, a major foreign airline is expected to begin operating a new, fully interactive electronic entertainment system installed on a single Boeing 747-400. Among several features, the entertainment system reportedly will provide telephone, fax and catalog shopping services to individual passengers, along with movies-on-demand and a variety of entertainment games. Also, for the first time in commercial aviation, video gambling -- poker, slots, roulette, blackjack -- reportedly will be offered, to passengers 18 years of age or older, with all financial transactions to be processed electronically via credit card. Based on customer response, the carrier may elect to offer video gambling as an entertainment option on more of its fleet.¹

This engagement of video gambling with air travel is the product of two forces. One is the ongoing revolution in telecommunications technology, which is enabling greater amounts of information to be transmitted and processed rapidly from virtually any point around the globe. The other force is increased public acceptance of gambling as a legal form of entertainment and diversion of the consumer dollar. These forces not only make video gambling feasible on aircraft flights; they are animating efforts to gamble via personal computer and, ultimately, home TV.²

Legal gambling's evident popularity notwithstanding, its rapid spread across the United States has spawned a counter reaction from those who question its efficacy on moral, economic or social policy grounds. Today, these concerns are manifested in the Congress as bipartisan proposals for a comprehensive assessment of gambling's impact on the nation.

This chapter supplies the backdrop for the Department's examination of gambling in foreign air transportation. It highlights the technology, in place or forthcoming, that is making video gambling and a host of other interactive electronic services accessible to air travelers. It then looks at the growth of legalized gambling in the United States since 1974, along with the concerns of those persons disturbed at the prospect of extending gambling's reach today, and the federal gambling statutes now in force. Lastly, it reports the findings of the Department-sponsored survey of U.S.

¹Aviation Daily (Nov. 28 and Dec. 7, 1995); "IFE Horror Movie," Airline Business (Feb. 1996). On-board gambling other than the video variety was offered previously. In the 1980's Singapore Airlines installed slot machines in the rear of its planes, but subsequently abandoned the practice as incompatible with its business-oriented image. Reportedly, the popularity of the slot machines also was an issue. So many passengers lined up to play the slots that aircraft trim (balance) was affected, requiring extra fuel to keep the plane level. (International Herald Tribune, Oct. 9, 1995.)

²"Wanna Bet?," Wired (Oct. 1995); "Electronics Is Bringing Gambling Into Homes, Restaurants and Planes," The Wall Street Journal (Aug. 16, 1995); "Turn Your TV Into A Tote Board," Business Week (Jul. 17, 1995); "In-Home Gambling? No Thanks," Crain's Chicago Business (May 14, 1995); "Gamblers Could Make Themselves Right at Home," Chicago Tribune (May 10, 1995).



international air travelers regarding their reactions to the concept of on-board entertainment systems, both with and without gambling games.

TECHNOLOGY RULES

As of the close of March 1996, no international airline offered video gambling. However, both British Airways and Alitalia Airlines are known to have taken delivery of interactive entertainment systems with a gambling feature, and at least two other foreign carriers are reported as preparing to implement gambling this year.³ Virtually all major international airlines have expressed an interest in video gambling, though most appear to be moving deliberately due to uncertainties over the cost and reliability of entertainment systems⁴ as well as the acceptability and legal status of gambling *per se*.

Installation of video gambling essentially involves adding a software program to an aircraft's installed entertainment system, which typically is comprised of:

- o A central processing unit and master control panel on the aircraft.
- o A polarized video screen mounted on the back of each passenger seat or aside the arm rest.
- o A push-button controller, also operable as a telephone and credit-card reader, wired to each seat for transmitting commands to the video screen and central processing unit. Some systems allow commands to be activated by touching the video screen.
- o An digital audio system, including earphones, integrated with the screen display.
- o An air-to-ground communications link for sending and receiving digital data.
- o Assorted switches, connectors and wiring linking the system's components.

The gambling games themselves are akin to games played on personal computers or in video arcades, with various "bells and whistles" to signal the state of play. Both airlines and game developers

³Aviation Daily (Nov. 27, 28, 1995; Dec. 4, 7, 1995; Feb. 20 and Mar. 1, 1996).

⁴"IFE Horror Movie," Airline Business (Feb. 1996); "A 'Mortal Lock' for Airlines," Air Transport World (Nov. 1995); 21st Century Jet: The Building of the 777, Episode IV (Public Broadcasting Service). Full interactivity, generally denoted by the presence of video-on-demand, *i.e.*, the ability of the passenger to select, start, stop, pause and view individual programs at will (much like a home video or CD-ROM player), has proven complicated to implement, and some carriers that took the plunge early have encountered difficulties with the reliability of their systems. Part of the problem stems from a lack industry-wide standards for ensuring technical compatibility between vendors' entertainment systems and the aircraft's interface, a condition reminiscent of the early days of personal computers when adding a sound board or other peripheral device often led to compatibility glitches. Another factor is the complexity of the software supporting interactive systems. Boeing's latest commercial offering, the Model 777, an electronic fly-by-wire aircraft with advanced methods of data transfer and computing power, is supported by some 4 million lines of computer code, over half of which are attributable to the in-flight entertainment system. By comparison, a modern jet fighter, with its electronic warfare systems, uses about 1.5 million lines of code.



emphasize that on-board gambling is designed to be non-threatening, “fun” entertainment for whiling away time on long flights. Stakes will be low, pay-outs will be frequent, and the amount that a passenger can lose on a single leg of a flight will be capped (reportedly at \$75 to \$350, depending on the airline). According to officials of one foreign airline, partakers of their carrier’s games are to be presented with a series of cautionary on-screen messages describing the games, the odds of winning, applicable limits on losses and winnings, *etc.*, and then required to acknowledge all of the foregoing before they can begin to play. Also, a skeptical passenger will be able to try out the games, *sans* wager, to relieve anxiety, while the games themselves are designed to provide a novice player with helpful hints, such as when to get “hit” and when to “stand” on a blackjack hand. Gambling transactions, including settlement of net winnings or losses, are to be processed via credit card through the entertainment system’s air-to-ground communications link.

Video gambling is but one of potentially many customer services availed by on-board entertainment systems. Telephone, fax, and digital audio are commonly available now, with full video-on-demand and other interactive services coming soon. Virtually any service targeted for personal computer screens -- banking, shopping, radio broadcasts, Internet surfing, hotel reservations, car rentals, advertisements, *etc.* -- is a candidate for passengers’ screens as well. The technology to access the Internet from aircraft has been demonstrated,^{5,6} and over the next year the installation of phased-array antenna will open the door for direct satellite broadcasts to passengers’ screens.⁷ Longer-term, low-orbit satellite systems will greatly enhance the capacity, speed, and access to telecommunication networks, making a wider array of options available to airline travelers as well as users on the ground.⁸ Because of greater capacity and complexity, it is likely that entertainment systems eventually will be integrated with airplane design, rather than retrofitted to aircraft as occurs today. Further, industry observers

⁵Aviation Daily (Aug. 21, 1995); “The Internet on Flights May Fly,” USA Today (Dec. 13, 1995); “Network to Introduce Inflight Office Software, Internet Access,” Aviation Daily (Feb. 16, 1996).

⁶Internet access, coupled with wireless communications technology, invites the prospect of an airline passenger wagering via laptop computer while cruising the skyways, effectively by-passing the aircraft’s entertainment system. Today one could, though the transaction would be illegal unless permitted by state law, place a parley-card or proposition bet through the Internet with Sports International, an Antigua-based outfit webbed at <http://www.inter-sphere.com/bet/>, which reported handling wagers totaling \$31.6 million during the first 9 months of 1995 and over \$48 million in 1994. Overseas lotteries, such as Liechtenstein’s InterLotto (<http://www.interlotto.li>), could be accessed, too. On the other hand, traditional casino-style gambling via the Net appears to be more hype than reality thus far. Startup of Sports International’s companion Global Casino, for instance, originally promised for the fall of 1995, has been pushed back to the summer of 1996. Meanwhile, a U.S. cyber-visitor to Caribbean Casino, based in the Turks and Caicos Islands (<http://www.casino.org>), is advised that he or she “may not be legally able to gamble at this casino site” and, in any case, is unable to play for real money at this time. Delays and legal barriers notwithstanding, observers predict that encryption technology, together with “digital” cash for settling cyber-bets, eventually will render gambling via the Net undetectable (*cf.* Wired, Oct. 1995), with at least one enthusiast anticipating a \$50-billion business (Glassman, “Cyber Liberation,” The Washington Post, Nov. 7, 1995).

⁷“Travelers May Get a Chance to Channel Surf While Flying,” The Wall Street Journal (Oct. 5, 1995).

⁸“In New Space Race, Companies Are Seeking Dollars From Heaven,” The Wall Street Journal (Oct. 10, 1995).



anticipate that future systems will incorporate various crew management functions (*e.g.*, inventory tracking), allowing both passengers and crew to be served by a single, integrated system.⁹

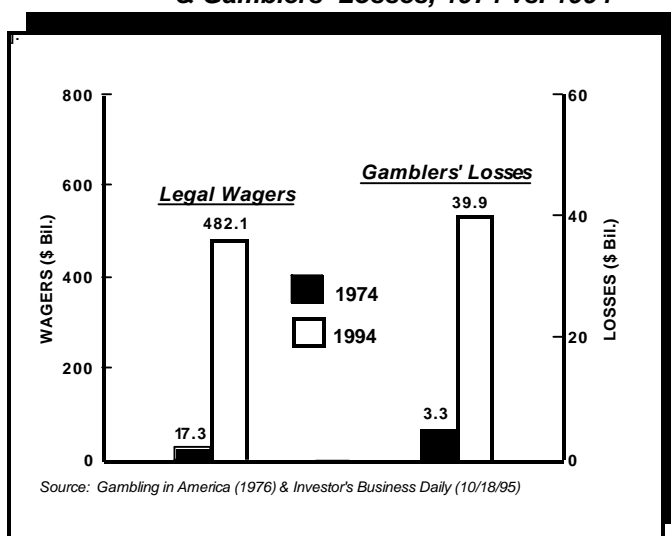
LEGAL GAMBLING IN THE UNITED STATES

If U.S. airlines were allowed to offer gambling on their international flights while outside U.S. airspace, the value of wagering activity aboard those flights, although potentially significant from the airlines' standpoint, would be modest in relation to overall gambling activity, representing less than 1 percent of the amount legally wagered by Americans today.¹⁰ Nonetheless, at this time virtually any proposal to augment gambling's presence is likely to encounter substantial opposition. Routinely controversial, gambling is particularly so today because its rapid growth has heightened concern over the consequent social and economic costs to the nation.

Growth of Legalized Gambling Since 1974

The most recent nationwide assessment of gambling was completed 20 years ago with publication of the final report of the Commission on the Review of the National Policy Toward Gambling.¹¹ According to that report, in 1974 legal wagering in the United States totaled \$17.3 billion and consumer gambling expenditures (*i.e.*, gamblers' losses) amounted to \$3.3 billion. In 1994, legal wagering totaled an estimated \$482.1 billion and gambler's losses amounted to approximately \$40 billion¹² (*see Exhibit 1.1*). Between 1974 and 1994, consumer gambling expenditures as a percentage of disposable personal income more than doubled, rising from 0.32 to 0.80 percent.

Exhibit 1.1: Nominal Dollar Increases in Legal Wagers & Gamblers' Losses, 1974 vs. 1994



⁹“A ‘Mortal Lock’ for Airlines,” *Air Transport World* (Nov. 1995); “Gates Looks Skyward” and “Planemakers Appeal For IFE Uniformity,” *Orient Aviation* (Oct. 1995).

¹⁰Current estimates of legal gambling in United States put total wagering, the so-called “handle” in gambler’s parlance, at approximately \$500 billion dollars for 1995. The Department estimates that if allowed to offer gambling on their international flights, U.S. airlines could generate wagering amounting to roughly \$3.3 billion on an annual basis (*see Chapter 4*).

¹¹*Gambling in America* (1976: U.S. Government Printing Office, Washington, D.C.).

¹²“Gambling: Boon or Social Ill?,” *Investor’s Business Daily* (Oct. 18, 1995).



Exhibit 1.2: Real Growth in Consumer Gambling Expenditures & GDP, 1974-1994

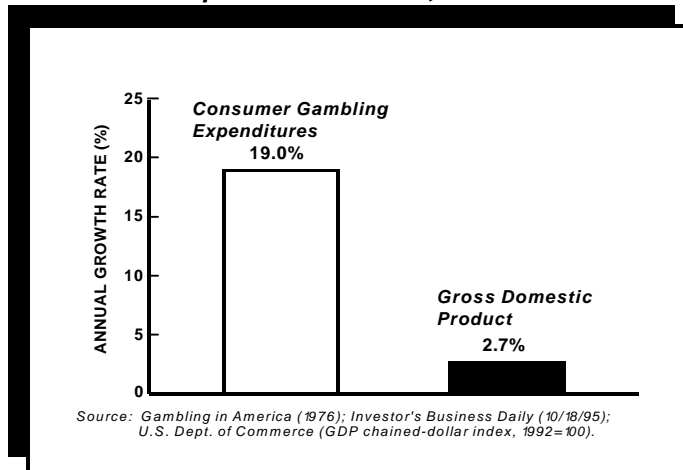
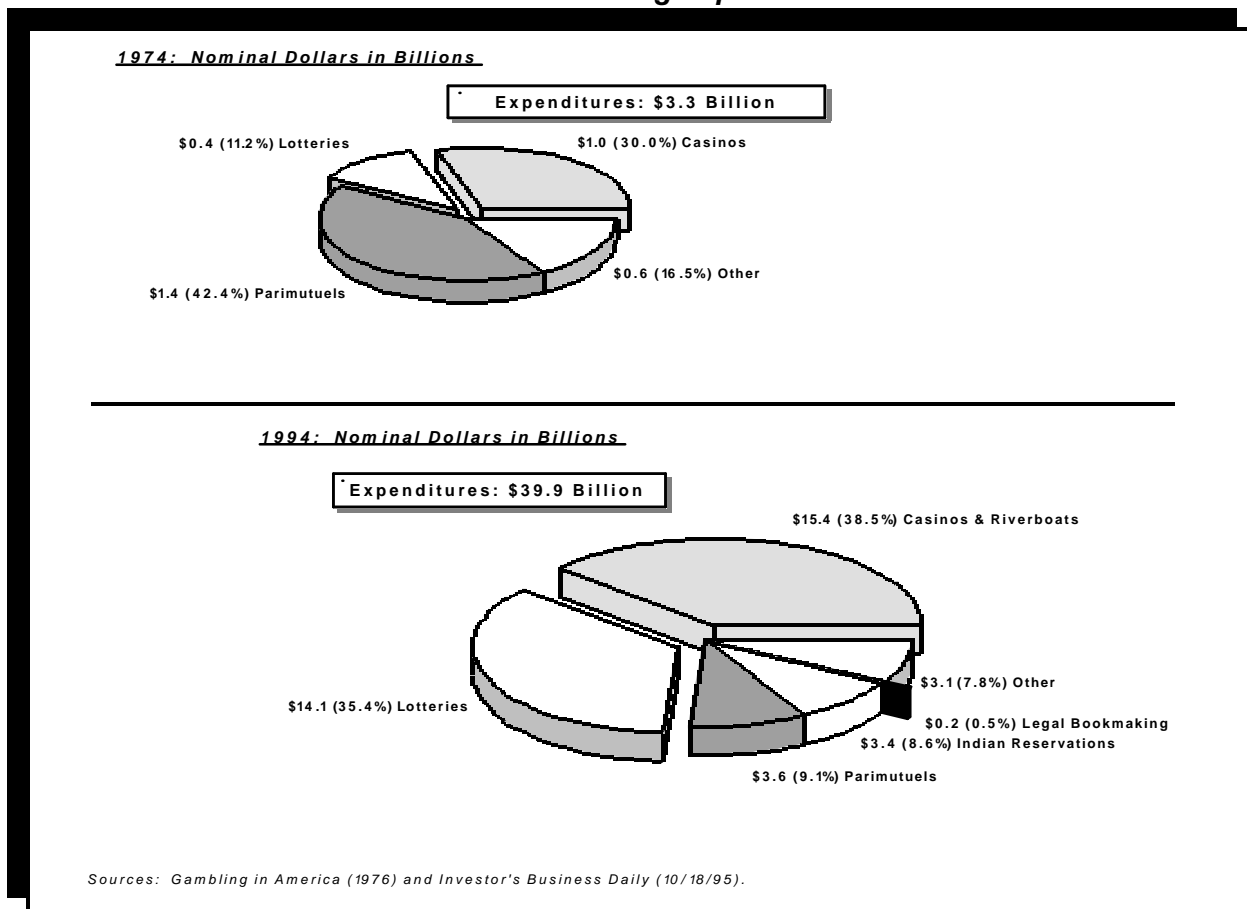


Exhibit 1.2 compares the average annual rate of growth in consumer spending on legal gambling in real terms (*i.e.*, striped of general price-level changes) with the growth rate of the U.S. Gross Domestic Product during 1974-1994. Over the 20-year period, real gambling expenditures rose at a rate more than seven times faster than the economy overall.

