STATEMENT OF PROFESSOR JANUSZ A. ORDOVER AND PROFESSOR ROBERT D. WILLIG

Our names are Janusz A. Ordover and Robert D. Willig. We reside, respectively, at 131 Hemlock Hill Road, New Canaan, CT, 06840, and at 220 Ridgeview Road, Princeton, NJ, 08540.

I. Qualifications

Janusz A. Ordover is Professor of Economics at New York University. He received his Ph.D. in Economics with Highest Distinction from Columbia University in 1973. Upon graduation, he joined New York University ("NYU") with the rank of Assistant Professor. He is now a Full Professor of Economics at NYU. He also has taught as a Visiting Professor at Columbia University, Yale University, and Bocconi University in Milan, Italy. He took leaves of absence to join the Technical Staff at Bell Laboratories and, from 1991 to 1992, to serve as the Deputy Assistant Attorney General for Economics in the Antitrust Division of the U.S. Department of Justice.

Ordover has authored numerous articles on various topics in economics, including industrial organization economics and regulatory economics. He has served as an expert witness before Congress, Federal and State Administrative Agencies, and Federal and State Courts on subjects involving competitive issues in railroad, telecommunications, cable television, airline, postal services, and many other industries. He has served as a consultant for the Federal Trade Commission and the Department of Justice on antitrust policy; for the Organization for Economic Cooperation and Development ("OECD") on issues of competition, deregulation, and international trade; for the World Bank on telecommunications policy; and for the post-communist governments of Poland, Russia, and Hungary on the proper structure and enforcement of competition policy. He has conducted research studies, written, and consulted on such topics

as network access, the economics of the information superhighway, prospects for liberalization of markets in Latin America and the post-communist countries of Eastern Europe, airline computerized reservation systems, airline business practices and mergers, and surface transportation regulation and competition.

Robert D. Willig is Professor of Economics and Public Affairs at Princeton University. He received a Ph.D. in Economics from Stanford University in 1973, an M.S. in Operations Research from Stanford in 1968, and an A.B. from Harvard College in 1967. He worked in the Economics Research Department of Bell Laboratories, first as a member of the technical staff and later as a supervisor, from 1973 to 1978. Since 1978, he has held the position of Professor of Economics and Public Affairs at Princeton University. He has led the economics program at the Woodrow Wilson School of Public and International Affairs, and generally teaches there as well as in the Economics Department. He took academic leave to serve as Deputy Assistant Attorney General in the Antitrust Division of the U.S. Department of Justice from 1989 to 1991, and is presently on a one-year leave, serving as Principal External Advisor to the Inter-American Development Bank.

Willig authored Welfare Analysis of Policies Affecting Prices and Products; Contestable Markets and the Theory of Industry Structure; and some seventy-five articles in the economics literature. He served as co-editor of the Handbook of Industrial Organization, and as a member of the editorial boards of the American Economic Review, the Journal of Industrial Economics, Utilities Policy, and the MIT Press Series on Government Regulation of Economic Activity.

Willig has served as an expert witness before Congress, federal administrative agencies, and state public utility commissions on subjects involving regulation and deregulation of

transportation, communications, energy and other industries. He has also provided expert testimony before state and federal courts and agencies on matters of antitrust and competition. He has served as a consultant for the Federal Trade Commission and the U.S. Department of Justice on antitrust policy; for OECD on global trade and competition policy; and for the World Bank, the Inter-American Development Bank, the Harvard Institute for International Development, and for many foreign governments on privatization, competition, and regulation of infrastructure and other sectors. He has consulted widely in the private sector on pricing, costing, finance, business practices, business organization, and government-business relationships.

Willig is an elected Fellow of the Econometric Society, a former member of the Research Advisory Council of the American Enterprise Institute, an Associate of the Center for International Studies, a former Member of the New Jersey Governor's Task Force on the Market Pricing of Electricity, a Member of the Advisory Board of the *Electronic Journal of Industrial Organization and Regulation Abstracts*, a former Member of the National Research Council Highway Cost Allocation Study Review Committee, a former Member of the Defense Science Board Task Force on the Antitrust Aspects of Defense Industry Consolidation, and a Member of Consultants in Industry Economics, L.L.C.

II. Purpose of paper

The purpose of this paper is to analyze the "Statement of Enforcement Policy Regarding Unfair Exclusionary Conduct" that was proposed on April 6, 1998 by the U.S. Department of Transportation (the "Statement"). We were asked to perform this task by counsel for the ATA. Each of us has general experience with competition and regulatory policy issues from both the governmental and private perspectives, has extensive experience with airline policy issues from both perspectives, and has done academic and policy work on issues of what constitutes anticompetitive and procompetitive business behavior. In this regard, we are the authors of an academic work cited by DOT in support of its Statement: "An Economic Definition of Predation: Pricing and Product Innovation," *Yale Law Journal*, Vol. 90: 473, December 1981, pp. 1-44.

We reviewed DOT's Statement both theoretically and empirically. We evaluated the proposed DOT standards and guidelines with the economic logic that informed our cited academic work on the economic definition of predation, and with our knowledge of the professional economic and legal literature on exclusionary conduct as well as on competition. In addition, we drew upon our accumulated empirical knowledge of the workings of the industry, the data assembled by consultants to ATA, and individual interviews with pricing and scheduling decision-makers at several of the major airlines.

It is clear to us, both from economic logic and from our experiences in government and in industry consulting, that a DOT enforcement policy regarding airline business practices is likely to influence and even shape industry behavior. Consequently, it is a matter of genuine importance that the stated enforcement policy avoid the creation, albeit unintentionally, of impediments to

competition and to efficient, pro-consumer conduct. Our analysis of DOT's proposed Statement shows that the Statement would be, if adopted, a substantial impediment to competition rather than the promoter of competition that DOT intends it to be. The purpose of this paper is to help assure that this becomes recognized clearly and quickly so that the predictable harms to competition that would be caused by its adoption can be averted.

III. Summary of conclusions

The overall conclusions of this paper can be summarized as follows:

Adoption of the Statement would represent totally unwarranted reregulation and would present serious obstacles to competition and consumer welfare in the airline industry.

