UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Slot Management and Transparency for LaGuardia Airport, John F. Kennedy International Airport, and Newark Liberty International Airport	**Docket No. FAA–2014-1073** **Notice No. 14–11**

COMMENTS OF THE
AMERICAN ANTITRUST INSTITUTE

I. Introduction

The AAI files these comments in the above-captioned proceeding regarding the Notice of Proposed Rulemaking (NPRM) by the U.S. Department of Transportation (DOT), Federal Aviation Administration (FAA) in regard to slot management and transparency for LaGuardia Airport (LGA), John F. Kennedy International Airport (JFK), and Newark Liberty International Airport (EWR).[1] The AAI is an independent and nonprofit education, research, and advocacy organization. Our mission is to advance the role of competition in the economy, protect consumers, and sustain the vitality of the antitrust laws.[2] The AAI has extensive experience analyzing competition policy and regulatory issues in the commercial airline industry, including frequent congressional testimony and white papers analyzing the competitive effects and efficiency claims surrounding most major airline mergers.

The AAI's Comments are organized as follows. Section II highlights the NPRM proposals that are likely to have beneficial effects on entry, competition, and efficiency.

[1] U.S. Department of Transportation, Federal Aviation Administration, *Slot Management and Transparency for LaGuardia Airport, John F. Kennedy International Airport, and Newark Liberty International Airport*,
[2] For more information, please see antitrustinstitute.org.

Section III provides important context regarding competition in the U.S. airline industry for the purposes of evaluating the proposals in the NPRM. Section IV outlines various areas where the NPRM proposals could be refined to better achieve the FAA's procompetitive goals. Section V discusses the various options for the design of a secondary slot market, and suggests that a hybrid of alternatives 4 and 5 is likely to be the optimal approach.

II. The Proposed Slot Policies Could Have a Number of Beneficial Effects on Competition and Consumers

The AAI commends the FAA for proposing to revise its slot management and transparency policies for the New York City area airports. Such initiatives work toward more efficient allocation of scarce airport takeoff and landing capacity and promote more competitive incentives and outcomes in domestic air travel markets. If properly structured, implemented, and monitored, new slot policies could have beneficial effects on efficiency, entry, and competition. Such benefits would flow to the consumers utilizing routes involving these airports as an origin or destination points, and potentially create positive spillover effects on competition elsewhere in airline networks. A number of features of the NPRM proposals merit mention.

First, the review process outlined in the NPRM would further limit the ability of incumbents to exclude rivals by minimizing potential withholding of slots. Mechanisms for this include the use-or-lose rule, a secondary market for buying and selling slots, and critical safeguards against anticompetitive slot acquisitions by incumbents. Second, in reviewing slot transfers, the DOT's proposed coordination with the Department of Justice ("DOJ") would help protect competition and the public interest. The DOJ has extensive

experience in examining the competitive implications of airline mergers and slot transfers, crafting antitrust remedies, and weighing in on broader aviation competition policy.[3] A collaborative, interagency approach would combine DOJ's expertise with DOT's institutional and technical expertise in the airline industry. This could minimize the possibility of divergent outcomes across the two agencies in reviewing slot transfers that can arise from differences in data collection methods, analytical and methodological differences in analysis, statutory standards, and remedies.[4] Coordination also reduces the risk that anticompetitive slot transfers are permitted, or that procompetitive slot acquisitions are challenged, respectively.

III. Diminished Competition and Congestion in the Domestic Airline Industry Highlights the Need for New Slot Policies

A. Mergers Have Resulted in High Concentration and Barriers to Entry

In the last several years, the U.S. airline industry has experienced both long-standing and novel challenges—fuel price volatility, limits to organic growth, and pressures to expand globally.[5] Consolidation has perhaps been the most commonly applied remedy for these challenges, and the industry's transformation has been swift and dramatic. For example, there have been seven mergers in recent years: 2005 - US Airways and America West Airlines; 2008 - Delta Air Lines and Northwest Airlines;

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[3] *E.g.*, Press Release, Dep't of Justice, Antitrust Div., Justice Department Requires US Airways and American Airlines to Divest Facilities at Seven Key Airports to Enhance System-Wide Competition and Settle Merger Challenge (Nov. 12, 2013), *available at* http://www.justice.gov/atr/public/press_releases/2013/301616.htm; Press Release, Dep't of Justice, Antitrust Div., Statement of the Department of Justice Antitrust Division on Its Decision To Close Its Investigation of Southwest's Acquisition of AirTran (Apr. 26, 2011), *available at* http://www.justice.gov/atr/public/press_releases/2011/270293.htm.

[4] See, e.g., Diana L. Moss, *Antitrust Versus Regulatory Merger Review: The Case of Electricity*, 32 REVIEW OF INDUSTRIAL ORGANIZATION 241 (2008).

[5] See, e.g., Severin Borenstein, *Why U.S. Airlines Need to Adapt to a Slow-Growth Future*, BLOOMBERG.COM, June 3, 2012, *available at* http://www.bloomberg.com/news/2012-06-03/why-u-s-airlines-need-to-adapt-to-a-slow-growth-future.html.