Exhibit 1.3 below compares the distribution of consumer spending on legal gambling in 1974 with the distribution in 1994. Not only did the gambling pie grow larger, it acquired additional slices (or

Exhibit 1.3: Distribution of Consumer Gambling Expenditures in 1974 and 1994



more robust slice labels). In 1974 casino gambling was legal only in Nevada, lotteries were run by 12 States, and parimutuel betting¹³ -- horseracing, dogracing, jai alai -- was permitted in 31 States and represented the largest slice of the expenditures pie.¹⁴

By 1994 parimutuel betting was surpassed by both casinos and state lotteries as the chief outlet for gambling expenditures. Currently, all but two States -- Hawaii and Utah -- have legal gambling of some form. Twenty-eight States allow casino-style gambling, including five with traditional land-based casinos, six with riverboat casinos, and 24 with casinos operated (or approved for operation) by more than 100 Native American tribes on Indian lands; 43 States permit parimutuel betting; and 37 States and the District of Columbia run lotteries.¹⁵ According to *Business Week*, during the 1990's legal gambling became the fastest-growing segment of the U.S. entertainment industry, commanding a larger share of the consumer entertainment dollar than amusement parks, cable television, movie-going and video rentals, or spectator sports.¹⁶

Anti-Gambling Backlash

Supporters of legalized gambling point to new jobs, additional revenues and other economic benefits for states and local communities. For example, as of the end of 1994, casinos in the United States employed an estimated 295,500 workers and, during that year, contributed approximately \$1.4 billion in direct gaming tax revenues to state and local governments.¹⁷ Net profits from lotteries, meanwhile, added about \$10 billion to the coffers of affected States¹⁸ and accounted for an estimated 3.2 percent of their tax-related revenues.¹⁹

Gambling's opponents counter that these employment and revenue statistics ignore significant socio-economic costs that are imposed by legalized gambling activity, including:

- o Cannibalistic competition between States, between States and Native American tribes, and among local communities as they vie to capture one another's gambling commerce -- a zero-sum

¹³System under which bettors wager against one another instead of against a bookmaker or the house.

¹⁴Gambling in America, Chp. 5 and App. 2, Chp. 3 (1976).

¹⁵Harrah's Survey of Casino Entertainment (Mar. 1995); U.S. General Accounting Office (GAO/GGD-96-29, Jan. 1996); The Washington Post (Mar. 3, 1996); InterLotto On-Line Lottery Service (Mar. 1996). State-run lotteries include New Mexico's, which was authorized in 1995 and is expected to offer instant chances starting this April.

¹⁶"The Entertainment Economy," Business Week (Mar. 14, 1994).

¹⁷Harrah's Survey of Casino Entertainment (Mar. 1995).

¹⁸Statistical Abstract of the United States 1995, Table No. 496 (U.S. Department of Commerce). 1994 lottery profits pertain to state fiscal years ending by Sep. 30.

¹⁹Business Week (Jul. 31, 1995).



exercise which, too often, simply drives out existing small businesses as discretionary spending is diverted to gambling pursuits.

- o Problem and pathological (compulsive) gambling, which leads to financial insolvency, decreased worker productivity due to absenteeism, increased white-collar crime to support gambling addiction, and child and spousal abuse in the families of compulsive gamblers.
- o Increased direct public expenditures, such as those for criminal justice, regulation, and public infrastructure to support gambling operations.
- o Political corruption by gambling interests, as reported last year in Louisiana where several state legislators allegedly took pay-offs to forestall tighter regulation of video poker devices.²⁰

Morality, of course, is at issue as well. In a September 1995 campaign address, Senator Richard Lugar decried the spread of legal gambling as “a measure of the moral erosion taking place in our country,” with the lure of quick riches undermining traditional values of hard work and personal responsibility.²¹

These anti-gambling sentiments appear to have had some impact. During 1994-95 organized opposition successfully sidetracked or defeated proposals to establish or expand legalized gambling in Florida, Virginia, Washington and several other states and localities.²² These set-backs, along with the failure of Harrah’s New Orleans Casino in November 1995,²³ have caused some observers to scale down their expectations for further legalization efforts.²⁴ Moreover, opponents of legalized gambling have engaged Congress’ interest.

Study Commission Proposals

Two major bills to examine gambling are before the Congress: S. 704, introduced by Senator Paul Simon (co-sponsored by Senator Lugar and 19 others, as of late March 1996), and H.R. 497, introduced by Congressman Frank Wolf and recently passed by the House. While the bills differ

²⁰“FBI Probes Louisiana Gambling,” The Washington Post (Aug. 29, 1995).

²¹Speech to Christian Coalition Convention (Sep. 8, 1995).

²²“Gambling Nearly Absent from State Ballots,” The Press of Atlantic City Online (Nov. 8, 1995); “Casino Companies Find States Less Willing to Play,” The Wall Street Journal (Nov. 28, 1995); Congressional Record (Senate - Nov. 30, 1995, p. S17871 and Dec. 19, 1995, p. S18929); National Coalition Against Legalized Gambling (cf. <http://www.iquest.net/cpage/ncalg/>). According to the Coalition’s scorecard, 17 of 22 gambling initiatives were defeated by voters in the November 1995 elections.

²³The casino, opened in a temporary facility in the spring of 1995, fell well below revenue projections and closed its doors in late November. Construction of a permanent facility was halted and one of the partners, Harrah’s Jazz Co., filed for bankruptcy protection.

²⁴“Casino Companies Find States Less Willing to Play,” The Wall Street Journal (Nov. 28, 1995).



in some particulars, both reflect a need for current, comprehensive information on the magnitude, benefits and costs of gambling; both would establish a commission to assess gambling's effects nationwide; and both have been endorsed in principle by the President.²⁵ The House bill,²⁶ which is somewhat broader in scope, would create a 2-year, nine-member panel to conduct a legal and factual study of:

- o The economic impact of gambling on the United States, States, political subdivisions of States, and Indian tribes, both in its positive and negative aspects;
- o The economic impact of gambling on other businesses;
- o The extent to which casino gambling provides economic opportunity to residents of economically depressed regions and to Indian tribes;
- o The demographics of gamblers;
- o The relationship between gambling and crime;
- o The effectiveness of existing practices in law enforcement, judicial administration and corrections to combat and deter illegal gambling and related illegal activities;
- o Political contributions and their influence on the development of public policy regulating gambling;
- o The impact of pathological, or problem gambling on individuals, families, social institutions, criminal activity and the economy;
- o The effects of advertising concerning gambling, including sponsorship of sporting events, State lottery advertising practices and the process used by States to award lottery advertising contracts, the relationship between advertising and the amount of the prize to be awarded, and whether advertising has increased participation in gambling activity;
- o Gambling that uses interactive technology, including the Internet;
- o The effect of revenues derived from State-sponsored gambling on State budgets;
- o The costs and effectiveness of State, Federal, and Tribal gambling regulatory policy; and
- o Such other relevant issues and topics as considered appropriate by the commission chair.

²⁵See President Clinton's letter in *Appendix*.

²⁶As passed by the House on March 5, 1996 (*Cong. Rec.* - House, pp. H1675 ff.). As of late March, S. 704 was pending with the Governmental Affairs Committee.



The proposals to establish a national study commission have been criticized by the American Gaming Association and certain members of Congress as an unwarranted federal intrusion on state regulatory authority and a thinly disguised first step toward a federal gambling ban.²⁷ A leading industry executive, however, reportedly views a national study as an opportunity to showcase gambling's economic benefits.²⁸

Overview of Federal Gambling Statutes

In several respects the objectives of the federal gambling statutes (*see Exhibit 1.4, pp. 16-18*) reflect the ongoing debate over gambling legalization. Historically, government involvement has been justified on the basis of a relationship between gambling and crime and the need to protect consumers from fraudulent operations. Most of the statutes in force today, in particular those enacted during the 1950's, 1960's and early 1970's, are targeted at illegal interstate gambling operations and organized crime. At the same time, some provisions of the statutes, such as the exemption for the cruise-ship industry from proscriptions on the transport and use of gambling devices (*p. 16*), the exemption of state-authorized lotteries from federal anti-lottery laws (*p. 17*), and the Interstate Horseracing Act and Indian Gaming Regulatory Act (*p. 18*), allow gambling as a means to achieve a limited, specific public purpose. Moral attitudes about gambling, while rarely explicit in the statutory language, are nonetheless evident in the history of the anti-lottery laws that date back to the 19th century (*p. 17*), the prohibition on wagering on amateur and professional sporting events (*p. 17*), and the treatment of gambling as a character issue under the immigration laws (*p. 18*). A theme threading through many of the statutes is that the states and not the federal government should determine what types of gambling are lawful within their borders.

AIR TRAVELERS' REACTIONS TO THE CONCEPT OF ELECTRONIC ENTERTAINMENT SYSTEMS AND VIDEO GAMBLING ABOARD AIRCRAFT

The financial success of gambling aboard aircraft will depend on how warmly the concept is accepted by international air travelers. Although airlines have long offered feature films for cabin-wide viewing, the installation of interactive systems for individualized access is a relatively new development

²⁷"GOP Faces Tensions As Gambling Interests Meet Family Values," The Wall Street Journal (Oct. 8, 1995); "Casinos Warned of Tax/Morality Push," The Press of Atlantic City Online (Oct. 17, 1995); "Gaming Industry Says Fed Study's Goal Is Regulation," Investor's Business Daily (Oct. 17, 1995); "Clinton Supports Study of Gambling's Impact," The Press of Atlantic City Online (Nov. 2, 1995); H. Rept. 104-440, Part I (Dec. 21, 1995).

²⁸Phillip Satre, president and chief executive of Harrah's Entertainment, Inc., quoted in The Wall Street Journal (Nov. 28, 1995).



Exhibit 1.4: Summary of Federal Gambling Statutes (see Note, page 18)

	Statute	Key Provisions	Notes
Gambling Ships & Transportation of Gambling Devices	18 U.S.C. 1081-1083	Generally prohibits the operation of gambling ships -- vessels used principally for the operation of one or more gambling establishments -- when such vessels are under or within U.S. jurisdiction and not within the jurisdiction of any state. [See Chapter 5.]	Codified in 1949 based on the Gambling Ship Act (1948), the first modern federal legislation to outlaw certain gambling activities, the statute achieved its original intent of eliminating gambling ships that were operating off the U.S. coasts. A 1994 amendment substantially changed the scope of the law by excluding from the definition of "gambling ship" a vessel beyond U.S. territorial waters during a "covered voyage" (as defined in section 4472 of the Internal Revenue Code of 1986 as in effect on Jan. 1, 1994). [Pub. L. 103-322, Sep. 13, 1994, 108 Stat. 2114.]
	15 U.S.C. 1171-1178	Generally prohibits the interstate transportation of gambling devices, excepting to states where the devices are permitted, and requires reporting and registration by device manufacturers. Section 1175 prohibits the transport or use of gambling devices within the "special maritime and territorial jurisdiction of the United States," which includes U.S. air carriers. [See Chapter 5.]	Codified in 1951, the Gambling Devices Act was an outgrowth of the Kefauver hearings on organized crime. The law was originally aimed at nation-wide crime syndicates and was intended to support state policies outlawing such devices as slot machines. A 1962 amendment significantly broadened the definition of gambling devices; a 1992 amendment provides an exemption for U.S.-flagged cruise ships when operating in international waters.
	49 U.S.C. 41311	Prohibits an air carrier or foreign air carrier from installing, transporting, or operating, or permitting the operation of, any gambling device on board an aircraft in foreign air transportation. [See Chapter 5.]	Codified by Pub. L. 103-305 (Aug. 23, 1994), section 205(a)(1), part of the "Gorton Amendment" which also directs the Department to conduct this study of gambling in foreign air transportation.
Illegal Interstate Gambling Operations	18 U.S.C. 1084	In general, prescribes penalties for someone engaged in the business of wagering who knowingly uses a wire communication facility for the transmission in interstate or foreign commerce of bets or wagers, or, except as authorized by state law, for the transmission of information assisting in the placement of bets or wagers, or for the transmission of a wire communication that entitles the recipient to receive money or credit as the result of bets or wagers. Also generally prohibits a common carrier under FCC jurisdiction from allowing its facilities to be used to transmit or receive gambling information in violation of federal, state or local law. [See Chapter 5.]	These three statutes were enacted in 1961 for use against large gambling syndicates that employed interstate facilities, such as bookmaking operations doing an interstate lay-off business. Senate bill 1495, introduced in December 1995, would amend 18 U.S.C. 1084 to prohibit (unless permitted by state law) wagers transmitted by electronic as well as wire communication and wagering by the individual bettor as well as someone engaged in the wagering business. Violators would be subject to forfeiture of any real or personal property involved in the offense, as well as fines and/or imprisonment. [S. 1495, Title XV, Sec. 1501.] The proposed amendment is intended to address gambling on the Internet [Cong. Rec., Dec. 21, 1995, pp. S19113, 19114, 19117].
	18 U.S.C. 1952	Prohibits travel in interstate or foreign commerce, or the use of the mail or any facility in interstate or foreign commerce, to promote a gambling enterprise that is in violation of state or federal law.	
	18 U.S.C. 1953	Generally, prescribes penalties for whoever, except a common carrier in the usual course of business, knowingly carries or sends in interstate or foreign commerce any record, paraphernalia, ticket, certificate, etc., intended for use in bookmaking, sports wagering pools, or "numbers" and other such games. Does not apply to certain legalized wagering activities, such as a state-authorized lottery.	
	18 U.S.C. 1511	Prohibits conspiracy to obstruct law enforcement in order to facilitate an illegal gambling business if one of the co-conspirators is an elected or appointed official of a political subdivision.	
	18 U.S.C. 1955	Provides penalties for conducting a gambling business that is a violation of a state or local law and involves 5 or more persons.	
	18 U.S.C. 1961 et. seq.	Includes violations of 18 U.S.C. 1084, 1511, 1952, 1953 and 1955 (see above) as racketeering activity subject to criminal sanctions, including criminal forfeiture. Civil remedies are also available under 18 U.S.C. 1964.	
	18 U.S.C. 2516	Authorization for interception of wire or oral communications with respect to certain offenses, including offenses under sections 1084, 1952, 1955 and 1963 above.	
Enacted as part of the Organized Crime Control Act of 1970, the statutes significantly expanded federal jurisdiction over gambling via the Commerce Clause, and following their enactment were employed in federal efforts against illegal gambling by racketeer-influenced and corrupt organizations (RICO).			
Enacted as part of the Omnibus Crime Control and Safe Streets Act of 1968, the statute strengthened federal surveillance powers in investigating illegal gambling activities.			

Sources: Gambling in America, Chps. 2, 5 & App. I (1976); The Annuals of the American Academy of Political and Social Science (Jan. 1985); U.S. Code (1994); U.S. Code Annotated (1994,1995); and as noted.



Exhibit 1.4: Federal Gambling Statutes, continued...			
	Statute	Key Provisions	Notes
Lotteries	18 U.S.C. 1301-1304, 1306 & 1307	In general, sections 1301-1304 and 1306 prescribe penalties for the importation and transportation of lottery tickets into the U.S.; the use of the mails or of Postal Service employees as agents to disseminate lottery-related materials; the broadcasting of lottery-related information by means of a licensed radio or television station; and the willful violation of statutes prohibiting certain financial institutions from participating in lottery-related activities (see below). Section 1307 provides specific exemptions from the prohibitions of sections 1301-1306, including advertisements for state lotteries.	<p>Lotteries have a rich and varied history in America. They were commonly employed as a revenue-raising device in Colonial times, either in the form of private drawings run for personal profit or legally sanctioned drawings to support public projects, and many of the Founding Fathers were frequent lottery patrons. Lottery revenues helped to defray the costs of the French and Indian Wars, to finance the American Revolution, and to support numerous colleges, including Harvard, Yale and Princeton, as well as hundreds of local primary and secondary schools. Total lottery sales in 1809 alone exceeded \$66 million, five times the annual expenditures of the federal government. By the mid-1800's, countless lotteries were held by states and municipalities to finance bridges, roads, hospitals, libraries and other public works, and among the lottery managers of the day were the future founders of major U.S. banks and brokerage houses. This period marked the pinnacle of lotteries in the 19th century, however. By the end of 1893, in the wake of numerous scandals involving fraudulent selection of winners, lotteries were banned in all states.</p> <p>Federal anti-lottery laws stemmed from the experience of the 19th century. Beginning as early as the 1860's and continuing well into the 20th century, the federal government sought to protect the public by prohibiting the mailing, broadcasting and interstate transportation of lottery-related materials. In 1964, however, soon after New Hampshire had become the first state in modern times to resurrect the lottery, Congress acted to exempt state-conducted sweepstakes from federal wagering excise and occupational taxes. A decade later, by which time 11 more states had joined New Hampshire in approving lotteries, Congress passed Public Law 93-583 (18 U.S.C. 1307), largely exempting state-authorized lotteries from the proscriptions of the federal lottery laws. Since then 25 additional states and the District of Columbia have joined the list of state-run lotteries. In 1994, 18 U.S.C. 1301 was amended to apply penalties to whoever engages in the business of procuring for a person in one state a ticket for a lottery operated in another state, unless both states agree to permit that business. [Pub. L. 103-322, Sep. 13, 1994, 108 Stat. 2126.]</p>
	12 U.S.C. 25a, 339, 1829a & 1463	Prohibits national banks, state banks which are members of the Federal Reserve System, nonmember state banks insured by the Federal Deposit Insurance Corporation, and federal savings associations from participating in lottery-related activities, excepting the performance of lawful banking services (e.g., accepting deposits of receipts in conjunction with a legal state lottery).	
	19 U.S.C. 1305	Generally prohibits all persons from importing any lottery ticket, or any printed paper that may be used as a lottery ticket, or any advertisement of any lottery, except for such materials printed in Canada for use in connection with a lottery conducted in the U.S.	
	39 U.S.C. 3005	Authorizes the Postal Service, upon evidence that a person is engaged in conducting a lottery, to return such mail to the sender, forbid related payment of any postal order or postal note, and require the person to cease and desist from engaging in a lottery. Does not apply to mailing of certain materials concerning a lottery exempt pursuant to 18 U.S.C. 1307 (see above).	
	15 U.S.C. 5701 & 47 U.S.C. 228	In general, provides statutory basis for federal regulation of "pay-per-call" service providers and common carriers facilitating such service, including disclosure to consumers of odds of winning for lotteries, games, and sweepstakes. Also, specifically provides that 47 U.S.C. 228 (regarding regulation of carriers) does not preclude a state from enforcing its statutes and regulations with regard to lotteries, wagering, betting and other gambling activities.	
	20 U.S.C. 107a	Permits licenses to be issued to blind persons for the operation of vending facilities on federal and other property in a state, including the vending or exchange of chances for any lottery authorized by state law and conducted by a state agency.	
Sports Bribery & Wagering Schemes	18 U.S.C. 224	Prescribes penalties for a person who carries into effect, attempts to carry into effect, or conspires with any other person to carry into effect, any scheme in commerce (i.e., the use in foreign or interstate commerce of any facility for transportation or communication), to influence any sporting contest by bribery.	Enacted by Pub. L. 88-316 (Jun. 6, 1964) to prevent gamblers from corrupting college and professional sports. The statute was predicated on the belief that sports betting had become a favorite outlet of organized crime and that the profits derived from bribery of athletic contests supported other illegal activities.
	28 U.S.C. 3702 & 3704	Makes it unlawful for a governmental entity or a person to sponsor, operate, advertise, promote, etc. a wagering scheme based on one or more competitive games in which amateur or professional athletes participate. Does not apply to parimutuel animal racing or jai-alai games, or to certain wagering schemes authorized by a state or other governmental entity prior to the enacting legislation.	Enacted by Pub. L. 102-559 (Oct. 28, 1992) to stop the spread of sports gambling and protect the reputation of professional and amateur sporting events. Although opponents of the act had argued that it usurped states' prerogative to determine legal gambling within their borders, Congress was concerned about the moral message imparted to the nation's youth when sporting events intended as wholesome entertainment become the object of government-sanctioned gambling. [1992 U.S. Code Cong. and Admin. News, p. 3553 ff.]
Sources: Gambling in America, Chps. 2, 5 & App. I (1976); The Annuals of the American Academy of Political and Social Science (Jan. 1985); U.S. Code (1994); U.S. Code Annotated (1994,1995); and as noted.			