- 1. The airline industry should not be subjected to special economic regulation of competition.
- 2. DOT's proposed standards make unwarranted judgments about conduct by wrongly presuming harm to competition and the likelihood of predatory recoupment.
- 3. Leg (1) of the proposed overarching standard is dangerous to competition and unworkable in practice because it wrongly assumes that the incumbent's revenue foregone is a meaningful, knowable, and known number, and that the new entrant's capacity is a knowable, known, and fixed number.¹
- 4. The empirical evidence and airline economics show that a new entrant's capacity varies elastically and rapidly as a product of competition and in response to market conditions.
- 5. Leg (2) of the proposed overarching standard is far too vague and open-ended to provide guidance to airlines and to DOT regulators. It is mistaken in confining attention to short-run profits.
- 6. The proposed DOT standards and guidelines are genuinely dangerous because they would predictably arrest the very competition that DOT asserts they are intended to protect.

Following the definitions in the Statement, we will use "new entrant" to mean "an independent airline that has started jet service within the last ten years and pursues a competitive strategy of charging low fares." Of course, new entry can, and often does, involve carriers not covered by this definition.

- 7. The guidelines would predictably transform the incentives of the major incumbent carriers, motivating them to desist from competing hard against new entrants. The result would be far less benefit to consumers from vigorous competition, and a distorted and possibly bloated industry structure, going forward.
- 8. The guidelines would dramatically alter the incentives of new entrants and strongly encourage them to become protectorates of DOT rather than competitive benefactors of consumers.
- 9. Genuinely competitive and efficient behavior by a major incumbent carrier would predictably run afoul of one or more of the proposed new standards or guidelines.
- 10. DOT's proposed standard and guidelines are anticompetitive because demand expands dramatically and unpredictably in response to movements towards low fares, because targeting low fares to an entrant's passengers is impractical, and because an entrant's capacity on a route can expand and contract dramatically and rapidly in response to competition and market forces.

IV. Adoption of the guidelines would represent totally unwarranted reregulation of the airline industry.

Economic regulation, as distinguished from safety regulation, entails close governmental intervention into such everyday business decisions as pricing, capacity deployment, and marketing practices. It is generally recognized today, by leading economists from most schools of thought, that economic regulation should be confined to those circumstances where the following three-part test is satisfied: (i) there is natural monopoly over the relevant market (in that more than one supplier would wastefully duplicate significant industry costs); (ii) difficult entry barriers prevent potential competition from adequately disciplining an active monopolist in the relevant market; and (iii) there are market opportunities for the single seller to earn substantially excessive levels of profits through excessively high prices that are sustainable over time.

This widely held conclusion flows from the recognition that economic regulation is inevitably very costly to society — not just because of the inescapable costs of the administrative

body and procedures necessary to carry out the regulatory program, but far more so due to the inevitable distortions and constraints on business decision-making that accompany economic regulation. As a consequence, economic regulation should not be imposed unless the fundamental conditions of the industry meet the above three-part test, which in turn indicates that there would be substantial benefits from well-conducted economic regulation, and that there would not likely be much competition in the relevant market without economic regulation.

It is plain that the airline industry does not meet any of the components of the three-part test. The industry and most of the services that it provides are not described at all accurately by natural monopoly characteristics. Further, there has been and continues to be substantial entry activity, aided by the absence of entry constraints at most airports, as well as exit and dynamic reconfigurations of route networks. Moreover, while airline profits are today generally stronger than they have been, over the time period since deregulation the general picture of the profits of the major airlines is better described as weak than as reflecting monopolistic overcharge.

Congress recognized some twenty years ago that the airline industry should not be subjected to economic regulation, and academic economists recognized this fact considerably longer ago than that. It is fair to say that the community of academic economists today still agrees with that view, and that the consensus holds that airline deregulation has been a substantial success that brought generally lower prices and generally higher quality service to consumers. It appears from its language surrounding the proposed new standards and guidelines that DOT agrees that deregulation has been a success and that reregulation should be avoided.

Nevertheless, it is critical to recognize that DOT's proposed new standards and guidelines

would represent a major step towards the reimposition of economic regulation on the major airlines. The standards and guidelines announce that DOT would scrutinize in great detail the pricing, marketing, and capacity deployment decisions of the major carriers, and exercise enforcement powers over those decisions. The trigger for such scrutiny—and the resulting vulnerability to enforcement actions—would be competitive responses by a major carrier that were successful in the marketplace and that led or seemed likely to lead to the exit of a new entrant (as defined by DOT) from the routes at issue. This trigger is not an uncommon event in the industry, since there are often vigorous dynamic thrusts and marketing initiatives, and reshuffles of airlines' routes.

Most significantly from an economic perspective, the trigger does not entail any verified charges of illegal or even of inappropriate business conduct. Without foreknowledge of the entrant's likelihood of exiting, or of claiming that exit is imminent, the incumbent major carrier must anticipate that this new regulatory trigger may be pulled wherever entry has occurred. For these reasons, the standards and guidelines proposed by DOT have the essential characteristics of economic regulation and can be expected to bring back the concomitant social costs of economic regulation to an industry that is an inappropriate candidate for such policy treatment.

V. The airline industry should not be subjected to special economic regulation of competition.

It might be suggested that DOT's proposal should be accepted, despite the recognized dangers and costs of reregulation, because the new standards and guidelines would be confined to behavior that responds to competition from new entrants on local hub routes. Such a suggestion should be assessed in terms of how this purportedly narrower domain for economic regulation

compares to the broader general domain over which all seem to agree that economic regulation of the airlines should be avoided because it would bring far more costs than benefits.

The domain of incumbent responses to competition from entrants is generally less appropriate for economic regulation than even other areas of decision-making in the airline industry. First, it is not at all clear that there is in fact a significant problem that needs fixing in this domain. The data show that a substantial portion of passengers who fly a local hub route on a major carrier do have a competitive alternative on another carrier that is not a "major." While DOT expresses concern about the responses of major carriers to new entrants, it does not indicate a substantiated finding that these responses have generally been anticompetitive rather than genuinely competitive.