Exhibit 1.4: Federal Gambling Statutes, continued...			
	Statute	Key Provisions	Notes
Interstate Horseracing	15 U.S.C. 3001 et. seq.	In general, permits interstate off-track betting, defined as a legal wager placed or accepted in one State with respect to the outcome of a horse race taking place in another State, only where prior consent of the interested parties (e.g., host State's racing commission, off-track State's racing commission) has been obtained. Also makes a person who accepts an interstate off-track wager except as provided by the law liable for civil damages.	Enacted by Pub. L. 95-515, the Interstate Horseracing Act of 1978 (Oct. 25, 1978), in order to further the horseracing and legal off-track betting industries in the United States and to ensure that states will continue to cooperate with one another in the acceptance of legal interstate wagers in the area of interstate off-track wagering on horseraces.
Gambling Activity on Indian Lands	25 U.S.C. 2701 et. seq.	Provides the statutory basis for (1) the operation of gaming (e.g., gambling) by Indian tribes as a means of promoting tribal economic development and self-sufficiency, and (2) the regulation of gaming by an Indian tribe adequate to shield it from organized crime and other corrupting influences, ensure that the Indian tribe is the primary beneficiary of the gaming operation, and assure that gaming is conducted fairly and honestly by both the operator and players.	Enacted by the Indian Gaming Regulatory Act, Pub. L. 100-497 (Oct. 17, 1988), to sort out the respective roles of the tribal, state and federal governments in the conduct of gaming activities on Indian lands, which numerous Native American tribes had become engaged in or had licensed for operation as a means of generating tribal government revenue. The act states that Indian tribes have the exclusive right to regulate gaming activity that is not specifically prohibited by federal law and is conducted within a state which does not prohibit such gaming activity. Senate bill 487, introduced in March 1995, would amend the act to make most Indian gaming subject to minimum federal standards on licensing and operations, to be developed based on the recommendations of an advisory committee comprised of federal, state and tribal representatives. A newly created body -- the Federal Indian Gaming Regulatory Commission -- would be charged with establishing and monitoring compliance with the federal standards. [Cong. Rec., Mar. 2, 1995, p. S3401 ff.; Senate Rpt. No. 104-241 (Mar. 14, 1996).]
	18 U.S.C. 1166	For purposes of federal law, makes all state laws pertaining to the licensing, regulation or prohibition of gambling, including criminal sanctions, applicable in Indian country, excepting those gambling activities regulated by the Indian Gaming Regulatory Act or conducted under a Tribal-State compact pursuant to that act.	
Other Statutes	7 U.S.C. 12a	Permits the refusal to register, to register conditionally, or to suspend, revoke or place restrictions on, the commodity-dealer registration of any person legally enjoined from engaging in or continuing any activity where such activity involves gambling, or who has been convicted within the preceding 10 years of any felony that involves gambling.	These statutes expressly cite gambling in the context of a character issue, potentially denying or restricting certain privileges to persons with a history of gambling activity or record of gambling violations.
	8 U.S.C. 1101	Excludes from the definition of "good moral character" necessary for naturalization, relief from deportation, and related actions, a person whose income is derived principally from illegal gambling activities or has been convicted of two or more gambling offenses during the period for which good moral character is required to be established under federal immigration law.	
	29 U.S.C. 1813	Permits refusal to issue or renew, or to suspend or revoke, a certificate of registration for farm labor contracting activity if the applicant or holder has been convicted within the preceding 5 years of any crime under state or federal law relating to gambling in connection with or incident to any farm labor contracting activities.	
<p><i>Note:</i> Exhibit does not include (1) provisions of Title 26 (Internal Revenue Code) regarding (a) the application, withholding and payment of federal income, excise and occupational taxes with respect to wagering activities, and (b) reporting of cash transactions of over \$10,000; (2) casino recordkeeping and reporting of monetary transactions under Treasury regulations promulgated pursuant to the Bank Secrecy Act; and (3) statutes specifically excluding "compulsive gambling" as a "disability" qualifying for certain programs, such as vocational rehabilitation services.</p>			
Sources: Gambling in America, Chps. 2, 5 & App. I (1976); The Annuals of the American Academy of Political and Social Science (Jan. 1985); U.S. Code (1994); U.S. Code Annotated (1994,1995); and as noted.			



for which available data are meager regarding passenger acceptance and usage.²⁹ In the case of video gambling, such data are nonexistent since no airline offered gambling as of the time of the Department's analysis. We therefore contracted with Yankelovich Partners Inc., a marketing research firm experienced in surveying consumer attitudes on gambling and travel preferences, to ascertain air travelers' reactions to the concept of electronic entertainment systems in general and video gambling in particular.

The Yankelovich survey included a statistically representative sample of 394 persons residing in the United States who had taken one or more trans-Atlantic or trans-Pacific air trips within the past year. The sample was divided into two groups of similar travel experience and demographic and economic characteristics. As described in Exhibit 1.5 on the next page, one group, numbering 198 respondents, was presented with a concept of an electronic entertainment system with gambling; the other group, consisting of 196 respondents, was presented with the identical concept but without gambling. Members of each group were then asked a series of questions to elicit reactions to and perceptions of the applicable concept. By comparing responses between the groups, it was possible to distinguish reactions to video gambling from those concerning entertainment systems in general.³⁰ The entertainment concept with gambling was intentionally worded to include those attributes -- limits on losses and winnings, along with settlement via credit card -- which airlines and gaming vendors have said they intend to feature.

Survey responses are summarized in the charts starting on page 21. Briefly stated, although most international air travelers gamble irregularly and never have played video gambling, they react favorably to the concept of gambling games with limits on losses and winnings and payment by credit card. Most also perceive on-board gambling as convenient, fun and enjoyable. This should warm the hearts of airlines and gaming vendors since it mirrors their expressed intent. On the other hand, the entertainment system without gambling is generally viewed more favorably than the system with the gambling feature, though in nearly all respects observed differences in responses between the two groups are not statistically significant.³¹

²⁹More generally, it is not clear the extent to which consumers *want*, or are willing to pay for, the variety of services potentially afforded by interactive technology, whether in the home or on an airplane. Interactive television, for instance, despite high initial expectations and several trials, has yet to prove commercially viable. Still, many observers expect interactive services to take hold as more households gain access to the Internet, the current hotbed of interactive technology development and services. ("Tuned Out and Dropping Off," The Economist, Nov. 4, 1995; "Scrambled Signal: Innovative Start-Up Flops, and a Lawsuit Against TCI Follows," The Wall Street Journal, Feb. 26, 1996; "It's A TV. It's a PC. It's a Stereo," The Washington Post, Mar. 22, 1996; "Up and Running," The Wall Street Journal, Section R, Mar. 28, 1996.)

³⁰A detailed description of the Yankelovich methodology is provided in Chapter 2.

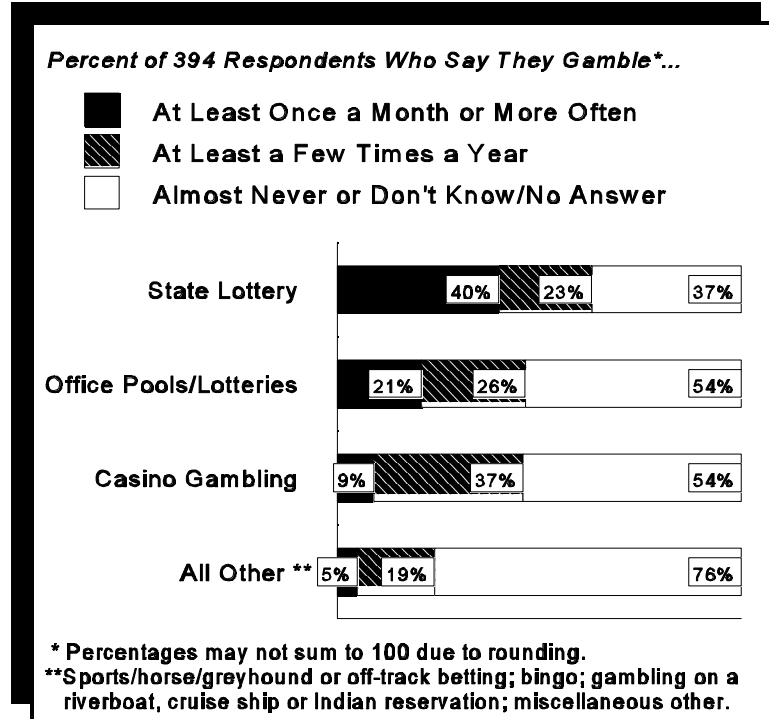
³¹In addition to reactions concerning the concept of entertainment systems, the Yankelovich survey produced certain estimates on the likelihood of air travelers to switch to airlines offering such systems and to play gambling games. Because those estimates speak to the issue of competitive impact, they are separately reported in Chapter 4.



Exhibit 1.5: Electronic Entertainment Concepts Presented to Survey Respondents	
International Air Travelers - Past Year (394 Total Respondents)	
<i>“Now I am going to read you a Concept describing a new service that may become available on international flights in the future.”</i>	
Exposed to Concept <u>WITH</u> Gambling (198 Respondents)	Exposed to Concept <u>WITHOUT</u> Gambling (196 Respondents)
<p>“Electronic in-flight entertainment systems are systems that combine computer, video and audio technologies to provide a variety of entertainment options including movies, video arcade games, duty-free and catalogue shopping, phone and faxing services, cable TV channels, educational and reference materials. Also included is video gambling such as poker, slot machines, keno and bingo with limits on the amount of money a person could win or lose. Winnings for each passenger would be limited to no more than \$3,500 per flight and losses for each passenger would be limited to no more than \$350 per flight. All of these services would be available to international airline passengers through the use of a credit card. Each passenger seat would be equipped with an individual TV-type screen, handheld controls and earphones that would make these services available on an individual and secure basis without intruding on other passengers.”</p>	<p>“Electronic in-flight entertainment systems are systems that combine computer, video and audio technologies to provide a variety of entertainment options including movies, video arcade games, duty-free and catalogue shopping, phone and faxing services, cable TV channels, educational and reference materials. All of these services would be available to international airline passengers through the use of a credit card. Each passenger seat would be equipped with an individual TV-type screen, handheld controls and earphones that would make these services available on an individual and secure basis without intruding on other passengers.”</p>



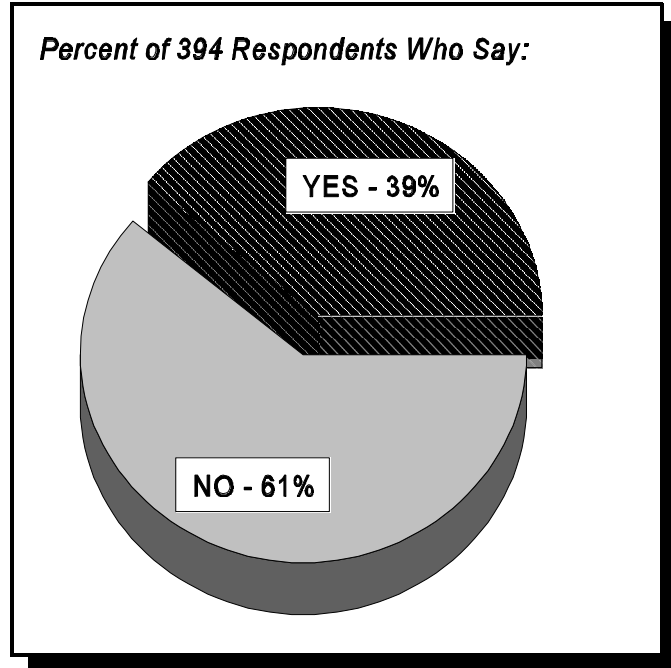
Exhibit 1.6. Current Gambling Activities



Excepting state lotteries, which are played fairly often, less than a majority of international fliers gamble on a regular basis.

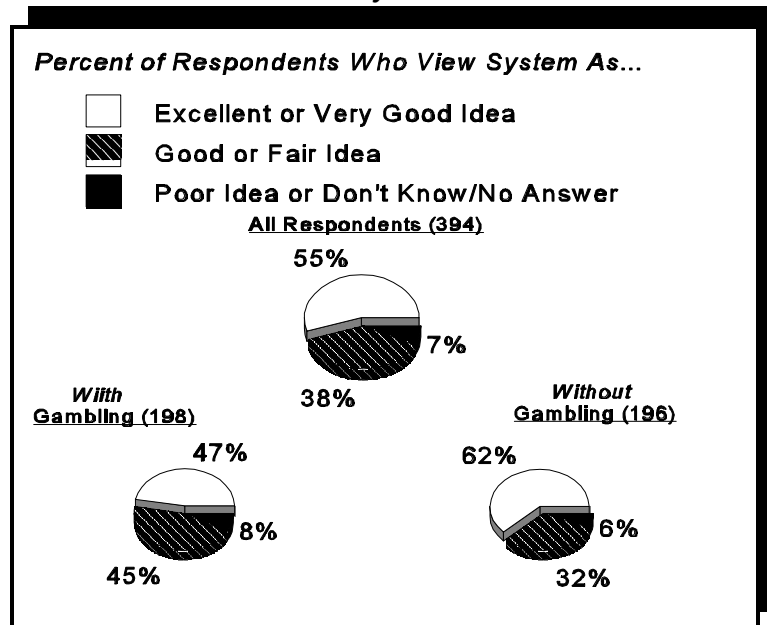
Most international air travelers lack experience with video gambling. Fewer than 4-in-10 respondents ever played a video gambling device in any venue -- at home or elsewhere.

Exhibit 1.7: Ever Played Video Gambling Before?



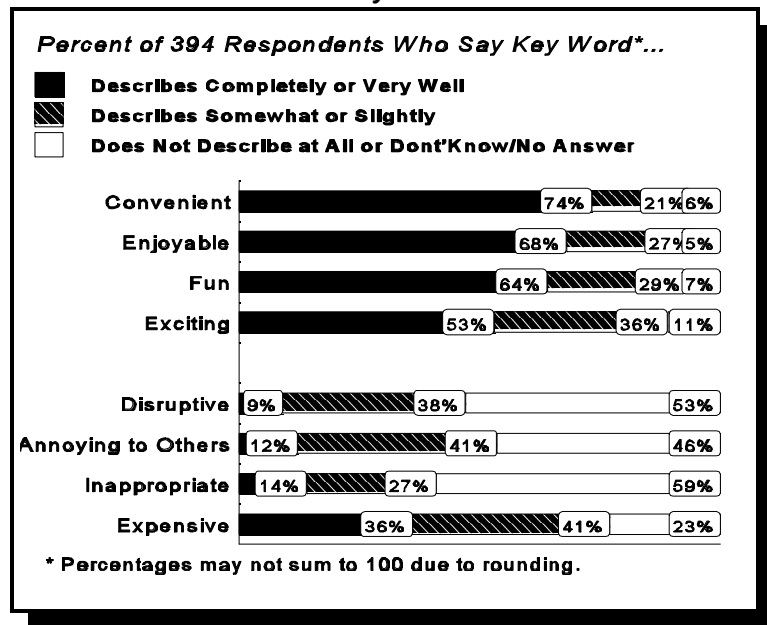
Lack of experience with gambling, and perhaps a dislike of gambling itself, are suggested in the responses to the concept of on-board electronic entertainment systems. Those exposed to the concept without gambling reacted more favorably, with 62 percent considering the system an “excellent” or “very good” idea. By contrast, less than half (47%) of those exposed to the entertainment concept with gambling responded in a like manner.

Exhibit 1.8: Reaction to Concept of On-Board Electronic Entertainment System



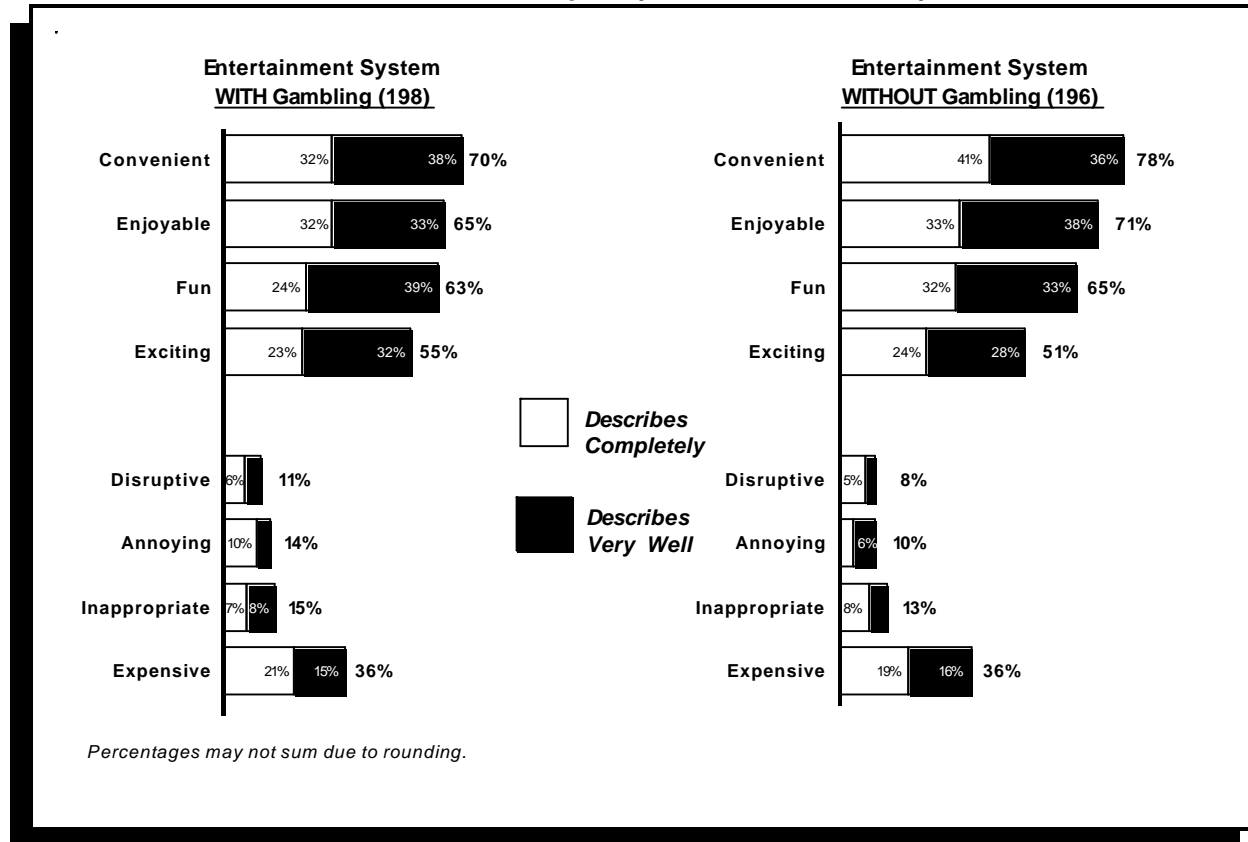
Electronic entertainment systems are most likely to be described as “convenient”, “enjoyable”, “fun” and “exciting.” Most travelers do not believe the system would, in general, be disruptive or annoying to other passengers, though a sizable number (36%) appear concerned about the expense of using the systems. On these measures, the reactions of respondents exposed to the concept with gambling were much the same as the reactions of those exposed to the concept without it.

Exhibit 1.9: Words Describing On-Board Electronic Entertainment System



The system without gambling, however, achieved higher upper-rank scores on “convenient,” “enjoyable” and “fun”, as shown below. The differences between response groups are consistent though not statistically significant. Also, while the system with gambling was seen as potentially more annoying to other passengers, the potential for annoyance or disruption does not appear to be a major concern of air travelers.

Exhibit 1.10: Breakdown of “Describes Completely” and “Describes Very Well”



The exhibit on the following page lists specific likes and dislikes expressed by survey respondents. For the system with gambling, the most commonly mentioned “like” was the elimination of boredom during flights -- specifically, the potential to “keep you occupied/give you something to do.” Over half of these respondents also liked the types and variety of entertainment offered. Fourteen percent specifically mentioning gambling as a “like”; on the other hand, a larger number (33%) cited gambling as a “dislike.” Overall, 37 percent had no dislikes of the system.

For the system without gambling, the types and variety of entertainment offered was the most frequently cited “like”, with avoidance of boredom a close second. Overall, a larger proportion of respondents expressed no dislikes of the system without gambling (52% vs. 37%).

Nearly identical though relatively modest percentages of both groups expressed specific dislikes about the price/economy of the systems. Those exposed to the concept with gambling cited it as “too expensive/costly” and pointed out that they dislike to lose money. Those exposed to the concept without gambling also cited expense/cost and disliked having to pay extra to use the system.



Exhibit 1.11: Likes and Dislikes About Concept of Electronic Entertainment System		
Phrases Used to Express Likes/Dislikes	System <u>WITH</u> Gambling (198)	System <u>WITHOUT</u> Gambling (196)
	Percent of Respondents (a)	
<u>LIKES about the System:</u>		
Avoids Boredom (net)	53	44
It keeps you occupied/gives you something to do	28	20
Helps you pass the time/makes time go by	25	20
It's good for a long trip	15	10
Keeps you from being bored	8	10
It's individualized	10	16
It's good for kids	6	5
It won't disturb other passengers	2	6
Relieves tension (related to flying)	4	4
It's educational/informative	4	3
You can get work done	3	2
Types of Entertainment (net)	51	47
Like the variety of options/gives you a choice	22	26
<i>Like gambling/offers gambling</i>	14	**
Like movies/offers movies	12	14
Like video games/offers video games	9	6
Like cable TV/offers cable TV	9	6
Like the games	6	3
Like the shopping service/catalog shopping	2	3
Like the music	1	3
Enjoyment (net)	18	21
It's entertaining/offers entertainment	15	19
It's fun	3	2
<u>DISLIKES about the System:</u>		
Negative Types of Entertainment (net)	33	5
<i>Dislike Gambling</i>	33	**
Dislike shopping service/catalog shopping	2	2
Negative Price/Economy (net)	26	27
Too expensive/costly	9	10
Dislike paying extra for it; should be included in ticket price	3	12
<i>Don't like to lose money</i>	9	**
Wouldn't want to put it on my credit card	4	5
Would raise ticket prices	2	2
Disadvantages (net)	9	12
It's intrusive/disruptive/prefer peace and quiet	6	5
It would take up too much room	2	4
Don't like it/wouldn't use it	6	6
<i>Nothing disliked</i>	37	52
Note a: Multiple responses permitted.		



A large majority of all respondents (78%) indicated that if gambling is offered as part of an entertainment system, losses and winnings should be limited.

Exhibit 1.12: Should Limits Be Placed on Gambling Losses & Winnings?

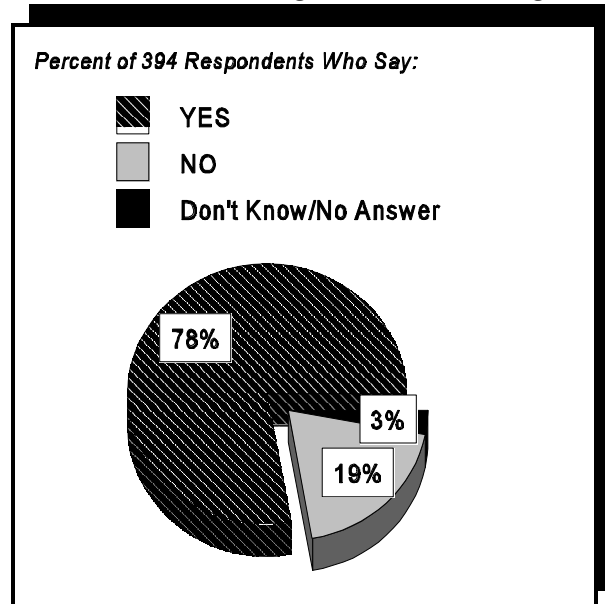
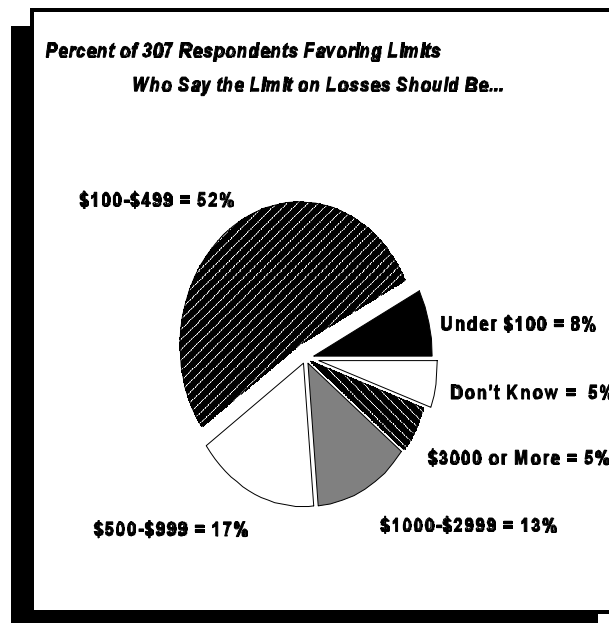


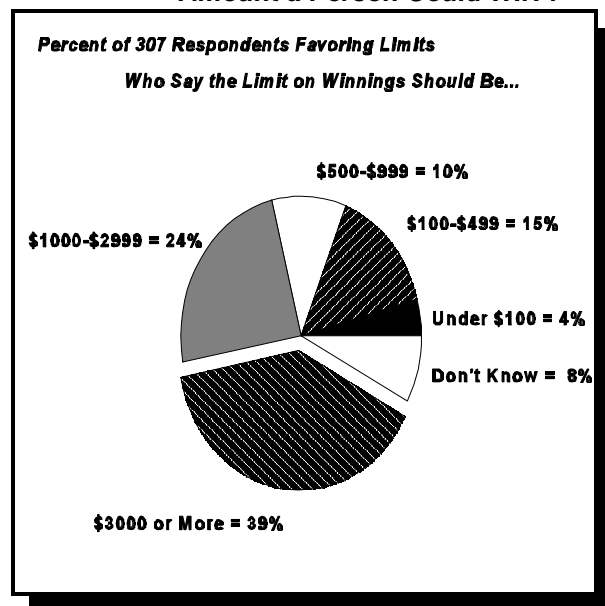
Exhibit 1.13: How Much Should the Limit Be on Amount a Person Could LOSE ?



Not surprisingly, many respondents preferred much higher limits on *winnings*; the median was \$1500.

Among those preferring limits, a simple majority (52%) preferred *losses* in the range of \$100 - \$499. The median amount was \$350.

Exhibit 1.14: How Much Should the Limit Be on Amount a Person Could WIN ?



CHAPTER 2: STUDY SCOPE AND METHODOLOGY

In accordance with the Congress' directive, this study assesses:

- ▶ The effects of electronic entertainment systems and video gambling on air travel safety. Safety is considered from both a *technical* standpoint (*e.g.*, structural integrity of entertainment systems) and a *behavioral* standpoint (*e.g.*, passenger-crew interaction related to gambling activity).
- ▶ The impact of the current U.S. gambling ban on the competitive position of U.S. airlines relative to foreign air carriers, and the potential competitive impact of changes in the law which would permit gambling in foreign air transportation. Two such changes are considered: (1) permitting gambling only on flights to or from the United States that are operated by foreign, but not U.S., airlines; and (2) permitting gambling on the international flights of U.S. airlines, as well as foreign-carrier flights to or from the United States.
- ▶ The implications of the current gambling ban for U.S. bilateral aviation relations, and legal issues presented by lifting or modifying the ban to allow gambling in foreign air transportation.

Written comments submitted by the public during the period May 3-31, 1995 (Docket No. 50315), were instrumental to the design of this study. A summary of those comments is provided below, followed by a description of the study procedures and work performed. Field work was done between July and November 1995. The Department's study team included members from the Office of the Secretary and the Federal Aviation Administration. Yankelovich Partners Inc., a nationally recognized consumer research firm, provided contractor support.

PUBLIC COMMENTS

The Department invited the public to comment on whether or not the United States should permit gambling in foreign air transportation. Comments were specifically requested regarding (1) the safety effects of allowing gambling devices, including payment methods, to be installed and/or operated aboard aircraft, including the effects on navigational and other electronic equipment and on airline passengers and crew; (2) the competitive effects of retaining, lifting or modifying the current restrictions on U.S. carriers with respect to foreign air transportation, code-sharing arrangements,¹

¹Agreement whereby the designator code of one airline is marketed through computer reservation systems on the flight of another airline. Often, code sharing is the foundation of a broader arrangement under which carriers cooperate to provide single check-in service, coordinate flight schedules, share maintenance services, co-locate their airport terminals, *etc.*



and flights involving fifth-freedom markets;² and (3) whether gambling should be allowed in foreign air transportation by U.S. and/or foreign air carriers.

Comments were received from 25 parties (*see Exhibit 2.1*), including labor groups, concerned citizens, U.S. and foreign air carriers, and organizations that either produce electronic entertainment services or represent some form of gambling interest. Among all respondents, eight opposed video gambling, 15 indicated support, and two took no position but expressed concerns regarding pathological (compulsive) gambling behavior or how the integrity of gambling games would be ensured.

Most of the respondents opposed to video gambling based their position on concerns for air travel safety. The Association of Flight Attendants, for instance, cited the potential for increased safety risks arising from the location and operation of video entertainment systems, their electrical interference with navigational and other aircraft control systems, and the disruptive effects of gambling on passenger behavior and passenger-crew interaction. Other respondents objected to having non-gambling passengers (especially children) involuntarily exposed to gambling activity, or asserted that airlines would raise ticket prices to defray the cost of installing and maintaining video games.

Supporters, on the other hand, generally discounted any safety risks and inconvenience to passengers, and contended that U.S. airlines would be left at a substantial competitive disadvantage if only foreign carriers provided gambling games. This latter point was the principal factor cited by Trans World Airlines and United Airlines, both of which predicated their support for gambling largely on competitive concerns. In this regard, several parties noted that, for competitive reasons, U.S. cruise ships, subject to certain conditions, are exempt from federal prohibitions on the transport and use of gambling devices when operating in international waters,³ and suggested that a similar exemption could be provided for U.S. carriers when operating outside U.S. airspace. Finally, foreign carriers in particular raised the issue of national sovereignty, arguing that the United States lacks the authority under international law to proscribe passenger services such as video gambling that occur outside U.S. territory on the carrier of another country.

SAFETY EFFECTS

To assess the technical safety effects of allowing electronic gambling devices on board aircraft, we researched and analyzed current rules, guidance, handbooks, advisory circulars and other requirements related to FAA's certification process. To obtain information regarding current entertainment

²Fifth freedom is the right accorded to a carrier of one nation to fly into the territory of a second nation and take on (or discharge) traffic destined for (or coming from) third nations. Thus, for example, for a U.S. airline with a flight originating in New York, boarding passengers in London, and continuing on to Berlin, London-Berlin is a fifth-freedom market.

³15 U.S.C. 1175(b)(1)(A).



Exhibit 2.1: Summary of Public Comments on Whether to Allow Video Gambling in Foreign Air Transportation

Position & Respondent	Comments Address...				Principal Arguments for Position...
	Safety Effects	Competitive Effects	National Sovereignty	Other Issues	
Opposes Video Gambling...					
1 Association of Flight Attendants	✓				Structural integrity of interactive video systems; electrical interference with navigational and other aircraft systems; exposure to electro-magnetic fields; adverse reaction of passengers to gambling and diversion of flight and/or ground maintenance crews from primary safety responsibilities.
2 International Association of Machinists and Aerospace Workers	✓				
3 Nevada Institute of Environment, Health & Safety	✓				
4 Jack Wojciech	✓				
5 Charles B. Jones, Jr.	✓				Disruptive/offensive to non-gambling passengers; exposure of children to gambling; gambling's adverse personal effects on individual participants; cost of installing/operating games would increase ticket prices.
6 Shelley Hickman				✓	
7 Larry Clopp				✓	
8 Debbie Moore				✓	
Supports Video Gambling...					
9 Trans World Airlines, Inc.	✓	✓	✓		Adverse competitive impact if only foreign carriers are able to offer gambling.
10 United Airlines, Inc.	✓	✓	✓		
11 British Airways PLC	✓		✓		No significant safety risk; efficacy and practicality of prohibiting gambling on non-U.S. aircraft operating outside U.S. jurisdiction.
12 Virgin Atlantic Airways, Ltd.	✓		✓		
13 Qantas Airways Limited	✓		✓		
14 International Airline Coalition on the Rule of Law (11 foreign carriers)			✓		Proscribing gambling on non-U.S. aircraft operating outside U.S. jurisdiction contravenes established principles of international law on provision of airline passenger comfort, convenience and entertainment.
15 Royal Netherlands Embassy			✓		
16 InterGame	✓	✓	✓		Design of video entertainment systems and gambling games mitigates risks to safety, including need for flight crew involvement, and offers convenient, affordable, low-stakes form of entertainment desired by air travelers; substantial revenue loss <i>vis-a-vis</i> foreign carriers if gambling is proscribed for U.S. carriers; Congress has exempted U.S. cruise ships plying international waters from federal gambling proscriptions and could do likewise for U.S. carriers in foreign air transportation.
17 In-Flight Phone Corporation	✓	✓			
18 Interactive Entertainment Limited	✓	✓			
19 International Game Technology	✓	✓			
20 Interactive Flight Technologies, Inc.	✓	✓			
21 The Sports Network	✓	✓			
22 Simon Goldfarb and Associates				✓	Promotes bingo game as "simplest, easiest enjoyment for any plane trip."
23 American Greyhound Track Operators' Association				✓	Advocates feasibility of offering simulcasts of greyhound racing to air travelers.
Takes No Position but Cautions...					
24 The National Council on Problem Gambling, Inc.				✓	Increased availability of gambling games would increase compulsive gambling.
25 Nevada Resort Association				✓	How would integrity of gambling games be validated, monitored, regulated?



system technology and approaches, we contacted various equipment manufacturers of entertainment systems, airframe manufacturers, and certification engineers participating in the approval of entertainment systems on commercial aircraft.

With respect to the behavioral safety effects, we analyzed comments contained in the public docket, performed a literature search focusing on gambling, gambling violence, pathological gambling, and gambling behavior disorders and related problems. We also contacted experts and industry observers with experience dealing with disruptive behavior linked with gambling.