Second, unlike other areas that are within the general domain of economic regulation, responses to competition from entrants are also squarely within the scope of antitrust law. Airlines that believe they are the victims of predation or other exclusionary anticompetitive conduct certainly have available opportunities to seek relief through the courts, as in other industries. Moreover, the Department of Justice has publicly expressed its determination to employ its resources to apply the antitrust laws to the airline industry generally, with specific

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Data assembled at our request by the Campbell Aviation Group Inc. show that for most major airlines the percentages of passengers who have a carrier alternative that DOT considers "low-fare" range between 30% and 60%. (Of course, DOT's definition is irrelevant to the consumer, who cares only about the prices of the services in which he or she is interested.) These percentages tend to be higher on hub-related city-pair origination and destination routes. This finding is consistent with the notion that the preponderance of the routes on which there is substantial local traffic emanate from the majors' hubs.

emphasis on and reference to responses by major carriers to competition from non-majors.³

Thus, there is no expressed reason why the antitrust laws need more bolstering from special economic regulation in the airline industry than in any other industry in the economy. The competitive characteristics of the industry are not intrinsically different from those of many other industries that no one would consider for special regulation. The antitrust laws provide the right degree of general governmental and judicial oversight of business practices with respect to their impact on competition in such industries.

Third, as compared to the general domain of economic regulation, competitive responses to entrants by incumbents should be regarded as an especially sensitive area that is particularly prone to socially harmful distortions and regulatory costs. It is well known within the fields of both economics and law that it is difficult for a fact-finder accurately to discern whether challenged prices, capacity, and other business decisions are anticompetitive or whether they are instead a socially valuable part of the competitive process itself. Thus, it is all too easy for a well-intentioned process to go wrong, and mistakenly condemn procompetitive responses to entry. As a natural consequence, incumbents subject to such regulation will have the incentive to avoid the aggressive procompetitive behavior that is most likely to be labeled anticompetitive. Yet this is the very conduct that is most valued by consumers, and that policy should be most intent on protecting, rather than inadvertently proscribing or discouraging. Moreover, even as economic regulation of competitive responses to entry is apt to suppress and distort genuinely

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³ "Predation In the Airline Industry," remarks by Roger W. Fones, Chief, Transportation, Energy, and Agricultural Section, Antitrust Division, U.S. Department of Justice, before the American Bar Association Forum on Air and Space Law, Seattle, Washington, June 12, 1997.

procompetitive responses, it is also likely correspondingly to result in less procompetitive conduct by the entrants themselves. They will be facing less aggressively pro-consumer conduct by the incumbents as a result of the regulation, and will also be motivated to soften their own proconsumer aggression in reaction to their incentives to enjoy regulatory protection.

Hence, for all these reasons, it is unambiguously true that there is less rationale for, and far more dangers from, economic regulation of competitive responses to entry than economic regulation of other conduct. While this would be the right conclusion for any form of economic regulation of competition in the airline industry, as we shall see below, it is a matter of great urgency to avoid adoption of the specific proposals of DOT. These proposals are particularly inimical to competition and to its benefits for consumers.

VI. The two overarching standards proposed by DOT are deficient and dangerous to competition.

Against the backdrop of the above discussion of DOT proposals, it is time to turn to some of the details of the proposed standards and guidelines. In this section, we begin by analyzing the two portions of the overarching statement of the proposed standard:

"We propose to consider that a major carrier is engaging in unfair exclusionary practices ... if, in response to new entry into one or more of its local hub markets, it pursues a strategy of price cuts or capacity increases, or both, that either (1) causes it to forego more revenue than all of the new entrant's capacity could have diverted from it or (2) results in substantially lower operating profits – or greater losses – in the short run than would a reasonable alternative strategy for competing with the new entrant."

A. DOT's proposed standards leap to judgments about conduct by wrongly presuming harm to competition and the likelihood of predatory recoupment.

It is most immediately striking that this statement of DOT's proposed standard triggers

scrutiny, investigation, and enforcement activity that could lead to sanctions against incumbents' responses to entry without the need for a finding or determination that competition is at stake in a relevant market, and that the challenged practices are dangerous to that competition. It is generally accepted within the fields of economics and competition policy that judicial or regulatory assessment of a given firm's unilateral business practices to determine whether or not they are anticompetitive should not proceed without first showing that the practices are dangerous to competition. The reason for this general precept, already discussed above, is that judgments about conduct are necessarily uncertain and potentially repressing of competition itself, so that structural analysis of the relevant market should precede them.

According to this generally accepted view, if the first steps of structural analysis do not prove that the challenged unilateral conduct is dangerous to competition in a relevant market, then the process should not proceed to any next steps leading to judgments about the details of the conduct itself. The requisite first steps of analysis should include determinations of whether: (i) the challenged practices are likely, as a matter of business reality, to exclude efficient competitors; (ii) that exclusion of competitors is likely to create significant market power in a relevant market; (iii) entry, reentry, or potential competition are unlikely to eliminate that market power; and (iv) resulting market conditions can be expected to permit the challenged firm to recoup, by means of market power, an alleged predatory sacrifice of profits.⁴

The proposed DOT standard fails to adhere to this critical discipline. Instead, DOT seems to presume that major carriers have significant market power on local hub routes, that new carrier

Our 1981 article on predation that DOT cites for its guidelines contains a discussion of these points.

entrants are efficient and low-cost (including the many impacts of various dimensions of quality of service on passengers), that relevant markets are protected by entry and reentry barriers, that new carrier entrants are needed for competition to exist, and that new carrier entrants would persist and succeed but for anticompetitive responses by the incumbent major carriers. All of these presumptions are clearly false as universally general propositions. Many factors that are particular to the carriers, to the routes, to the airports, and to the networks are important for reaching conclusions about these issues. For example, DOT is silent on whether its presumptions are intended to apply to routes where there are in operation more than one non-major carrier, two hub-based major carriers, a low-fare offshoot operation of a major carrier, etc. Thus, DOT wrongly and dangerously presumes harm to competition, the efficiency of new carrier entrants, and the likelihood of predatory recoupment.

B. Leg (1) of the proposed overarching standard is dangerous to competition and unworkable in practice because it wrongly assumes that the incumbent's revenue forgone is a meaningful, knowable and known number, and that the new entrant's capacity is a knowable, known, and fixed number.

Leg (1) of the proposed standard explains that DOT will "consider that a major carrier is engaging in unfair exclusionary practices ... if, in response to entry by a new carrier into one or more of its local hub markets, it pursues a strategy of price cuts or capacity increases, or both, that either (1) causes it to forego more revenue than all of the new entrant's capacity could have diverted from it" In other words, the major carrier would have to choose its response in a fashion that assured that its price cuts and/or capacity increases (and other price related initiatives) did not give indications that DOT might interpret as meaning that the major carrier had given up more revenue than the revenue that all of the entrant's capacity could have diverted from

the carrier.