COMPETITIVE IMPACT

Although the Department encouraged respondents to provide factual data in their submissions to the docket, little hard information was received on the competitive and financial aspects of video gambling. To a large extent this was anticipated, since electronic entertainment systems are relatively new and no airline was offering video gambling as of the time of our field work. Consequently, we contracted with Yankelovich Partners Inc. to conduct a survey of air travelers and ascertain their reactions to the concept of electronic entertainment systems, both with and without gambling games. The results of the Yankelovich survey provided the basis for our analysis of competitive impact.

As reported earlier (*see Chapter 1*), the Yankelovich survey included 394 persons residing in the United States who had taken one or more trans-Atlantic or trans-Pacific air trips during the 12 months preceding the survey, which was conducted July 6-15, 1995. Participants were divided into two groups: one was presented with a concept of an entertainment system with gambling; the other was presented with the identical concept but without gambling. Members of each group were then asked a series of questions about the applicable concept.⁴ Each group included equal proportions of trans-Atlantic and trans-Pacific fliers and were identical in other relevant respects. The survey sample is, therefore, projectable to U.S. residents who have flown internationally in the past year. The sampling error is plus or minus 5 percentage points at the 95-percent statistical confidence level. While Yankelovich has world-wide survey capability, due to cost considerations the Department limited its survey to travel involving trans-Atlantic and trans-Pacific routes, where we expect video gambling initially will be offered.

The Department's survey was designed around two unique Yankelovich products -- the *Yankelovich MONITOR* and the *Yankelovich CnXn* (pronounced "connection"). The Monitor is an annual survey of consumer social values based on in-home, 2-hour personal interviews of 4,000 adults (age 16 and over). Begun in 1971, the Monitor tracks nearly 50 social values and is projectable nationally. The Yankelovich CnXn is a marketing research service providing customized access to the Monitor data base. Under this product, 16,000 individuals who participated in the Monitor survey have agreed to be available to participate in re-contacts regarding other topics. This allows specific groups -- in our case, U.S. international air travelers -- to be queried on particular subjects in the context of the demographic and personal information previously collected via the Monitor.

⁴Copies of the survey questionnaires and Yankelovich's survey report are on file in the public docket at Department headquarters.



By splitting the sample and exposing one group to the entertainment system with gambling, and the other to the identical concept without gambling, Yankelovich was able to compare responses between groups and estimate the likelihood that air travelers would switch to an airline offering entertainment systems, as well as their likelihood to use the system and to gamble during a flight. In calculating its estimates, Yankelovich adjusted raw response data to account for a phenomenon, common to market research, known as “consumer overstatement,” *i.e.*, the systematic tendency on the part of survey respondents to overstate their likely behavior. In the real world, the availability of an entertainment system, or the opportunity to gamble, would be but one of several factors (fares, schedules, service amenities, *etc.*) consumers consider when making air travel decisions. Yankelovich’s adjustments for systematic overstatement are based on certain proprietary weighting factors and its decades of experience with test market forecasting. It should be noted that, although adjusted for consumer overstatement, Yankelovich’s estimates regarding likelihood to switch or to gamble assume that other relevant competitive factors remain equal, *e.g.*, that the entertainment features offered by competing carriers are comparably priced and promoted.

Along with the Yankelovich estimates, the Department based its analysis of competitive impact on published airline schedules, operating data reported by the airlines, and a review of the literature on entertainment systems and video gambling. We also spoke with representatives of the airline industry. The detailed procedures used to analyze competitive impact are described in Chapter 4. Because of limited data, several assumptions had to be made in conducting the analysis. The most significant are the assumptions that all of the foreign-carrier passenger flights included in the analysis offer entertainment systems with gambling and, by inference, that gambling is permitted by the nations (save for the United States) where those flights occur. It is also assumed that the Yankelovich estimates of the likelihood to switch airlines or to gamble -- which are based on the survey of U.S. residents -- also apply to non-U.S. residents when considering U.S. airline flights.

Because we limited the Yankelovich survey to air travel involving trans-Atlantic and trans-Pacific markets, our estimates of gambling-related revenues and costs pertain only to those markets, unless expressly noted otherwise (*see Chapter 4, n. 7*). Further, all estimates should be viewed as short-range projections in light of the rapidly changing capabilities of electronic entertainment systems and the variety of customer services they potentially afford.

BILATERAL AND LEGAL ISSUES

Our analysis of bilateral and legal issues associated with gambling aboard aircraft included a review of U.S. gambling statutes, relevant domestic and international law, and the provisions of bilateral aviation agreements with other nations. We also spoke with officials of the Justice Department regarding regulation of gambling activity.



CHAPTER 3: SAFETY EFFECTS OF ELECTRONIC GAMBLING DEVICES ON BOARD COMMERCIAL AIRCRAFT

For over three decades, commercial airlines have offered their customers entertainment in the form of recorded music and movies. Although these early entertainment systems were simplistic, they raised concerns about safety risks stemming from electromagnetic interference with other equipment on the airplane, electrical power loading on the aircraft's power generation and distribution system, the potential for fire hazard, and potential interference with emergency procedures and passenger evacuation. Today's electronic entertainment systems are much more sophisticated than those earlier systems, yet the nature of their safety risk is much the same.

The entertainment systems in operation today, whether they feature recorded music on Douglas DC-8's, interactive video on the latest Boeing 777, or video gambling on a McDonnell Douglas MD-11, have been certificated as safe by the Federal Aviation Administration (FAA). FAA addresses two types of safety risk: *technical* and *behavioral*. Technical risk pertains to the structural integrity of an entertainment system and its compatibility with other equipment and operations on board the aircraft. FAA assesses technical risk through a well-established safety certification process. Behavioral risk relates to passenger-crew interaction and the potential for disruptive actions that interfere with the flight crew's safety-related duties. Behavioral risk is addressed by FAA's flight-crew training requirements.

The Department found no evidence that on-board electronic entertainment systems and video gambling increase technical safety risk, or that system enhancements likely to be implemented in the foreseeable future would increase that risk. We also determined that the potential for increased behavioral safety risk due to video gambling is likely to be minimized given FAA's current training requirements. At this time, however, the Department cannot wholly discount behavioral risk due to the absence of any experience with in-flight video gambling and the behavior of "problem" or "pathological" gamblers when gambling aboard aircraft.

TECHNICAL SAFETY RISK

The certification of entertainment systems, including those with a gambling feature, must comply with the requirements of Federal Aviation Regulations Part 25, *Air-worthiness Standards: Transport Category Airplanes*. The specific sections of the regulations applicable to entertainment systems, together with the advisory circulars containing guidelines for ensuring compliance, are identified in Exhibit 3.1 on the next page. To be certified as safe, an electronic entertainment system must meet the following technical requirements:



Exhibit 3.1: Federal Aviation Regulations Applicable To Electronic Entertainment Systems	
Part 25, Section...	Title
25.1301	Function and installation
25.1309	Equipment, systems, and installations
25.1351	General
25.1353	Electrical equipment and installations
25.1363	Electrical system test
25.1423	Public address tests
25.1431	Electronic equipment
25.789	Retention of items of mass in passenger and crew compartments and galleys
25.803	Emergency evacuation
25.813	Emergency exit access
Advisory Circulars	Title
AC 20-115B	RTCA, Inc., Document RTCA/DO-178A; software considerations in airborne systems and equipment certification
AC 21.16C	Radio Technical Commission for Aeronautics Document DO-160C; environmental conditions and test procedures for airborne equipment
AC 25-10	Guidance for installation of miscellaneous nonrequired electrical equipment
AC 25.1309-1A	System design and analysis

- ▶ The equipment, systems and installation must be designed to ensure that they perform their intended functions under any foreseeable operating conditions, with compliance shown by analysis and, where necessary, by appropriate ground, flight or simulator test.
- ▶ The required generating capacity and number and kinds of power sources must be determined by an electrical load analysis. The power source must function properly when independent and when connected in combination with other functions. Crew members must have accessibility to disconnect the power source from the system for individual seats and for collective functions.
- ▶ Electrical equipment, controls, and wiring must be installed so that operation of any one unit, or system of units, will not adversely affect the simultaneous operations of any other electrical unit or system.
- ▶ Likewise, radio and related equipment, controls and wiring must be installed so that operations of any one unit, or system of units, will not adversely affect the simultaneous operation of any other radio or electronic unit or systems of units.
- ▶ Testing of electrical systems must be performed on a mock-up using the same generating equipment used in the airplane. Further, for each flight condition that cannot be simulated adequately in the laboratory or by a ground test on the airplane, a flight test is required.



- ▶ Each interphone restraint system must be designed so that when it is subjected to stress or load factors, the interphones will remain in a stowed position.
- ▶ Each crew and passenger area must have emergency means to allow rapid evacuation and the exit must be unobstructed, with no interference in opening the exit by seats, berths or other protrusions.

Ensuring Compliance with Technical Safety Requirements

Several manufacturers produce entertainment systems, with a variety of features, that meet technical safety requirements for installation on commercial aircraft. Examples are given below.

<i>Exhibit 3.2: Features of Typical Electronic Entertainment Systems Installed on Commercial Aircraft</i>						
Features	Manufacturer					
	GEC Marconi	Sony Transcom	Matsushita	Hughes Avicom	Phillips Airvision	Interactive Flight Technologies (IFT)
Interactive Video	YES	YES	YES	YES	NO	YES
Gambling Software	NO	NO	NO	NO	NO	YES
Selective Disable	NO	NO	NO	NO	NO	YES
Telephone Channels	30	30	6	NO	NO	NO
Video Channels	8	12	12	8	8	1
Voice Channels	72	32-STD 96-OPT	24-STD 72-OPT	24-STD 72-OPT	NO	NO

One company shown in the exhibit -- Interactive Flight Technologies, Inc. (IFT) -- recently obtained certification for an electronic entertainment system which includes a gambling feature. The process used to certify IFT's system demonstrates how FAA ensures the technical safety of entertainment systems.

IFT's system, dubbed the In-Flight Entertainment Network, was certificated for installation on a McDonnell Douglas MD-11 presently operated by Alitalia Airlines. The on-board entertainment network is a distributed network, combining computer, video and sound technologies into an interactive system. Each aircraft seat connected to the network has an in-seat video terminal featuring



individual 9.5-inch color touch screens. Since the entertainment network uses flat-panel technology, there are no cathode ray tubes and therefore no "X-ray" emissions. The entertainment network interfaces with all aircraft safety systems. For example, all flight-crew and cabin-crew announcements override entertainment audio channels and pause any movies or other video programs which happen to be in progress. Further, should an aircraft malfunction occur, the entertainment network would automatically deactivate by removal of power from the main power distribution. The system also includes a selective disable function allowing the gambling feature to be deactivated at individual seats.

Because the installation of an electronic entertainment system is considered a major modification to an aircraft, as is the case with other electronic systems, the installation and operation of IFT's entertainment network was subject to FAA's issuance of a supplemental type certificate for the particular aircraft type. This certification process is initiated by an application to FAA and is multifaceted, requiring several interim approvals. It is a long-standing, standard process spelled out in detail in internal FAA operating manuals.

Martin Aviation, an FAA-approved representative, handled the supplemental type certification process for the IFT system. FAA established the certification criteria necessary for approval, including the requirement for a flight test. FAA and Martin Aviation reviewed all necessary certification and technical drawings, manuals, and procedures for adequacy and compliance. FAA issued necessary interim approvals, including permission to conduct a flight test; reviewed the results of the flight test; performed inspections to ensure that both the components of the entertainment system and its installation and operation conformed to the certification requirements; and issued the supplemental type certification.

Throughout this safety-certification process the primary concern was to ensure that the entertainment network performed its intended function and did not interfere with the intended functions of other aircraft systems or with emergency procedures. In particular, scrutiny was accorded to whether the entertainment network would interfere with the operational and navigational equipment installed on the aircraft; whether the electrical components of the network were compatible with the aircraft; and whether the network would generate any type of electromagnetic interference. Other factors examined were whether the entertainment network would provide any unusual drain on the aircraft power system; whether the components of the network installed in the passenger seats would interfere with emergency egress or cause injury in the event of body or head impact; and whether the components of the entertainment network would, if subject to heat or fire, emit toxic fumes.

System Enhancements on the Horizon

Installation of electronic entertainment systems is not required for the safe operation of aircraft, but are determined by competitive market conditions. Because the airlines and developers of entertainment systems are responding to customer needs, we expect that today's systems will be enhanced to include those electronic services air travelers already access in their office or home. These include a variety of capabilities -- global voice and data communication via communication satellites,



traditional desktop computer applications (word processing, graphics, spreadsheets, *etc.*), and personal services such as Internet access, shopping and banking.

Aviation safety may well benefit as these enhancements are implemented. In order to process the amount of digital information necessitated by system enhancements, developers probably will have to turn to fiber optic technology rather than rely on traditional wiring. In addition to much greater capacity, the advantages of fiber optics include lower weight and reduced potential for electromagnetic interference. Although cost considerations have limited their use on aircraft to date, fiber optic systems have been certified as safe and their applications are likely to grow in response to customer demand for enhanced entertainment features.

Future enhancements of the kind identified above will require increased data processing and storage capacity, additional antennae, greater systems integration, and additional physical components in the passenger compartment. However, they are not likely to require any pioneering technology. The electronic components needed to provide future enhancements have previously been certified and incorporated into various configurations, systems and subsystems, are covered by current airworthiness requirements, and will be certified as safe in the context of specific configurations in accordance with the technical requirements and procedures described earlier. For these reasons, future enhancements to aircraft entertainment systems are not likely to entail any increase in technical safety risk.

BEHAVIORAL RISK

The behavioral safety risk associated with video gambling arises from the possibility of passenger activities that increase the workload of the flight attendants and potentially interfere with their safety-related duties. The Association of Flight Attendants and other parties have expressed concern over behavioral issues specific to video gambling aboard aircraft, including: problem gamblers, passengers wanting to change seats because someone close by is engaged in gambling, handling money for gamblers, and access to gambling games by minors.

Dealing with Behavioral Risks

FAA regulations (Part 121.41) require training of flight attendants to deal with behavioral risks. FAA Order 8400.10, Aviation Safety Inspections Handbook, further addresses those risks, which can be grouped into three broad categories:

- ▶ *Disgruntled passengers.* These are passengers who are upset by what they consider to be inadequate service, such as not getting enough to drink, disliking the person sitting next to them, enduring late flights, malfunctioning videos, lavatories being full, inadequate meals, undesirable seating location, *etc.*
- ▶ *Disturbed passengers.* These are passengers who exhibit aberrant behavior because of problems such as neurosis, chemical abuse, fear of flying, claustrophobia, diffuse anxiety and psychosis.



- ▶ *Passengers threatening the safety of occupants or the aircraft.* This category includes disgruntled or disturbed passengers who express their dissatisfaction to an extreme; it also includes terrorists, hi-jackers and/or persons engaged in sabotage.

Training is required for all crew members before serving on a new aircraft, and recurrently once every 12 months. Flight attendants also must complete an FAA-approved security training course every 12 months. This course emphasizes techniques for dealing with passengers who could pose a risk to flight safety.

Problem Gambling

It seems unlikely that the behavior of passengers engaged in video gambling would present problems markedly different in kind or severity than the behavioral problems already recognized and addressed by FAA's training curricula. Nevertheless, in the absence of experience with on-board gambling, the potential for behavioral safety risks associated with "problem" and "pathological" (compulsive) gambling¹ should not be summarily dismissed.

In comments submitted to the Department, some parties asserted that problem gambling is unlikely to occur given the low-key, low-stakes approach being implemented by airlines and game developers. Other parties, by contrast, contended that the behavioral risks of gambling aboard aircraft are unknown, and that any such risks are likely to be compounded by consumption of alcohol during a flight. Past studies have found that heavy drinking is associated with heavy gambling; that pathological gamblers seek a euphoric "high" comparable to that derived from cocaine or other drugs and may experience trance-like or dissociative states while engaged in gambling activity; and that pathological gamblers evidence sociopathic tendencies, *i.e.*, they are unable to profit from experience, lack personal and group loyalties, have defective judgment and responsibility, are able to rationalize and justify their behavior, and experience deep bouts of depression and suicidal thoughts.²

¹Pathological gambling, which bears similarity with alcohol or drug dependence, was first recognized by the American Psychiatric Association as a mental disorder in 1980, and was subsequently recognized by the American Medical Association in 1994. The essential characteristics of the pathological gambler include a continuous or periodic loss of control over gambling, a progression in frequency and in the amount wagered, a preoccupation with gambling and with obtaining monies with which to gamble, and a continuation of the behavior despite adverse consequences. To be diagnosed as a pathological gambler, an individual must meet at least five out of ten diagnostic criteria established by the American Psychiatric Association, which are: loss of control; tolerance; withdrawal; increasing preoccupation; gambling to escape problems and dysphoric (unhappy or unwell) feelings; chasing one's losses in an effort to get even; lying about one's gambling; jeopardizing family, education, job or career; serious financial difficulties requiring a bailout; and illegal activities to finance gambling or to pay gambling debts. Persons who experience gambling problems short of the criteria for pathological gambling are described as "problem" gamblers. Such persons may be early travelers on the road to pathological gambling. (*The National Council on Problem Gambling, Inc., 1993, 1995*)

²Gambling in America, App. 2, Chp. 2, Sec. 2.4 "Compulsive Gambling and Other Socially Undesirable Correlates of Gambling," (1976); The Need for a National Policy on Problem and Pathological Gambling in America, The National Council on Problem Gambling, Inc. (Nov. 1993); "Pathological Gambling: Roots, Phases, and Treatment," American Academy of Political and Social Science (Jan. 1985).



While the numbers are uncertain, it is generally recognized that making gambling more accessible increases the number of people who gamble and the number who exhibit problem or pathological gambling behavior.³ Accordingly, it is reasonable to assume that making video gambling available aboard aircraft would precipitate an increase in aberrant behavior. Precisely how that behavior may be manifested aboard an airplane, or how frequently it may occur, is not known.

Other Behavior-Related Issues

Behavior-related concerns other than problem gambling appear to be adequately addressed in the design of the latest electronic entertainment systems. Specifically:

- ▶ The use of polarized screens should minimize the need to relocate passengers who object to gambling or other entertainment features since the screens can be viewed clearly only by persons sitting directly in front of them. Similarly, all audio is transmitted through individual headphones.
- ▶ Transactions are handled via credit card, eliminating the need to handle cash. The system delivered to British Airways, for instance, includes this feature, and both VISA and MasterCard have pilot programs for eliminating cash transactions.
- ▶ Systems such as IFT's distributive network include a selective disable function, allowing gambling games to be shut down at seats occupied by minors. In addition, IFT's and other systems provide a toll-free telephone connection enabling passengers to direct questions and resolve problems directly with the system vendor instead of the aircraft's flight crew.

Manufacturers have adopted these features in response to the concerns raised by the Association of Flight Attendants and because of their desire to make entertainment systems as convenient and non-intrusive as practicable. We anticipate these features will appear in future entertainment systems even though they are not required by FAA's airworthiness regulations. If the Department at some future time decides to recommend removing or modifying the ban on gambling in foreign air transportation, it will consider, in the context of a formal rulemaking, the need to make such features mandatory.

³Gambling in America, pp. 3, 74 (1976); The Need for a National Policy on Problem and Pathological Gambling in America, *Ibid.* The last (and only) national study on the prevalence of pathological gambling was conducted in 1975 by the University of Michigan's Institute for Social Research in conjunction with *Gambling in America*. That study estimated the rate of "probable" compulsive gamblers at 0.77 percent, and the rate of "potential" compulsive gamblers at 2.33 percent, among the population aged 18 years and older. If those rates still pertain, there are today roughly 1.5 million probable compulsive gamblers and an additional 4.5 million potential compulsive gamblers among the adult U.S. population. The Institute's study also estimated, however, that wide-spread legalization of gambling could lead to an increase of more than 3-fold in the compulsive-gambling incidence rate. More recent studies of limited population groups have reported rates considerably higher than in 1975, particularly among teenagers and young adults, but are not statistically projectable to the U.S. population as a whole. Similarly, there are no systematic studies of the financial or social impact of pathological gambling on the nation; contemporary estimates of lost productivity, white collar crime, marital strife, suicide rates and other manifestations of pathological gambling behavior are based on limited population data.



CHAPTER 4: COMPETITIVE CONSEQUENCES OF PERMITTING ONLY FOREIGN AIR CARRIERS TO OFFER VIDEO GAMBLING

This chapter presents the Department's analysis of the competitive impact of permitting foreign air carriers, but not their U.S. counterparts, to install, transport and operate gambling games on electronic interactive video systems aboard aircraft in the foreign commerce of the United States. Under current U.S. law, gambling is prohibited on all flights operated by a U.S. airline and on all flights to or from the United States, including those flown by a foreign carrier.

To measure competitive impact, we assessed the opportunities for foreign carriers to offer video gambling compared with the major U.S. airlines, assuming (1) the current U.S. gambling ban remains in force, (2) the law is changed to permit only foreign airlines to provide gambling on flights to or from the United States, or (3) the law is changed to allow gambling on the international flights of U.S. airlines as well as foreign-carrier flights to or from the United States.¹ We then developed estimates of the revenue impact associated with these assumptions. Much of our analysis draws upon the results of the Yankelovich survey of U.S. international air travelers which the Department commissioned.²

Our analysis concludes that U.S. airlines will install electronic entertainment systems on their international fleets regardless of whether or not they are allowed to offer video gambling. If U.S. carriers did not install entertainment systems, an estimated 4 percent of their international traffic in the Atlantic and Pacific regions would shift to foreign carriers having entertainment systems. Since a 4-percent traffic shift would amount to an annual revenue loss of over \$490 million, U.S. airlines of competitive necessity will implement entertainment systems. We estimate the cost to install those systems on the current U.S. international fleet in the Atlantic and Pacific regions combined at about \$401 million; further, additional fuel costs due to the weight of the systems would amount to about \$43 million annually.

Given that both U.S. and foreign airlines will install entertainment systems for competitive reasons, we also conclude that the ability of foreign carriers to offer gambling could provide them with a substantial revenue advantage over their U.S. rivals under the current U.S. law. Specifically:

- ▶ The absence of video gambling *per se* on U.S. airline international flights is not likely to have a material effect on the U.S.-carrier share of international passenger traffic. Passenger *fare*

¹In all cases it is assumed that gambling continues to be prohibited on all commercial flights within the airspace of the United States.

²The scope and methodology of the Yankelovich survey is discussed in Chapters 1 and 2.



revenue, in other words, would not be significantly affected by the presence or absence of video gambling.

- ▶ If video gambling is available, however, an estimated 18 percent of passengers will use it. This means that foreign airlines have a potential new revenue source, not presently available to their U.S. competitors, amounting to roughly \$592 million per year as follows:
 - (1) The great majority of foreign carrier flights do not involve direct service to or from the United States and, therefore, are not affected by the current U.S. gambling ban. We estimate that gambling on these flights would generate about \$480 million in additional revenue per year for foreign airlines. Since this revenue would be available to the foreign carriers to defray the cost of their entertainment systems, reduce fares where they have the flexibility to do so, or otherwise support their operations worldwide, it could have unfavorable competitive consequences for U.S. carriers. Moreover, some of the gambling revenues garnered by foreign carriers would be earned in direct competition with U.S. carrier service in fifth-freedom markets, where gambling on U.S. aircraft is prohibited.
 - (2) If the U.S. law were changed to permit only foreign airlines to offer gambling on flights to or from the United States, the number of additional foreign carrier flights eligible for gambling would be comparatively modest. Again, however, those flights would compete directly with U.S. airline service. We estimate that foreign airlines would receive an additional \$112 million in annual revenue from gambling aboard their flights to or from the United States.
- ▶ Under the current U.S. law, the opportunity cost of video gambling to the U.S. airlines -- *i.e.*, the revenue they forego by not being able to offer the gambling feature on their entertainment systems while in international service -- is estimated at \$300 million per year. Conversely, if U.S. carriers were allowed to offer gambling on their international flights in the Atlantic and Pacific regions, they could earn an additional \$300 million annually. Net of direct operating expenses, which we estimate at approximately \$75 million per year, video gambling could yield annual net revenues of about \$225 million. This is a major revenue impact, equivalent to about 13 percent of the cash flow³ generated from the international operations of the U.S. major airlines during the year ended June 30, 1995.

Certain methodological issues noted earlier (*see Chapter 2*) should be reiterated with respect to these conclusions. First, available information was limited regarding the cost and operation of video gambling aboard aircraft and a number of assumptions had to be made to develop revenue and cost estimates. The Department does not know which, when, or at what rate individual carriers will install video systems with gambling games on their aircraft fleets. For purposes of this analysis, we assumed that all foreign-carrier passenger flights in the markets examined include entertainment

³Defined as operating profit plus depreciation and amortization expenses, as reported on DOT Form 41.



systems with gambling. In reality, airlines will implement gambling at different times and varying rates, in effect stretching out any impacts. Second, our estimates of revenues and costs should be viewed as short-range projections. As on-board entertainment systems continue to develop, a variety of new services will become available that could change, perhaps substantially, the assumptions underlying our estimates. Finally, we limited our analysis to international service involving Atlantic and Pacific routes because those are the routes where we believe video gambling will be offered initially and because the scope of the Yankelovich survey was limited to trans-Atlantic and trans-Pacific travel.

OPPORTUNITIES TO OFFER VIDEO GAMBLING

To assess the relative opportunities for foreign carriers to offer video gambling, we examined worldwide flight schedules as reported in *Official Airline Guides* for the month of September 1995. We totaled the number of scheduled monthly, non-stop flights for U.S. and foreign airlines by Atlantic and Pacific regions, and then calculated the percentages of flights that involve a U.S. city as well as the percentages between foreign cities only. This analysis was done for two scenarios: (1) non-stop long-haul passenger flights, *i.e.*, those of more than 1,500 miles, and (2) non-stop passenger flights in total (excluding aircraft with fewer than 60 seats). We focused initially on flights of more than 1,500 miles because they are the chief candidates for introducing video entertainment with the gambling feature. Such flights typically involve the use of longer-haul, larger aircraft -- the type on which most airlines have indicated they would initially install entertainment systems and gambling games. Should gambling prove popular on long-haul routes, it is likely that the feature eventually would be offered on shorter routes as well. Accordingly, we also considered total flights. Both data sets included flights in fifth-freedom markets and flights involved in code-sharing agreements.

Long-Haul Flights

Exhibit 4.1 on the next page summarizes the numbers and percentages of non-stop flights of more than 1,500 miles by U.S. and foreign airlines in the Atlantic and Pacific regions. As these data show, foreign carriers have substantial opportunities to offer video gambling under the current U.S. law and would see those opportunities grow if the law were changed to permit gambling on their flights to or from the United States. In particular:

- ▶ Foreign airlines dominate long-haul flights between foreign locations. Such flights comprise 82 percent of their long-haul service in the Atlantic and Pacific regions combined. Since these flights are not affected by the current U.S. gambling ban, foreign airlines could offer video gambling on the large preponderance of their long-haul service.
- ▶ If the current law were changed to permit only foreign airlines to offer gambling on service to or from the United States, the remaining 18 percent of foreign carrier long-haul flights would come into play. Significantly, these flights would compete directly with U.S. carrier service on which gambling would still be prohibited.



Exhibit 4.1: Long-Haul Flights by Foreign and U.S. Airlines									
	Number of Monthly Flights of More than 1500 Miles						Gambling Allowed?		
	Atlantic Region		Pacific Region		Total		Current Law	Change (1)	Change (2)
	Number	Percent	Number	Percent	Number	Percent			
Foreign Airlines:									
Flights between U.S. & foreign cities	3,084	22.4%	601	9.5%	3,685	18.4%	No	Yes	Yes
Flights between foreign cities (a)	10,699	77.6%	5,695	90.5%	16,394	81.6%	Yes	Yes	Yes
Total	13,783	100.0%	6,296	100.0%	20,079	100.0%			
U.S. Airlines:									
Flights between U.S. & foreign cities	6,594	98.8%	2,182	83.1%	8,776	94.4%	No	No	Yes
Flights between foreign cities	77	1.2%	443	16.9%	520	5.6%	No	No	Yes
Total	6,671	100.0%	2,625	100.0%	9,296	100.0%			

(1): To allow only foreign carriers to offer video gambling on flights to/from U.S.
(2): To allow gambling on U.S. carriers' international flights in addition to foreign-carrier flights to/from U.S.
(a): Includes foreign carrier domestic service using jet aircraft.

Source: Official Airline Guides, Sep. 1995 (electronic edition).

- ▶ U.S. airlines provide more than twice as many long-haul flights between a U.S. city and a foreign destination than do their foreign counterparts. None of these flights, nor any U.S. carrier flights between foreign cities, are eligible for gambling today. All would become eligible if the law were changed to allow gambling on the international flights of U.S. airlines.

Total Flights

If video gambling proves to be successful on long-haul flights, foreign airlines could opt to offer the service on shorter flights as well. As shown in Exhibit 4.2 below, foreign airline service as measured by total flights greatly exceeds the international flights of the U.S. airlines. The share of foreign

Exhibit 4.2: Total Flights by Foreign and U.S. Airlines									
	Total Number of Monthly Flights						Gambling Allowed?		
	Atlantic Region		Pacific Region		Total		Current Law	Change (1)	Change (2)
	Number	Percent	Number	Percent	Number	Percent			
Foreign Airlines:									
Flights between U.S. & foreign cities	3,084	2.7%	601	1.0%	3,685	2.1%	No	Yes	Yes
Flights between foreign cities (a)	112,641	97.3%	57,370	99.0%	170,011	97.9%	Yes	Yes	Yes
Total	115,725	100.0%	57,971	100.0%	173,696	100.0%			
U.S. Airlines:									
Flights between U.S. & foreign cities	6,594	91.2%	2,249	74.1%	8,843	86.1%	No	No	Yes
Flights between foreign cities	637	8.8%	787	25.9%	1,424	13.9%	No	No	Yes
Total	7,231	100.0%	3,036	100.0%	10,267	100.0%			

(1): To allow only foreign carriers to offer video gambling on flights to/from U.S.
(2): To allow gambling on U.S. carriers' international flights in addition to foreign carrier flights to/from U.S.
(a): Includes foreign carrier domestic flights using jet aircraft.

Source: Official Airline Guides, Sep. 1995 (electronic edition).



carriers' flights between foreign locations rises from 82 percent to 98 percent of their total system, underscoring their relative advantage to provide on-board gambling. Based on total flights, allowing foreign airlines to offer gambling on flights to or from the United States would affect about 2 percent of their service. Again, however, these additional flights would compete directly with U.S. carrier service on which gambling is proscribed.

Fifth-Freedom Markets and Code Sharing

Fifth-freedom markets are those in which an airline from one country has the right to enplane passengers in another country, and deplane them in a third foreign country. For example, Northwest Airlines and United Airlines have fifth-freedom rights to enplane passengers in Tokyo and deplane them in Seoul. For U.S. airlines generally, fifth-freedom rights are highly important because of their role in establishing worldwide hubs and supporting inbound and outbound flights to and from U.S. cities. The current gambling ban applies to U.S. airlines in their fifth-freedom markets.

We identified 22 flight segments in the Atlantic sector and 14 city-pairs in the Pacific sector in which U.S. air carriers exercise fifth-freedom rights. These fifth-freedom markets, which include most of the flights shown in Exhibit 4.2 for U.S. airline service between foreign cities, generate significant traffic and revenues for U.S. airlines, and may entail strong competition between U.S. carriers and those of the homeland country.

We could not reliably project the effect of gambling on code-sharing arrangements because of (1) our uncertainty regarding which foreign airlines would offer video gambling and when they would elect to do so, and (2) the complexity of code-sharing arrangements themselves. In general, airlines that participate in code-sharing arrangements or other marketing agreements share the benefits and costs of providing the service covered by the agreements. Assuming U.S. airlines continue to be prohibited from offering gambling games, it is possible that their foreign code-share partners would agree to assume a greater role in shared operations, resulting in a potential shift of benefits to the foreign carriers. This could occur even if foreign airlines continue to be prohibited from offering gambling on flights to or from the U.S., since they could still offer gambling on direct flights to cities beyond a foreign gateway city.

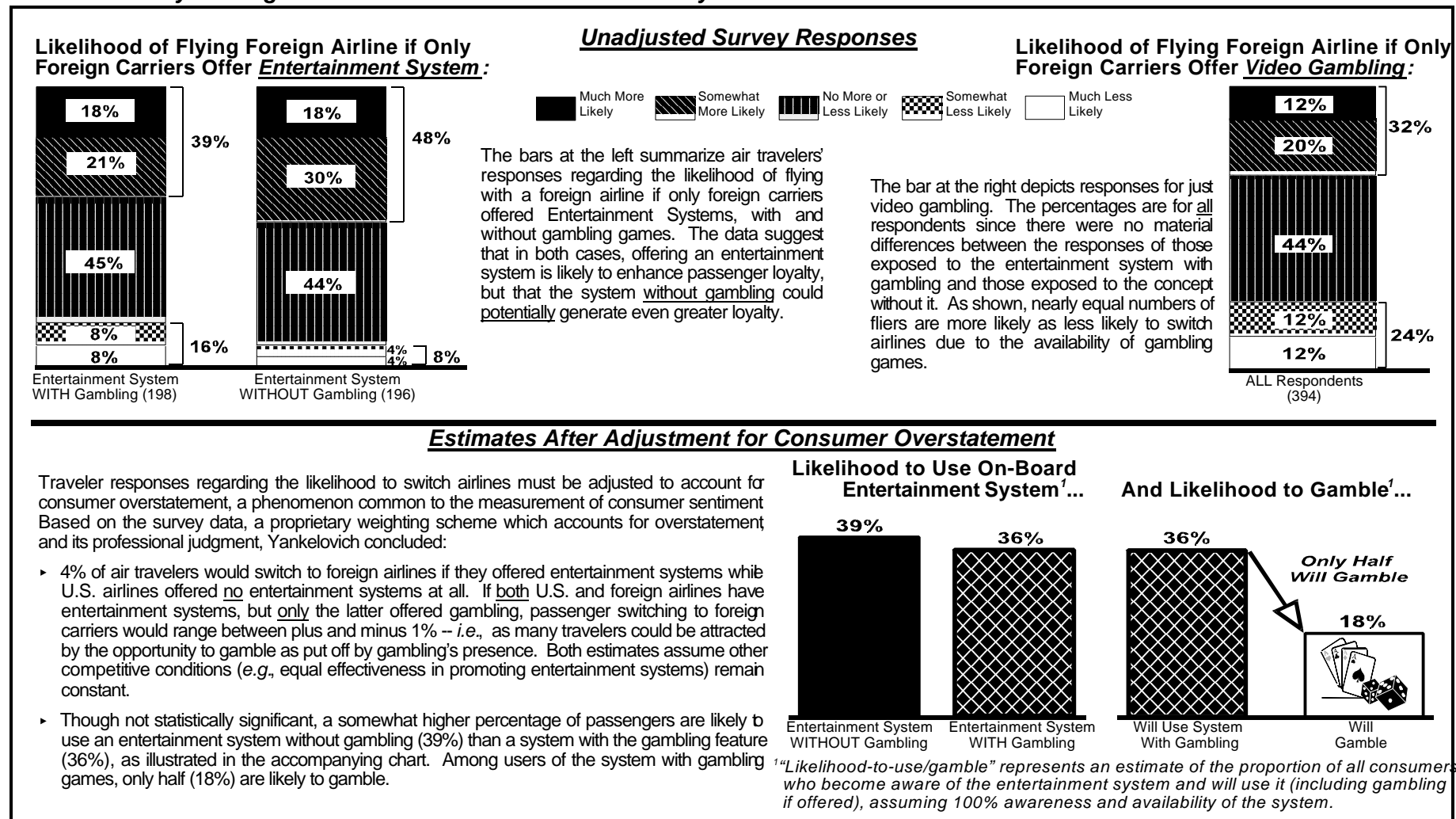
REVENUE IMPACTS OF VIDEO GAMBLING

As illustrated in Exhibit 4.3 on the next page, the Yankelovich survey produced certain conclusions regarding the likelihood that international air travelers would switch to an airline having an entertainment system and the likelihood they would use the system while in flight. In particular:

- ▶ If U.S. airlines do not install electronic entertainment systems on their international fleets, they could experience a 4-percent traffic loss to foreign competitors having such systems with or



Exhibit 4.3: Key Findings & Conclusions of Yankelovich Survey of U.S. International Air Travelers



without video gambling. Given the magnitude of this potential traffic loss, we believe that U.S. airlines of competitive necessity will install entertainment systems regardless of whether they are able to offer video gambling.