This standard is unworkable and dangerous to competition because the major carrier would not be able to know, at the time it must make its fare and capacity decisions, the various elements to be compared in the proposed test. Of course it is true that airline carriers, like all firms in markets with rivalry and other dynamic forces, deal with uncertainties in their business environments and proceed in the face of these uncertainties to make business decisions. The point here is that under the DOT proposal, adverse regulatory consequences await the incumbent major carrier whose decisions turn out, *ex post*, to be in violation of one of the standards or guidelines. As we shall see repeatedly, this regulatory risk is not only arbitrarily punishing to the targeted major carriers, but in addition it works largely in one direction under the DOT proposal: as a chill on pro-consumer competitive behavior.

1. DOT's foregone-revenue concept is undefined and unknown.

Under the proposed leg (1) standard, the incumbent must "forego" no more revenue than DOT's total-new entrant-capacity revenue-diversion measure. How much revenue the major carrier's response "causes it to forego" is a function of how many passengers respond to the various fare offerings and frequencies actually put into the market by the major carrier and the entrant (and any other carriers on the route), and what those passengers would have otherwise done with the entrant (and any other carriers) in the market in the absence of the incumbent's particular fare and service offers. As a matter of economic logic, it is clear that the incumbent carrier cannot know at decision time what the passenger responses will be both to what the incumbent elects to implement and to what DOT might have in mind for the comparison scenario

in which the carrier reacts in some other unknown manner that DOT will later deem more reasonable.

For example, if the incumbent offers a new low fare that essentially matches the low fare of the entrant, a moderately enthusiastic market response might cause much foregone revenue, an unenthusiastic market response might appear to forego less revenue, and a highly enthusiastic response might appear to forego even less revenue due to market expansion. Since the degree of market expansion is difficult to predict, to say nothing of how the entrant chooses (and any other carrier on the route chooses) to respond in turn and how that might affect passenger flows, common sense and economics agree on the conclusion that the incumbent would find it very difficult to make the predictions that underlie this portion of the proposed standard.

Likewise, the articulation of what is intended to be DOT's comparison benchmark for the assessment of revenues foregone under leg (1) of the standard is also not clear. But while it is not at all clear what DOT intended the benchmark to be, the obvious candidates all suffer from their own infirmities. It may be the case that the intended benchmark is a no-response scenario in

Different responses clearly lead to different losses in revenue. An unenthusiastic response may appear to cost only little in foregone revenues given that very few passengers avail themselves of the new fare. In contrast, a moderately enthusiastic response, where almost every passenger who would have flown on the incumbent buys at the new low fare, may represent a worse profit outcome for the incumbent than an alternative whereby the incumbent loses some passengers to the new entrant but retains the rest at the elevated fares. (Of course, since the entrant can expand its output, the losses to the incumbent cannot be predicted.) Finally, if the new fare generates a huge amount of additional traffic, this could be a better profit outcome for the incumbent than just conceding the traffic.

These predictions are even more uncertain given that a major carrier would have to account for competitive decisions made by all carriers on a route. DOT's Statement is unworkable, as a practical matter, where only a major carrier and a new entrant are involved. This difficulty is compounded where, as is often the case, multiple carriers serve a given route.

which the incumbent in no way alters any of its offerings. This benchmark is problematic, inasmuch as the response of the entrant to an entirely passive incumbent is difficult to predict in detail, but it is plain that it involves rapid expansion of capacity and passenger flow, together with concomitant impact on the incumbent. Another possibility is that the intended benchmark is the market prior to the entrant's arrival, or the market "but for" the entrant's arrival. Either of these latter possibilities, of course, must be assessed in a fashion that somehow takes into account the changes in revenues that would have occurred both because of any changes in fares and frequencies of the incumbent, and also because of the arrival of the entrant, the dynamics of its market participation, the reactions and dynamics of any other carriers' market participation, and the reactions of passengers to all this. But none of this is knowable by the incumbent at the time of its decision.

2. The capacity of an entrant in the market is highly elastic and a product of competition.

It must be emphasized that the capacity of the new entrant in the market at issue is not a fixed number but rather one that rapidly and elastically adjusts to the competitive dynamic interplay between an entrant, the incumbent, and any other carriers on the route. This is so as a matter of empirical fact. Section IX.B. references observations from airline economics as well as data on the dynamics of a number of new entrants on various routes, showing that their capacity on a given route is highly and rapidly variable. Section IX.A. considers the effects of capacity additions by majors in response to traffic stimulation and shows that such expansions are in line with the growth in traffic.

We were told by the airlines executives we interviewed that the capacity deployed by a

new entrant on any given route was typically subject to rapid variations depending on how well the carrier was doing in attracting passengers. They knew from experience that a relatively passive response to new entry on their part would typically cause relatively more diversion of passengers to the entrant, which would in turn lead the entrant rapidly to deploy more capacity on the route, enabling and causing yet more passenger diversion, in a continuing process lasting at least until the incumbent offered an aggressively pro-consumer rather than a passive response.

Further, interviewees explained that their rivals, like themselves, do not disclose the capacity available at the various fare classes, so that even if they knew the number of seat-miles a rival would fly, they nevertheless would be ignorant of the effective capacity that were deployed in competition with each of their own fare offerings. Moreover, while the effective capacity deployed by new entrants in each fare category is unknown to the incumbent, the incumbent is well aware, we were told, that the sizing of its and the competitors' "buckets" (i.e., the groups of seats allocated to given categories of fares) is constantly subject to adjustment up to the time of the flight's departure, and that adjustments are made in response to relative ticket demands that are shaped by competitive alternatives.

Thus, as a matter of economic logic and of business reality, incumbents cannot and should not respond in the marketplace to new entrants as if their capacity were known and fixed. A passive response such as that suggested by DOT ("a major carrier will choose to coexist with the low-fare competitor") based on an initial observation of small capacity flown by an entrant often would rapidly become a self-defeating prophecy, since the resulting strong demand for the entrant's service would impel a rapid expansion of its capacity, both physically in terms of seats

flown, and in effective capacity in terms of the sizes of the fare buckets involved. Obversely, a passive response by the incumbent to an entry strategy with substantial capacity would merely cede the market to the rival, while a more aggressive response would be procompetitively rational since the entrant could elastically scale back if it proved to be the loser in the competition for the passengers. While the latter response may appear to be consistent with a predatory strategy, it certainly is consistent with a strategy that is procompetitive and pro-consumer. The point is that the proposed policy would trigger regulation and enforcement activity without distinguishing between the two, thus deterring both.