- ▶ Assuming both U.S. and foreign airlines have entertainment systems, but our carriers do not offer the gambling feature, there will be no discernible traffic shift away from U.S. airlines.
- ▶ If gambling is offered, 18 percent of passengers will use it. Consequently, while the inability of U.S. airlines to offer gambling is not likely to have a material effect on their international traffic, it will deprive them of a major revenue source available to their foreign competitors.

U.S. Airlines Will Install Entertainment Systems

The Yankelovich survey determined that up to four percent of international air travelers would switch to foreign airlines if only those airlines provided entertainment systems. It also indicated that while the availability of entertainment systems with gambling games could enhance passenger loyalty, systems without the gambling feature could engender loyalty to a greater extent.

Based on U.S. international passenger revenue in the Pacific and Atlantic regions, a four-percent loss of passenger traffic would represent an annual revenue loss of approximately \$493 million for the major U.S. airlines, as demonstrated below.

Exhibit 4.4: Major U.S. Airlines Passenger and Excess Baggage Revenues Year Ended June 30, 1995 (\$000)			
<i>Airline</i>	<i>Atlantic Region</i>	<i>Pacific Region</i>	<i>Total</i>
American	\$ 1,591,151	\$ 286,940	\$ 1,878,091
Continental (a)	343,789	611,678	955,467
Delta	1,824,088	345,527	2,169,615
Northwest	473,629	2,326,130	2,799,759
Trans World	567,844	---	567,844
United	1,044,923	2,784,110	3,829,033
USAir	128,605	---	128,605
Total	\$ 5,974,029	\$ 6,354,385	\$12,328,414
Revenue Lost due to 4-percent Traffic Loss	\$ 238,961	\$ 254,176	\$ 493,137

(a:) Data include Continental Micronesia.

We estimate that a revenue shift of \$493 million would translate into annual operating profits of about \$373 million for the major U.S. airlines, based on financial (Form 41) data reported to the Department for operations in the Atlantic and Pacific regions combined. Considering that operating profits on this basis have achieved a level of \$373 million only five times over the past 16 years, a



profit shift of that magnitude would be financially unacceptable. Moreover, it could significantly erode the cost advantage that U.S. carriers currently enjoy as a result of their greater operating efficiency relative to foreign competitors. All factors considered, U.S. airlines have no choice but to invest in entertainment systems in order to remain competitive and forestall erosion in their share of international passenger traffic.

Absence of Gambling Feature *Per Se* Will Not Affect U.S. International Traffic Share

Assuming that all airlines will install video entertainment systems on their aircraft serving international routes across the Atlantic and Pacific, the question becomes whether the availability of gambling itself would affect a traveler's choice of airline flights and, thus, the passenger traffic of those carriers able to offer gambling as an entertainment feature.

The Yankelovich survey determined that the number of passengers switching to foreign airlines offering gambling as an entertainment option is likely to be within a narrow range -- plus or minus 1 percent. This equates to a revenue impact ranging from a positive \$123 million to a negative \$123 million. Since a positive or negative effect is equally likely, it is reasonable to conclude that there will be no material passenger shift, and thus no fare revenue impact, as a result of foreign airlines offering gambling while U.S. airlines do not. This result reflects the degree to which some survey respondents, on the one hand, indicated they would develop a loyalty to foreign airlines because of the entertainment system with gambling, while other respondents were predisposed to favor entertainment systems without the gambling feature.

This conclusion of no impact on U.S. carrier traffic due to gambling *per se* contrasts markedly with estimates contained in a study commissioned by Northwest Airlines and reported to Congress in 1993.⁴ That study projected a potential shift to foreign airlines of 2.4 million passengers representing \$680 million in annual revenue due to the availability of gambling. The Northwest study assumed that all air travelers who are gambling enthusiasts, as measured by the number of air travelers to Las Vegas and other U.S. gambling destinations, would divert to foreign airlines if only those airlines offered gambling games.

We believe Northwest's study overstates the potential traffic and revenue shift attributable to gambling for two reasons. First, the Yankelovich survey indicated that, other factors being equal, a somewhat higher percentage of respondents preferred on-board entertainment systems without gambling. Second, as a practical matter international travelers select specific airlines and flights based on multiple factors, including fares, schedules, frequent-flyer programs and amenities such as the variety and quality of a carrier's food service. In our view it is improbable that these factors

⁴Testimony of Richard B. Hirst, Senior Vice-President and General Counsel of Northwest Airlines, Inc., before the Senate Subcommittee on Aviation, Committee on Commerce, Science and Transportation (Nov. 8, 1993).



would be wholly overridden by a penchant for gambling, particularly gambling purposely designed for low stakes, limited losses and extended play.

Without On-Board Gambling, U.S. Airlines Would Be Deprived of a Significant Revenue Source

While the impact of gambling on airline choice and traffic shares is unlikely to be significant, it is highly significant that 18 percent of passengers are likely to use the gambling feature if offered. For U.S. airlines, the impact of the current gambling ban is an opportunity cost measured by the revenue they forego by not being allowed to offer video gambling on international flights. For foreign airlines, the impact is the revenue they receive from gambling on flights not affected by the U.S. law, plus the additional revenue they could earn if gambling were permitted on their flights to or from the United States.

Revenue Impact on U.S. Airlines

We estimate that if U.S. airlines were permitted to offer video gambling on international flights, they would realize gross revenues of \$300 million while incurring related operating expenses of \$75 million, leaving their net gambling revenues at approximately \$225 million per year. The \$300 million gross revenue figure is the average of two estimates arrived at by different routes, the first of which is traced below.

Exhibit 4.5: Estimation of Gross Gambling Revenues For Major U.S. Airlines			
<i>U.S. Airline</i>	<i>Atlantic Region</i>	<i>Pacific Region</i>	<i>Total</i>
Passenger Counts (yr. ended 6/30/95):			
American	3,511,000	363,000	3,874,000
Continental (a)	1,065,000	2,466,000	3,531,000
Delta	4,579,000	667,000	5,246,000
Northwest	1,439,000	4,840,000	6,279,000
Trans World	1,729,000	--	1,729,000
United	2,693,000	5,695,000	8,388,000
USAir	352,000	--	352,000
Total	15,368,000	14,031,000	29,399,000
18-percent Usage of Gambling Feature	2,766,340	2,525,580	5,291,820
Average wager per play	\$1.00	\$1.00	
Average time for one play	10 sec.	10 sec.	
Average games played per minute	6	6	
Average wager per player per hour	\$360	\$360	
Typical Las Vegas odds	6-5 (9.1%)	6-5 (9.1%)	
Average revenue per hour per player	\$32.76	\$32.76	
Average percent of time spent gambling	20%	20%	
Average time of flight	8.49 hrs.	11.57 hrs.	
Average time spent gambling per player	1.7 hrs.	2.3 hrs.	
Average Revenue per Passenger	\$56	\$75	
Total Gross Revenue from Gambling	\$154,909,440	\$189,418,500	\$344,327,940
(a): Data include Continental Micronesia.			



Based on total U.S. airline passenger traffic in the Atlantic and Pacific regions, an 18-percent usage rate would mean that nearly 5.3 million passengers would engage in video gambling on U.S. carriers. Published estimates commonly cite a betting limit of \$5 per play, with individual estimates of the minimum bet ranging as low as 25 cents. We assumed a conservative average wager of \$1.00 per play. Based on our trials of gambling software, a single play takes approximately 10 seconds on average, which means six games can be played per minute. This equates to about \$6 per minute or \$360 per hour, including re-wagering of any winnings. Depending on the payout rate, it could take a long time for the average player to lose a significant sum. According to industry representatives, gambling games aboard aircraft are designed to payout frequently to enable extended play during long flights.

We have no direct information on the payoff percentage, or “odds,” to be used by the airlines. Las Vegas gaming law, which is often cited as the standard for gambling regulation worldwide, allows payoffs as low as 75 percent, meaning the “house” can retain 25 percent of the total amount wagered. We expect the airlines to provide somewhat better odds given their stated intent to make on-board gambling “enjoyable” and “entertaining.” Specifically, we assumed that the normal Las Vegas odds of 6 to 5 in favor of the house will apply. This means that for every \$11 wagered, an airline would retain \$1, a payoff rate of 9.1 percent. Applying this percentage to the total hourly wager of \$360, an airline could potentially earn \$32.76 per hour per passenger.

The typical passenger, however, will not gamble during the entire duration of an international flight. Rather, available estimates indicate that about 20 percent of flight time would be spent gambling.⁵ Applying this 20-percent figure to the average flight time across the Atlantic (8.49 hours) yields a gambling time of 1 hour and 42 minutes per passenger, and average revenue per passenger of \$56 (\$32.76 per hour x 1.7 hours). Across the Pacific, with an average flight time of 11.57 hours, usage would average 2 hours and 19 minutes and gambling revenue would average \$75 (\$32.76 per hour x 2.3 hours). Combining these estimates with the 18-percent usage rate for Atlantic and Pacific passenger counts produces a gross revenue estimate of \$344 million.

As a check on the reasonableness of this estimate, we reckoned revenues by another method. The most commonly cited estimate of the revenue potential from video gambling is \$1 million per aircraft per year.⁶ Based on aircraft assigned to service as of June 30, 1995, the U.S. fleet providing service in the Atlantic and Pacific regions is approximately as follows:

⁵See Public Docket No. 50315, comments of Intergame and British Airways PLC.

⁶“High Fliers for High Stakes,” International Herald Tribune (Oct. 9, 1995); “A ‘Mortal Lock’ for Airlines,” Air Transport World (Nov. 1995); and comments of International Game Technology, *supra*.



Exhibit 4.6: U.S. Airline Fleet by Aircraft Type								
Region	Number of Aircraft (June 30, 1995)							TOTAL
	B747	B767	L1011	A310	MD11	DC10	B727	
Atlantic	22	82	20	5	11	17	2	159
Pacific	69	--	--	--	13	15	11	108
TOTAL	91	82	20	5	24	32	13	267

With an Atlantic and Pacific fleet of 267 aircraft, average gambling revenue of \$1-million per aircraft produces \$267 million of gross revenue per year. This estimate is not too dissimilar from our \$344 million estimate developed earlier. Because we have no persuasive evidence favoring one figure over the other, we have split the difference and settled on \$300 million as our estimate of the gross annual revenue from gambling aboard U.S. aircraft.⁷

Not all of this revenue will go to the airlines, however. The gambling feature will be managed by the companies that design and oversee entertainment systems, for which they will receive a share of the revenues or a management fee. Individual arrangements will vary, but the gaming companies are likely to serve as the clearing house with credit card firms for settling players' net winnings and losses. They also are likely to be responsible for the security and integrity of the systems, as well as resolving any disputes with passengers. For these reasons their revenue split or management fee is likely to be fairly high. We estimate fees in the neighborhood of 25 percent, or \$75 million based on gross revenues of \$300 million. Net gambling revenues to the airlines would therefore amount to about \$225 million annually.

Revenue Impact on Foreign Airlines

We made two estimates of potential gambling revenues to foreign airlines. The first applies to their long-haul service between foreign cities, which is not affected by the current U.S. gambling ban. The second estimate applies to foreign carrier flights to or from the United States, assuming the law were changed to permit gambling on those flights. Both estimates rely on the consensus estimate that video gambling would generate revenue averaging \$1 million per aircraft per year.

As reported earlier in Exhibit 4.1, flights between foreign cities account for about 82 percent of the long-haul service operated by foreign airlines. These flights involve some 480 aircraft. Thus, at \$1 million per aircraft, the potential gambling revenue from foreign airlines' long-haul service between foreign cities amounts to approximately \$480 million per year.

⁷Since the Department-sponsored survey of U.S. international air travelers was limited to trans-Atlantic and trans-Pacific travel, we have no direct empirical estimate of the likelihood to switch airlines or to gamble with respect to U.S. flights serving Latin American markets. If one assumes that the average gambling revenue estimate of \$1-million per aircraft is applicable to the U.S. jet fleet serving Latin America, the potential revenue benefit to U.S. airlines would amount to between \$68 million (large jets only) and \$134 million (total jet fleet).



For flights to or from the United States, an additional 112 aircraft come into play. At \$1 million per aircraft, the potential gambling revenue from foreign carrier flights to or from the United States totals an additional \$112 million per year.

As suggested previously, foreign airlines could elect to offer gambling on short-haul as well as long-haul flights. While it is unlikely that all foreign airlines would install entertainment systems on all of their aircraft, the foreign carrier fleet is comprised of more than 6,000 jet aircraft. To the extent video gambling were offered on short-haul flights, the revenue benefit to foreign carriers would be further enhanced.

COSTS TO INSTALL AND OPERATE ENTERTAINMENT SYSTEMS ON THE U.S. INTERNATIONAL FLEET

While U.S. airlines will have to install entertainment systems for competitive reasons, their ability to cover the costs of those systems if not permitted to offer gambling is uncertain. On one hand, virtually all commentators expect gambling to be the single largest source of the revenue produced by on-board systems; the most commonly cited estimate is that the systems will produce \$2 million per aircraft annually, with gambling accounting for one-half of the total.⁸ On the other hand, as the technology of entertainment systems continues to improve, new services may be offered that could change the revenue mix. To a large extent an airline's ability to pay for its system will depend on how astutely it packages and prices its service offerings.⁹

The two major costs associated with entertainment systems are the initial installation and the expense of additional fuel. We estimate the cost to install entertainment systems on the U.S. Atlantic and Pacific international fleets at \$401 million, with additional fuel expenses amounting to \$43 million per year.¹⁰

⁸"Luck Be A Lady, This Flight," Air Transport World (May 1994), and n. 6, *supra*.

⁹Some ambitious claims have been made regarding the revenue potential of video entertainment systems. In a presentation before the World Airline Entertainment Association, for instance, former Chrysler Corporation chairman Lee Iacocca predicted that, "...in-flight entertainment, properly executed, will be a bigger producer of revenue (and certainly margins and profits) than the revenue collected from ticket sales themselves." (Annual Conference, Montreal, Canada, Oct. 6, 1994.)

¹⁰These costs pertain to an entertainment system as a whole, not the gambling feature. Installing the latter involves adding only software to the on-board central processing component of an interactive entertainment system.



Installation Cost

Public estimates of the cost of electronic entertainment systems generally range from about \$1.5 million to \$3.5 million per aircraft. One commentator pegged the cost of retrofitting an aircraft already in service at three times the \$1.5-million “factory installed” cost, or \$4.5 million, the highest estimate we have seen. British Airways is reported to be planning to spend \$120 million to outfit a fleet of 85 aircraft (\$1.4 million per aircraft); United Airlines is cited as planning to spend \$150 million to retrofit 90 wide-bodied aircraft for both domestic and international use (\$1.7 million per aircraft); and Virgin Atlantic is reported to be spending \$20 million to outfit six new transatlantic aircraft (\$3.3 million per aircraft).¹¹

Given this wide range of estimates, we believe a conservative estimate of \$1.5 million per aircraft is reasonable. Applying that figure to an Atlantic and Pacific service fleet of 267 aircraft, the total outlay for the major U.S. airlines to install video entertainment systems amounts to \$401 million.

Additional Fuel Expense

Additional fuel costs attributable to the weight of electronic entertainment systems will not be trivial. FAA estimates the weight of a system aboard an aircraft the size of a B-737 at 2,500 pounds, and the weight of a system aboard a B-747-400 at 3,500 to 4,000 pounds. Based on publicly reported information and on operating data reported to the Department, we estimate that the fuel consumption of a typical B-747 aircraft would increase from 3,725 gallons to 3,818 gallons per revenue block hour, or by 2.5 percent, due to the added weight of an on-board entertainment system. Assuming a fuel consumption increase of 2.5 percent for other aircraft types, and applying consumption rates specific to those types, we estimate that the average annual fuel cost increase per aircraft would range from about \$50,000 for smaller aircraft to about \$270,000 for B-747-400 aircraft. Applying this range to the U.S. international fleet of 267 aircraft in the Atlantic and Pacific regions yields additional fuel expenses totaling \$43 million per year.

It should be noted that our estimate reflects current fuel prices. If the price of fuel jumps dramatically, as it did during the Persian Gulf War, fuel costs would take on greater importance. At the time of the Gulf War it was not uncommon for airlines to examine aircraft operations from the perspective of aircraft weight. We expect that airlines would re-evaluate the weight penalty imposed by on-board entertainment systems in the event fuel prices rise significantly.

Finally, the additional fuel required to support the weight of an on-board entertainment system could require a carrier to give up some freight carriage and related revenue. Due to insufficient data we did not attempt to estimate the revenue impact of this phenomenon, but recognize that it is a factor which individual airlines will consider when evaluating installation of entertainment systems on their aircraft fleets.

¹¹“Airlines Race to Tap In-Flight Gold Mine of Interactive Systems,” *The Wall Street Journal Europe*, (Nov. 4, 1994); and “Special Report, IFE, Part One,” *Asian Aviation* (Oct. 1994); “IFE Horror Movie,” *Airline Business* (Feb. 1996).