3. Leg (1) of the proposed overarching standard is dangerous to competition.

To clarify why leg (1) of the proposed overarching standard is dangerous to competition, consider as an example the plight of an incumbent major carrier faced with low-capacity, low-fare entry by a new carrier on a local hub route. For ordinary business reasons, the incumbent would respond competitively with some matching fares, demand would expand, the incumbent might add some frequencies, and competition would benefit consumers and lead to an equilibrium division of supply that is consistent with relative efficiencies. The incumbent would not fail to respond to the entrant, because passivity would lead to the rapid diversion of passengers to the entrant's rapidly expanded capacity.

Under leg (1) of the proposed standard, the incumbent might be deterred from this procompetitive response by fear of opprobrium and regulatory sanctions. The incumbent must recognize that it would be vulnerable to adverse regulatory findings if the entrant proved to be relatively unattractive to passengers in the competitive scenario. This is so because if an entrant's

offering is unattractive, the new entrant would remain with relatively low capacity and the incumbent would be flying a relatively high number of passengers at low fares. This is the sort of circumstance that could lead the incumbent to fail the leg (1) test, in that it might appear to have foregone more revenues than the equilibrium small capacity of the entrant could have diverted.

As a consequence, the incumbent might be led to a passive rather than an aggressively procompetitive response to the entrant. In this case, sadly for the welfare of consumers, the entrant might not proceed with its own natural capacity expansion. After all, if the entrant stands pat, it continues to be under the protection of leg (1). If the entrant were to react to the passivity of the incumbent with capacity expansion, then the incumbent could react more aggressively without incurring significant risk of being found in violation of the leg (1) test. The entrant is thus likely to stand pat and passengers will lose the benefit of expansion by either the incumbent or the entrant.

To sum up this example, then, it is the threat of regulatory intervention under the standard of leg (1) that chills the incumbent's incentives for beneficial competition. At the same time, it is the promise of protection from the competition of the incumbent offered to smaller-scale entry by leg (1) that chills the entrant's incentives for beneficial competition. In the place of the competitive equilibrium that offers an efficient number and allocation of low-fare seats between the incumbent and the entrant, leg (1) instead results in a passive incumbent coexisting under regulation with a limited and small entrant.

C. Leg (2) of the proposed overarching standard is far too vague and openended to provide guidance to airlines and to DOT regulators. It is also mistaken in confining attention to short-run profits. Leg (2) of the proposed standard holds that DOT will "consider that a major carrier is engaging in unfair exclusionary practices if, in response to new entry into one or more of its local hub markets, it pursues a strategy of price cuts or capacity increases, or both, that ... (2) results in substantially lower operating profits—or greater losses—in the short run than would a reasonable alternative strategy for competing with the new entrant."

This leg is an entirely open-ended philosophical generality in that it does not specify what would be considered for the key role of the "reasonable alternative strategy...." Consequently, to the extent that DOT proposes to put this leg of the standard forward as an everyday guidepost for the decision-making of airlines and active regulators, it would be an additionally dangerous source of costly regulatory risk that would tend to deter competition.⁷

The one degree of specificity in the articulation of leg (2) of the standard pertains to confining the comparison of profit levels to the short run. In our view, this is a serious analytic error. Airlines, like other firms involved in industries with fierce rivalries, capital intensive technologies, highly trained personnel, and service offerings that are highly sensitive to reputations for quality and safety, must invest for the long run in order to develop and sustain their capabilities and competitive strengths. When airlines compete with investments as well as with short-run tactics, consumers, employees, and the performance of the industry are likely to benefit. Thus, it is simply wrong as a matter of economic logic to label as unfair or exclusionary, as does leg (2), a strategy that competes via investments that are costly in the short run, but that

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DOT suggests that it may compare a major carrier's response to a new entrant against the same carrier's response to Southwest, for example, but fails to explain how such a comparison is to be made, or why such a comparison makes sense on any particular route and for any particular competitive interaction with a given entrant.

are expected to pay off procompetitively in the longer run. It would not serve the interests of consumers or the entire economy well for DOT, however inadvertently, to deter airline investments by adopting the proposed leg (2) of the standard.

It appears to be the intent of DOT to link leg (2) of the overarching standard to tests based on observable indicators or identifiable patterns of behavior. This does not affect our analysis. As we have already discussed, leg (1) articulates one such misguided attempt. The three more specific guidelines articulated by DOT are further attempts to identify tests based on observables. They are illogical and dangerous, for some of the reasons already discussed, and are further analyzed below. ⁸

VII. The proposed DOT guidelines are genuinely dangerous because they would predictably arrest the very competition that DOT asserts they are intended to protect.

Each of the three proposed guidelines has a similar structure. Each begins with a different description of what DOT seems to believe is an identifiable pattern of behavior. Each ends with the same stipulation: "resulting, through self-diversion, in lower local revenue than would a reasonable alternative response." This common stipulation is similar in its meaning to the articulation in leg (2) of the overarching standard. Like that articulation, the common stipulation is plainly too open-ended and vague for practical guidance for regulators and business decision-makers, as well as too much based on the notion that regulators could somehow accurately

As discussed, the Statement is inconsistent with our cited paper on predatory pricing. That paper rejects some other proposed practical tests on the grounds that they did not encourage economic efficiency and genuine competition, and were inconsistent with our general standard. Significantly, DOT's statement is not consistent with any of the proposed alternatives, or any other tests or theories of which we are aware.

second guess an airline's views of its self-diversion, or precisely calculate the extent of such diversion after the fact under different pricing/capacity scenarios.

It is our view that in practice, if the DOT's proposal were adopted, the identifiable patterns of behavior of the first portions of the guidelines are apparently designed to be the triggers of investigation and regulatory intervention. This portion of Guideline (3) is triggered where "the number of local passengers that the major carrier carries at the new entrant's low fares (or at similar fares that are substantially below the major carrier's previous fares) exceeds the number of low-fare passengers carried by the new entrant...." In short, this guideline would trigger regulatory investigation and possibly intervention where the incumbent carries more low-fare passengers than the entrant, i.e., where the incumbent outcompetes the entrant among the low-fare passengers. (Such an inquiry is also triggered if the incumbent merely guesses incorrectly about how many fare passengers it, the new entrant, and any other carriers serving the route will carry.)

The purpose of Guideline (2) is unclear because it seems on its face to be redundant to Guideline (3). It would be triggered where "the number of local passengers that the major carrier carries at the new entrant's low fares (or at similar fares that are substantially below the major carrier's previous fares) exceeds the new entrant's total seat capacity" While Guideline (2) is triggered where the incumbent carries more low-fare passengers than the entrant's total seats, Guideline (3) is triggered where the incumbent carries more low-fare passengers than the entrant's low-fare passengers. It seems that whenever Guideline (2) would be triggered, Guideline (3) would by definition be triggered also (because the new entrant can not carry more passengers than

it has the capacity to carry), while (3) could be triggered without (2) being offended. Thus, (2) seems to add nothing new to (3).

Guideline (1) has as its trigger that "the major carrier adds capacity and sells ... a large number of seats at very low fares..." This trigger does not seem to entail a comparison of the levels of success of the incumbent and the entrant, like Guidelines (2) and (3), but rather an informally expressed pattern of aggressive pursuit of low fare passengers on the part of the major carrier. Presumably, Guideline (2) is a recognition of the fact that the incumbent does not know at any point in time how many passengers the entrant has carried. Hence, it makes no sense to base the trigger, as Guideline (3) does, on evidence that is not available to either airline at the time that business decisions are made.

A. The guidelines would predictably transform the incentives of the major incumbent carriers, motivating them to desist from competing hard against new entrants. The result would be far less benefit to consumers from vigorous competition, and a distorted and possibly bloated industry structure, going forward.

The major incumbent carriers would be deterred from natural competitive responses to entry as a result of the strictures of the guidelines. All three of the guidelines are keyed from observations of low fares charged by the incumbent major carrier. Under each of the guidelines, DOT would apply extremely ambiguous tests to the major's prices and revenues, if "low" fares are charged. If any of the tests seem to be failed by the incumbent, then (in the absence of "strong reasons" pointing otherwise) enforcement proceedings will be instituted. This eventuality would be extremely punishing to the incumbent in terms of opprobrium, litigation delays and costs,

Of course, the entrant does not know how many passengers the incumbent carries in its low-fare bucket.

further inability to respond in the marketplace to the entrant, and significant financial and business risk. As a consequence, major-carrier incumbents would be reluctant to charge the low fares that would trigger the ambiguous tests in the first place.

In addition, a major incumbent carrier would likely be deterred by Guideline (1) from fully adding capacity as part of its natural competitive response to entry. Adding capacity could well be part of a pro-consumer, competitive response for two reasons: (i) capacity additions augment schedule convenience, and thus can be part of competition over the quality of service, and (ii) capacity additions may be needed to provide service to both the passengers who would have flown anyway and the passengers who are stimulated to fly by the lower fares offered in the market by entrants and/or incumbents. It seems that Guideline (1) applies an even more openended and ambiguous test than the other two guidelines in the event that the incumbent adds capacity after entry, and as a result, the incumbent would be reluctant to add capacity even though it is likely to be a procompetitive response that would benefit consumers.

B. The guidelines would dramatically alter the incentives of new entrants and strongly encourage them to become protectorates of DOT rather than competitive benefactors of consumers.

Under the guidelines, an entrant would also be powerfully motivated to limit drastically the amount of capacity it deployed in a particular market. By so doing, it would gain much enhanced profit protection from DOT Guideline (2) against fare cuts of an incumbent major carrier. This is so because the smaller DOT's assessment of the new entrant's total seat capacity, the greater the likelihood that any given price response by an incumbent major carrier would be viewed as a violation of Guideline (2). Consequently, the incumbent would be more dramatically

deterred by the guidelines from responding to entry with fare cuts when the entry occurs with more limited capacity, and this would impel the entrant to a less competitively aggressive and beneficial business plan.

The entrant would be similarly motivated to attract fewer passengers by less aggressive pricing. This would enhance profit protection from DOT's Guideline (3) against fare cuts of an incumbent major carrier. The likelihood that any given price response by an incumbent major carrier would be viewed as a violation of Guideline (3) is greater where DOT's assessment of the number of low-fare passengers carried by the new entrant is smaller. Consequently, the incumbent would be more dramatically deterred by the guidelines from responding to entry with fare cuts when the entrant carries fewer passengers, and this would also impel the entrant to a less competitively aggressive and beneficial business plan.

Thus, the guidelines would likely cause the entrant to deploy less capacity and to price higher than it would otherwise, bringing far less procompetitive benefit to consumers. In this relatively uncompetitive role, the entrant would be more securely protected by DOT as a result of the proposed guidelines.

The DOT policy would also encourage the entrant to threaten to exit, strategically, because according to the Statement, DOT will only "intercede" if the new entrant does not remain in the market. 63 Fed. Reg. 17,922.¹⁰ A new entrant reducing capacity and threatening to exit the market could complain to the DOT, strategically inviting DOT scrutiny of a major carrier's practices as a competitive weapon against the incumbent.

Market evidence suggests that entrants expand and contract capacity in response to a multitude of market forces. Hence it could be easy to disguise a contraction as imminent exit.

In short, the guidelines would themselves repress competition, to the harm of consumers and to the weakening of the long-term efficiency and health of the industry. They would tend to induce a market structure with major carriers pressured to offer rigidly high-priced services as an umbrella over the high prices of the entrants, and with both the entrants and the incumbents deliberately confining their capacity deployment as a rational business reaction to the guidelines.

VIII. <u>Genuinely competitive and efficient behavior by a major incumbent carrier would</u> predictably run afoul of one or more of the proposed new guidelines.

The Statement not only creates the wrong competitive incentives for incumbents and new entrants, but also is inappropriate for the public interest for a broader, more compelling reason: the Statement would label as unfair and exclusionary, and therefore illegal, behavior that is perfectly procompetitive and pro-consumer. Competitive conduct should be honored for benefiting consumers, not in effect proscribed by rules under the rubric of protecting competition. Several categories of competitive and efficient behavior that could offend the guidelines are developed below on the basis of economic theory.