CHAPTER 5: BILATERAL ISSUES AND LEGAL FRAMEWORK

This chapter addresses the bilateral and statutory/regulatory framework that governs gambling in the U.S. and in the transportation industry in particular. In summary:

- ▶ The existing ban on gambling has resulted in public comments and official foreign government communications questioning whether the extraterritorial application of the ban is consistent with international law.
- ▶ There is a well-established regulatory structure in place to ensure that gambling devices are registered with the Department of Justice. Gambling operations and the integrity of the gambling devices are in general regulated by the States. Also, for the cruise-ship industry the U.S. monitors and enforces the prohibition against U.S. and foreign-flag vessels offering gambling once the vessel enters the jurisdiction of the U.S., unless it enters the waters of a State that permits gambling.
- ▶ If the gambling ban is lifted to allow U.S. and foreign air carriers to offer gambling in foreign air transportation, the concerns relating to the extraterritorial reach of the existing ban would be eliminated. Pending a decision with respect to gambling in air transportation and how it would be structured, there is no specific regulatory structure in place to address consumer protection and other issues.
- ▶ Revising the gambling ban to allow only foreign air carriers to offer gambling to and from the U.S. also would eliminate the bilateral concerns relating to the extraterritorial reach of the existing ban, but could raise other competitive considerations as discussed in Chapter 4.

THERE ARE UNCERTAINTIES UNDER EXISTING LAW

Allowing gambling by both U.S. and foreign air carriers in foreign air transportation would likely eliminate the concerns by our foreign bilateral partners regarding the extraterritorial reach of the existing law. Decisions would have to be made concerning the extent of regulation, if any. While the existing federal framework described in this chapter with respect to gambling in general would apply to the airlines, two issues must be addressed regarding the regulatory structure that would or should be afforded.

First, since it is envisioned that gambling activities on board air carriers would require the use of communications facilities, any decision to allow gambling in air transportation must address whether 18 U.S.C. § 1084, concerning wire communications, would or should apply; if applicable, it may be difficult, for example, to use air-to-ground credit verification.



Second, under current Federal laws, the regulation of gambling operations is largely left to the States. Pursuant to 49 U.S.C. § 41713, however, a State is preempted from enacting or enforcing a law, regulation, or other provision related to a price, route, or service of a U.S. air carrier. Thus, a decision to allow gambling must also address what entity, if any, would regulate the gambling operations and ensure the integrity of gambling devices on board U.S. aircraft.

In regard to these issues, the proposed legislation establishing a National Gambling Commission specifically requires the Commission to review:

- o The effectiveness of existing practices in law enforcement, judicial administration, and corrections to combat and deter illegal gambling and illegal activities related to gambling; and
- o The costs and effectiveness of State and Federal gambling regulatory policy.

BILATERAL ISSUES

Under both the Chicago Convention and principles of comity, nations generally recognize the authority of another State to regulate conduct aboard aircraft within its territorial jurisdiction. Bilateral air service agreements also generally recognize the authority of a State to adopt laws and regulations that set the conditions for commercial entry into its air space and for landing and taking off from its territory.

Both the passage of the Gorton Amendment and the Department's subsequent request for comments have engendered formal diplomatic protests to the Department of State concerning the regulation of foreign airline conduct outside the territorial limits of the U.S. Foreign airlines have also submitted comments and arguments asserting that international law does not allow the U.S. to regulate gambling on foreign airlines outside U.S. airspace.

Most bilateral agreements have dispute-settlement provisions. Generally, any dispute, other than a dispute involving pricing, which is not resolved by the first round of formal consultations, may be referred to a person or body for resolution. If the parties do not agree, then the dispute may be submitted to arbitration at the request of either party in accordance to certain set procedures. The expenses of the arbitration tribunal, including the fees and expenses of the arbitrators, are shared equally by the parties. Each party agrees, consistent with its national law, to give full effect to any decision or award of the arbitral tribunal. In the event that one party does not give effect to any decision or award, the other party may take such proportionate steps as may be appropriate.

Besides the jurisdictional question, there are other bilateral issues that may be raised by a continued ban on gambling in "foreign air transportation" to and from the U.S. These include: enforcement difficulties and potential retaliation against U.S. carriers by foreign governments.



STATUTORY/REGULATORY FRAMEWORK

To understand the legal issues involved in gambling in foreign air transportation, we looked to the legal background and current regulatory scheme for gambling in the U.S. and in the transportation industry in particular. The basis for this study is the Gorton Amendment that enacted a ban on in-flight gambling as an overlay to existing law. The United States has a long history of legislation affecting gambling, most of which is in place today and provides the foundation for any policy decisions to be made.

The Gorton Amendment

The Gorton Amendment, section 205 of the Federal Aviation Administration Authorization Act of 1994 (the "Act"), Pub. L. No. 103-305 (August 23, 1994) added section 41311 to Title 49 of the U.S. Code. Under 49 U.S.C. 41311(a), "an air carrier or foreign air carrier may not install, transport, or operate, or permit the use of any gambling device on board an aircraft in foreign air transportation." The effect was to apply the same prohibition to foreign air carriers that already applied to U.S. carriers, so that there would be no competitive advantage for either type of carrier. This amendment was designed to clarify current statutory prohibitions and to ensure equal treatment of U.S.-flag air carriers and foreign flag carriers with regard to gambling on board commercial aircraft while the Department studied the issue and recommended whether a different approach might be appropriate. (See 140 Cong. Rec. S6664, June 9, 1994).¹

The Gambling Devices Act

Background

The Gambling Devices Act is the basic legislative framework for gambling within the United States. Pursuant to the Gambling Devices Act of 1962 (15 U.S.C. § 1171-1178), U.S. air carriers are prohibited from providing gambling on international flights. This prohibition did not apply to foreign carriers. Under the Gambling Devices Act, however, the possession of gambling devices, even by foreign air carriers, may violate state law once the plane lands, as discussed below.

Section 1175(a) of the Gambling Devices Act provides that it is:

“...unlawful to manufacture, recondition, repair, sell, transport, possess, or use any gambling device in the District of Columbia, in any possession of the United States, within Indian country as defined in section 1151 of title 18 or within the special maritime and territorial

¹The legislative history of the amendment indicates that "this section only prohibits air carriers from carrying gambling devices defined as devices which, when operated, can deliver money in any form (*i.e.*, cash or credit), or property as the result of the application of an element of chance. This section does not bar airlines from carrying game machines which do not have the prohibited money or property delivering capability." CONF. REP. No. 677, 103d Cong., 2d Sess. 70 (1994).



jurisdiction of the United States as defined in section 7 of Title 18, including on a vessel documented under chapter 121 of Title 46 or documented under the laws of a foreign country.”

The special maritime and territorial jurisdiction as defined in section 7 of Title 18 includes:

“Any aircraft belonging in whole or in part to the United States, or any citizen thereof, or to any corporation created by or under the laws of the United States, or any State, Territory, District, or possession thereof, while such aircraft is within the admiralty and maritime jurisdiction of the United States and out of the jurisdiction of any particular State.”

A 1992 modification to the general prohibition in the Gambling Devices Act (section 1175(b)(1)(A)) (the cruise ship amendment) was enacted to allow "the repair, transport, possession, or use of a gambling device on a vessel that is not within the boundaries of any State or possession of the United States." In addition, section 1175 provides in a further exception that a state could pass a law prohibiting the carrying of gambling devices aboard vessels within its territorial waters.

Another statute -- 18 U.S.C. § 1084, enacted in 1961 -- prohibits the use of communication facilities to transmit wagering information in interstate or foreign commerce. Specifically 18 U.S.C. § 1084(a) provides that:

"Whoever being engaged in the business of betting or wagering knowingly uses a wire-communication facility for the transmission in interstate or foreign commerce of bets or wagers, or information assisting in the placing of bets or wagers on any sporting event or contest, or for the transmission of a wire communications which entitles the recipient to receive money or credit as a result of bets or wagers, or for information assisting in the placing of bets or wagers, shall be fined not more than \$10,000 or imprisoned not more than 2 years, or both."

An exception to this prohibition permits the transmission of information for wagering purposes between two States where such wagering is legal.

Legislative History and Purpose of Gambling Statutes

The jurisdiction and scope of the Gambling Devices Act was based on two earlier statutes: the Gambling Ship Act of 1948 and the Johnson Act of 1951. Both the Gambling Devices Act (which amended the Johnson Act) and the Gambling Ship Act concern gambling aboard vessels. However, while the Gambling Devices Act only concerns gambling using a “gambling device” as defined in 15 U.S.C. § 1171, the Gambling Ship Act concerns any form of gambling activity.

With respect to jurisdiction in transportation, the Gambling Ship Act (18 U.S.C. § 1081-1083) was enacted in 1948 to prohibit persons who are within the jurisdiction of the United States from having



any interest in or engaging in any gambling activities on a “gambling ship” if such ship is on the high seas² or navigable waters not within the jurisdiction of any state. A “gambling ship” is a vessel used principally for the operation of one or more gambling establishments.

Under the Gambling Ship Act, gambling is prohibited once a vessel enters into the jurisdiction of the United States unless the state into whose waters the vessel enters permits gambling, in which case there would be no prohibition.³ A 1994 amendment substantially changed the scope of the Gambling Ship Act by adding that the term “gambling ship”:

“...does not include a vessel with respect to gambling aboard such vessel beyond the territorial waters of the United States during a covered voyage (as defined in section 4472 of the Internal Revenue Code of 1986 as in effect on January 1, 1994.)”⁴

The Gambling Devices Act of 1962 was preceded by the Johnson Act,⁵ which had been developed from the Attorney General's Organized Crime Conference. The legislative history of the Johnson Act shows that it was primarily directed at curbing the influence of nation-wide crime syndicates.⁶ The Gambling Devices Act broadened the definition of gambling devices, but retained the focus on organized crime.⁷

The Gambling Devices Act was amended in 1992 to permit gambling on U.S.-flagged ships and level the competitive playing field with foreign-flagged ships, which were already offering gambling in

²The “high seas” includes all waters beyond the territorial waters of the United States that are not under foreign territorial jurisdiction. Pursuant to the Submerged Lands Act, the jurisdiction of a coastal state may extend to the territorial waters of the United States. The territorial waters of the United States consist of the territorial sea (defined as the belt, 3 nautical miles wide, seaward of the territorial baseline) and to points located in internal waters, landward of the territorial sea baseline, in cases where the baseline and coastline differ. 1994 U.S. Custom HQ Lexis 5776; HQ 113009. Note that in 1988, a Presidential Proclamation extended the territorial sea from three to 12 nautical miles from the baselines of the United States, but only for purposes of international law. Presidential Proclamation No. 5928, December 27, 1988.

³1990 U.S. Custom HQ Lexis 5776.

⁴Pub. L. 103-322, Title XXXII, § 320501. Section 4472 of the Internal Revenue Code defines a “covered voyage” as a voyage of a commercial passenger vessel which extends over one or more nights, or a voyage of a commercial vessel transporting passengers engaged in gambling aboard the vessel beyond the territorial waters of the United States, during which passengers embark or disembark the vessel in the United States. However, a “coverage voyage” shall not include a voyage of a passenger vessel of less than 12 hours between two ports in the United States, or any voyage on any vessel owned or operated by the United States, a State, or any agency or subdivision thereof. (26 U.S.C. § 4472 (1), Jan. 1994.)

⁵Pub. L. 906, Sen. REP. 3357 contained eight sections broken down into 15 U.S.C. § 1171-1178.

⁶1950 U.S. C.C.A.N. 4240.

⁷1962 U.S. C.C.A.N. 3809. The Johnson Act was amended in 1962 to broaden the definition of “gambling devices;” to define the term “State” to include the District of Columbia and delete Alaska and Hawaii; and to add definitions of “interstate commerce” and “intrastate commerce.” 15 U.S.C. § 1171 (a), (b), (d) & (e), § 1172, § 1173 and § 1178.



international waters.⁸ Under this "cruise ship amendment" (cited as the United States-Flag Cruise Ship Competitiveness Act of 1991), the gambling devices are sealed when the vessel is within the territorial waters of a state (defined as three nautical miles from shore) and activated after the vessel reaches international waters.

Prior to the enactment of the cruise ship amendment in 1992, it was possible for certain foreign-flag vessels to offer gambling in international waters while U.S.-flag vessels were prohibited from doing so because the Gambling Devices Act served as an absolute bar to gambling on U.S.-flag vessels that engage in interstate and foreign commerce, even when they were in international waters.⁹

The cruise ship amendment also further clarifies the jurisdiction of the Gambling Devices Act by providing that gambling on "voyages to nowhere" and voyages between two points in a State would be prohibited if the State from which they are operating has a law prohibiting gambling activities on these voyages even though the vessel enters international waters.¹⁰ For example, Hawaii enacted a law prohibiting gambling activities on a vessel that embarks from any point within the State, and disembarks at the same or another point within the State, except on travel from the Continental United States or a foreign country.¹¹ Outside U.S. territorial waters, gambling aboard foreign-flag vessels is not regulated by the United States. Aboard U.S.-flag vessels it is regulated by both state and federal authorities.¹² The legislative history of the cruise ship amendment also states that the:

"...ability of the United States to enforce these restrictions on foreign-flag vessels when they are operating in international waters is governed by customary international law. Accordingly, the United States may board the vessel in international waters to enforce these restrictions with the permission of the flag state of the vessel. Also, if a vessel does violate these restrictions, the vessel may be denied entry into the United States for all future voyages since it has violated a law of the United States."¹³

⁸See Pub. L. 102-251 which added 15 U.S.C. § 1175(b)(1)(A).

⁹H. REP. No. 357, 102d Cong., 2d Sess., *available on LEXIS*, at *5.

¹⁰15 U.S.C. §1175(b)(2).

¹¹H. REP. No. 357, 102d Cong., 2d Sess., *available on LEXIS*, at *6 (*discussing Hawaii Revised Statutes Ch. 72.*)

¹²15 U.S.C. § 1175 (b) (2).

¹³H. REP. No. 357, 102d Cong., 2d Sess., *available on LEXIS*, at *7.



Implementation of Gambling in the Cruise Ship Industry In Relation to Air Transportation

Although there is a regulatory scheme for gambling on cruise ships, it is in many respects particular to that industry. There is no regulatory scheme in place that addresses gambling on aircraft. There are as a result several decisions that would have to be made attendant to a regulatory framework for gambling on aircraft.

Cruise Ship Industry

For the cruise ship industry, the United States with permission of the flag state of the vessel may inspect a ship in international waters to enforce any restrictions.¹⁴ While the Department of Justice is responsible for interpreting the scope and applicability of the gambling statutes,¹⁵ the U.S. Customs Service has responsibility for enforcing the Gambling Ship Act and the Gambling Devices Act. After inspection, if Customs believes that further action is warranted, it reports the matter to the U.S. Attorney's office. The same responsibility could be assigned to regulate similar activities on board aircraft.

Customs also has the jurisdiction to board both ships and airplanes to inspect for violations of federal regulations upon entry to the United States. The justification for boarding could be solely a concern about gambling. There are, however, no known circumstances where ships were boarded in connection with gambling.

Several administrative procedures are also covered by Customs and other agencies. Every ship that enters U.S. waters must report to Customs regarding currency transactions of \$10,000 or more. The reporting statute is not specifically tied to the gambling aspect of ship operations. In addition, under 19 U.S.C. § 1433, any vessel from a foreign port or place, or a foreign vessel from a domestic port, must report its arrival to Customs. Under 15 U.S.C. § 1173, manufacturers and distributors of gambling devices must register with the Attorney General's office, and the Federal Bureau of Investigation has access to company records regarding the devices' licenses. Justice generally defers to the State regarding the operation and overall integrity of the gambling device. This is true whether the device is to be used on a cruise ship or in another type of facility.

Air Transportation

Pursuant to 49 U.S.C. § 41713, a state is preempted from enacting or enforcing a law, regulation or other provision related to a price, route, or service of a U.S. air carrier. Gambling on board an aircraft could be considered a "service" for purposes of this provision. This provision complicates

¹⁴*Id.* at *7.

¹⁵1992 U.S. Custom HQ Lexis 376; HQ 112135. 1990 U.S. Custom HQ Lexis 5776. Title 18 U.S.C. § 1081 *et. seq.*



the policy question of the role of States in regulating gambling in air transportation. Current federal law concerning gambling on board either U.S. flag or foreign flag ships expressly defers to the states, but only within their own territorial waters. State jurisdictions have taken somewhat different approaches to regulation of gambling, such as creating enforcement agencies and licensing agencies, to enforce state regulation. Depending on the jurisdictional structure of any statute authorizing gambling on aircraft, the issue and scope of government regulation or self-regulation of such gambling would have to be considered by the level of government having authority over the activity.



[DOT Note: Below is a facsimile of the President's letter of Nov. 1, 1995, to Rep. Wolf regarding H.R. 497. A similar letter was sent to Sen. Simon regarding S. 407. The bills would establish a study commission to assess the effects of gambling on the nation (see Chapter 1).]

THE WHITE HOUSE

Washington

Dear Representative Wolf:

I deeply appreciate your efforts to draw attention to the growth of the gambling industry and its consequences. Too often, public officials view gambling as a quick and easy way to raise revenues, without focusing on gambling's hidden social, economic, and political costs. I have long shared your view about the need to consider carefully all of the effects of gambling, and I support the establishment of a commission for this purpose.

My Administration is eager to work with you in designing such a commission and ensuring that its work is completed in a timely and effective manner. Your bill, H.R. 497, and Senator Simon's and Senator Lugar's bill, S. 704, provide a very sound basis for this process, which I hope will include further discussion of the exact composition of the commission and the exact scope of its duties and powers.

Again, I applaud your efforts to place this important matter on the nation's agenda.

Sincerely,

A handwritten signature in black ink that reads "Bill Clinton". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

The Honorable Frank R. Wolf
House of Representatives
Washington, D.C. 20515