A. Demand Expansion, Not Self-Diversion.

As an example of an empirically significant phenomenon, suppose that a major incumbent carrier introduces and advertises a matching low fare in response to entry, and attempts to target it with fare restrictions. The matching fare proves to be very popular, and dramatically expands demand for the incumbent's service. Without expansion of the number of seats in the matching fare bucket, <u>i.e.</u>, the number of seats available at the matching fare, the incumbent carrier will spill far more passengers to the entrant and other carriers than it would gain from migration to higher fares. Expansion of the bucket alone would come at the expense of capacity to carry higher fare

local passengers and higher contribution connecting passengers flying beyond on the same airline.

Consequently, it pays the incumbent to add capacity to the route, and this expands demand further due to the added convenience of the schedule.

Consumers benefit greatly from these dynamic effects, and a searching analysis would provide two informative indications that the incumbent had responded procompetitively: (i) the incumbent's load factor did not decay to dangerous levels as a result of the capacity expansion, i.e., the capacity expansion was consonant with the demand expansion; and (ii) the incumbent's fare revenues and contributions earned from network effects on beyond segments exceed the relevant costs of the capacity expansion. Nevertheless, despite the benefits to consumers and the gains to the incumbent, the DOT guidelines might well prohibit such a response to entry. The number of local passengers that the major carrier flies at the low fare may well exceed the passenger count or even the capacity of the entrant. Guidelines (1), (2) and (3) seem to assert that it follows that the incumbent's low-fare offering must then be unprofitable for the incumbent due to "self-diversion," and that the response to the entrant should be condemned. In this example, the assertion of the guidelines is false, and the response of the incumbent is procompetitive and beneficial. The driving force is demand expansion rather than self-diversion, yet the guidelines presume otherwise.

B. Entrant's Capacity Not Fixed But Elastic.

Another significant example is based on the observation that the entrant's capacity deployment and number of passengers may well have been quite elastic, so that the incumbent was impelled to respond with low fares in order to hold onto its business. As a result, the investigator

employing the guidelines might see far more passengers choosing the incumbent, with its perceived superior service, than the entrant, and might see far more passengers choosing the incumbent than the seat capacity elected by the entrant in view of the limited demand for its service given the competitive response. Consequently, there would be the appearance of a violation of Guidelines (2) or (3). Yet, the response of the incumbent was beneficial to consumers and necessary for it to survive or remain competitive, and in no way predatory or anticompetitive.

C. Targeting Low Fares to Entrant's Passengers Is Impractical.

Consider circumstances where the incumbent matches or undercuts the entrant's fares, and earns more than the alternative of ceding the passengers to the entrant. Even if the fares offered were above an appropriate measure of the incumbent's costs, DOT may still find this behavior a violation of the standards proposed in the Statement because the low fare response might appear to the investigators employing the guidelines to be unnecessarily broad. But there is simply no practical way for the incumbent to target its low fares accurately to those passengers who would otherwise patronize the entrant. A limited bucket for the low fare might be exhausted by passengers who would not have otherwise been particularly likely to have flown the entrant's service, and thus be an ineffective competitive response. Then, the only effective competitive response would be a broader low fare, to the broad benefit of consumers. Here, prohibitions of the guidelines of such competitive responses would be misguided attempts to force narrow targeting of price cuts. Moreover, even if this were possible, the guidelines would not even succeed in protecting the entrant. This is so because a narrowly but accurately targeted price cut

Actually, we were told that an incumbent might initially match low fares but offer them only with limitations. As discussed in the text, such a limited response may not be sustainable.

would still divert passengers away from the entrant given that such a discount would be targeted at passengers who would otherwise fly the new entrant. Thus, the guidelines do not even make logical sense in their own upside-down world of attempting to protect inefficient entrants at the expense of competition.

IX. <u>DOT's proposed standard and guidelines are anticompetitive as a result of competition economics applied to the facts of airline dynamics.</u>

Through the analysis and discussions above, it has been clear that DOT's proposed standards and guidelines would be serious obstacles to competition and consumer welfare in the airline industry. It is important to understand how it could be that well-intended policy measures designed to protect competition could turn out, according to our analysis, predictably to have the opposite impact. We have come to the conclusion that, in essence, the proposal has foundered on the shoals of the empirical dynamics of the industry, and their impact on the economics of competition analysis. Several features of the empirical reality of airlines are at the center of this analysis.

First is the empirical proposition that targeting of discount fares is necessarily imprecise and imperfect. Our interviews made it clear that airline decision-makers attempt in their thought processes and in their marketing moves to target with matching low fares those passengers who are most likely to be attracted to the offerings of new entrants and any other low-fare competitors as well. We learned that it is the "leakiness of the fare buckets" and the impact of DOT consumer rules requiring reasonable availability of advertised fares that drive the airlines to offer the low fares relatively widely in response to relatively successful entrants. Once the targeting has to be

sufficiently wide in order to compete, it becomes impractical to defend many of the higher fare buckets against cannibalization. At this point, the profit maximizing strategy may well shift to embrace the market expansion made possible by widely available low fares, and to accordingly respond with added capacity and even fewer restrictions on the low fares. Hence, the second key empirical proposition is that demand may well expand dramatically in response to movements towards low fares.

A. Local passenger demand may expand dramatically and unpredictably in reaction to low fare competition.

DOT recognizes that entry by a low-fare carrier can greatly stimulate demand. The Statement offers the example of traffic stimulation on local routes served by Morris Air and Southwest where, apparently, these routes "... saw their traffic triple and their average fares decrease by half." Roger Fones on behalf of the Department of Justice noted that "it is not unusual for a deep price cut to double the demand for airline service on a city pair." Our interviews with airlines confirmed that low fares can lead to significant increases in demand for the low-priced coach seats. That stimulated demand comes from airline consumers who would otherwise not travel at the higher fares, from those who travel more frequently, and also from those passengers who switch from the higher fares in the business class to cheaper coach fares. Concomitantly, the actual magnitudes of the pertinent demand elasticities are likely to differ unpredictably from route to route. 13

Hence, the fact that demand can be expected to be significantly stimulated as a result of

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Fones Speech, at 2.

This point was confirmed to us in the interviews with several airlines. The interviewees noted that leisure destinations are very likely to enjoy significant traffic stimulation from low fares.

lower fares must be taken into account when assessing the competitive responses of the major carriers to competitive entry. In particular, if fare competition stimulates demand, it is likely that capacity increases of the incumbent, as well as the entrant, to meet the stimulated demand will be consistent with competitive outcomes. However, if the incumbent's capacity is frozen in the market, because the incumbent has been deterred by the proposed DOT guidelines from adding new capacity, it will spill traffic to other carriers or could fill its seats with the increased local traffic at the expense of the connect traffic, <u>i.e.</u>, traffic that travels from behind and beyond the hub. This connect traffic is especially important to the major carriers because losses in this traffic will reverberate throughout the whole network, which is optimized to handle such traffic.

It is unreasonable to assume that if lower prices stimulate traffic and if the incumbent matches the fares of the entrant (even on somewhat restricted bases) that the incumbent will not procompetitively be impelled to add capacity to serve consumers. The proposed guidelines, on the other hand, take a very dim view of capacity expansions by the major carrier who competes with the new entrant. Yet, there are many real market instances where demand stimulation from low fares led to capacity expansion by the major without a reduction in load factors by the major carrier. Several examples will illustrate these empirical market dynamics.

Delta reports that between 1Q95 and 1Q96, its capacity on the Atlanta to Orlando route grew by 11% while its load factors increased from 74.4% to 79.3%, despite intense competition from ValuJet and Kiwi International. On the Atlanta to Louisville, KY route, capacity increased by 12% over the same period while the load factor jumped from 70.8% to 80%.

American Airlines expanded capacity on the Dallas/Fort Worth to Colorado Springs route,

which was entered by Western Pacific in 2Q95. Just prior to this entry, American had load factors around 60%. As a result of price reductions, load factors increased into the 70% range, despite the fact that American more than doubled its capacity between 2Q95 and 3Q96.

Another American Airlines example illustrates the same point. Prior to Vanguard's entry on the Dallas/Fort Worth to Kansas City route, the load factors fluctuated in the 60% to 70% range. Vanguard entered in 1Q95, halted non-stop service in 4Q95, and resumed service in 4Q96. After Vanguard returned, load factors stayed above 75%, despite the fact that American Airlines' capacity grew by almost 50% between 1Q95 and 1Q97. This increase in the load factor resulted from the fact that the number of onboard passengers grew by 63% during the same time period.

On the Denver to Las Vegas route, aggregate capacity grew by fifty percent between 1Q95 and 1Q97, with United's capacity alone increasing by 39%. Yet, United's load factor remained high, often exceeding 80% and never falling below 70.3% during the period.

Of course, in all of these cases, yields fell. This is not surprising. What is relevant is that these reductions in yields substantially stimulated traffic and induced capacity expansions without which the stimulated traffic could not have been carried, unless, that is, the incumbents were to cede the stimulated traffic to the entrants.

We do not believe that the proposed DOT guidelines would protect competition and consumer interests by deterring the capacity expansions of either entrants or incumbents, since these expansions are an expected and efficient adaptation to stimulated demand under the most highly competitive conditions. Thus, significant capacity expansion and an unpredictable competitive

struggle must be expected and permitted by successful pro-consumer policy in the aftermath of new entry.

The third dynamic empirical regularity that must be understood is that new entrant's capacity is not a fixed number, but is rather an elastic result of the competitive interaction. We have collected some qualitative and quantitative facts to help make this empirical proposition clearer.

B. The empirical evidence and airline economics show that a new entrant's capacity varies elastically and rapidly in response to market conditions.

Because their capacity decisions have an impact on an entire network, major carriers generally make such decisions a limited number of times in a year with over two months of lead time before the capacity decision is implemented.¹⁵ A new entrant can make capacity decisions much more quickly, because unlike a major carrier, an entrant does not need to optimize its capacity decisions over the whole network. Its concern is solely with the profitability of local traffic and not with the profitability of a particular flight that carries both local passengers as well as passengers that travel beyond the hub.

The proposition that a new entrant can make capacity decisions quickly and in response to market conditions is both reasonable and supported by evidence. It is reasonable because the assets that the new entrant needs to serve any particular route can be quickly and readily obtained by leasing aircraft and hiring flight crews, or by diverting aircraft and crews from other routes.¹⁶

Delta exited in 2Q95, indicating that it is not only low fare entrants that leave routes.

A decision to redeploy larger aircraft can be implemented more quickly than that.

Basically, this all means that there are very few sunk costs associated with entry at the route level. This finding also bears on the central question of whether an airline that engages in predatory conduct could ever recoup the losses it would sustain during an alleged predatory

Ground personnel and ground services—such as unloading luggage or refueling the aircraft—are also readily available. Finally, at many airports, there are no gate and slot constraints that might hamper quick expansion of service. In sum, we conclude that new entrants face no significant sunk cost or technological impediments to capacity expansion, especially on a particular route. Any major carrier who predicates its business strategy on the assumption that its low fare competitor's capacity is somehow fixed would find itself at a competitive disadvantage and would be always forced to fight from behind to regain (or maintain) market share.

Empirical evidence supports our reasoning based on airline economics. Several examples will suffice to demonstrate how elastic an entrant's capacity is. For a first example, consider Reno Air's service from Anchorage to Seattle. It offered 40,880 seats during the first full quarter of competition (i.e., 3Q95). It moved down to 25,388 seats by 1Q96 and then grew to 142,231 seats by 3Q96. Even accounting for seasonal variations in demand, we conclude that Reno Air was able to respond quickly to changing market conditions.

On the Atlanta to Newark route, Kiwi International kept its capacity steady at about 50,000 seats per quarter, and then almost doubled its capacity from 66,300 in 2Q94 to 124,995 seats by 2Q95. ValuJet (on the Atlanta to Columbus route), Vanguard (on the Dallas/Fort Worth to Wichita route) and Reno Air (on the Las Vegas to Reno route) also implemented year-on-year increases in capacity of almost 100%. There are many other such examples, as well as examples that demonstrate that an entrant can rapidly contract its capacity, if there is no demonstrated demand for its services.

X. Concluding remarks

Our analysis of DOT's proposed Statement shows that it would be, if adopted, a substantial impediment to competition, rather than the promoter of competition that DOT asserts it is intended to be. It is our hope that this paper will help assure that DOT recognizes that its proposal will not fulfill its own goals but will instead subvert them.