2009 - Republic Airlines and Midwest Airlines; 2010 - Republic Airlines and Frontier Airlines; 2010 - United Airlines and Continental Airlines; 2011 - Southwest Airlines and AirTran Airways; and 2013 - USAirways and American Airlines.

All seven deals went through either unchallenged by federal antitrust authorities, or with consent orders requiring remedies to address likely competitive harms (e.g., USAirways–American). USAirways–American is the largest U.S. carrier (21% market share), followed by Southwest (17%), United Continental (17%), and Delta (15%).[6] The Big 4 therefore control 70 percent of the national market. This sweeping consolidation has produced high levels of concentration on many non-stop routes, with some markets dominated by a single carrier or only a few interdependent sellers. Smaller competitors, such as low cost carriers (LCCs) and regionals, are less likely to effectively discipline the pricing of the Big 4, and even "go along" with the higher prices that often accompany diminished competition in highly concentrated markets.

One major effect of consolidation and aviation policies that have facilitated the formation of fortress hubs is that entry at hub airports is now difficult. And the entry that does occur is likely to provide weak competition. Secondary airports in major metropolitan areas—heralded as providing competitive discipline for legacy-dominated hubs—do not exist in sufficient numbers to significantly benefit consumers. And many secondary airports are themselves becoming dominated by the former LCC Southwest Airlines. For example, concentration at Chicago's Midway Airport (MDW) grew from 5,657 HHI at the end of 2006 to 8,747 HHI at the beginning of 2015. This increase was

[6] U.S. Department of Transportation, Bureau of Transportation Statistics, *Domestic Market Share: January 2014 – December 2014, available at* http://www.transtats.bts.gov/. Shares are measured by revenue passenger-miles.

due almost entirely to a 20 percentage point increase in Southwest's market share over that period.[7]

The result of a decade of rapid consolidation has been the metamorphosis of an industry in which hubs were originally designed to be open access facilities at which multiple, competing airlines provided service. Now, only a few networks operated by the legacy carriers and Southwest remain and they are largely impermeable to competition, providing a hostile environment in which smaller competitors have difficulty gaining a foothold or expanding. This spree of consolidation advanced a closed system of hubs controlled by the few rivals that remain in the national market, leaving higher fares and reduced service for domestic consumers.[8]

The three New York area airports are no exception to broader observations regarding concentration at domestic airports. EWR, JFK, and LGA airports display levels of concentration high enough to raise competitive concerns under the DOJ and Federal Trade Commission's Horizontal Merger Guidelines.[9] For example, in January 2015, concentration, as measured by (revenue passenger miles) at EWR was almost 3,000 HHI, about 2,700 HHI at JFK, and about 2,500 at LGA.[10] Legacy airlines at EWR controlled about 86% of total passenger traffic, 49% at JFK, and 79% at LGA.[11] At EWR, United controls 73% of slots and at LGA, Delta and American account for 74% of slots. JFK

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[7] U.S. Department of Transportation (DOT), Bureau of Transportation Statistics (BTS), Airport Snapshots, Chicago Midway International Airport, January 2015, available http://www.transtats.bts.gov/airports.asp.
[8] Diana L. Moss and Kevin Mitchell, *The Proposed Merger of US Airways and American Airlines: The Rush to Closed Airline Systems*, American Antitrust Institute (August 8, 2012), at 11, *available at* http://antitrustinstitute.org/sites/default/files/AAI_BTC_USAir-AA_White%20Paper_8-7.pdf.
[9] *See* U.S. Department of Justice and Federal Trade Commission, HORIZONTAL MERGER GUIDELINES 19 (Aug. 19, 2010).
[10] DOT BTS, *supra* note 7.
[11] *See* U.S. GEN. ACCOUNTABILITY OFFICE, SLOT-CONTROLLED AIRPORTS: FAA'S RULES COULD BE IMPROVED TO ENHANCE COMPETITION AND USE OF AVAILABLE CAPACITY 49 (2012), Figure 6, at p. 50.

fares slightly better, with Delta and American controlling 48% of available slots, and JetBlue controlling a further 26%.[12]

With few exceptions, these metrics raise red flags as to the potentially strategic use of slots. As the NPRM states, for example, the FAA has observed "some underutilization behavior at EWR, JFK, and LGA."[13] Other research has also found evidence of incumbents' underutilizing slots at these airports.[14] Hub concentration erects barriers to entry to competitors. As discussed next, capacity-constrained or congested hubs have particularly strategic competitive value in an airline network(s).

B. Hub Congestion Adversely Affects Smaller Market Participants

Consolidation has invigorated the debate over the relationship between increased airline network size and effects such as diseconomies of scale and density and congestion externalities.[15] Larger networks with more intensive hubbing potentially create more opportunities for connectivity and benefits to consumers. But hubbing can create negative externalities such as congestion and delay for both large and small carriers utilizing the hub. In theory there are incentives for a carrier to internalize congestion costs that result from carrier-caused factors as it becomes more dominant at a hub. This effect is, however, dependent on market structure.[16] Moreover, costs that are outside a carrier's

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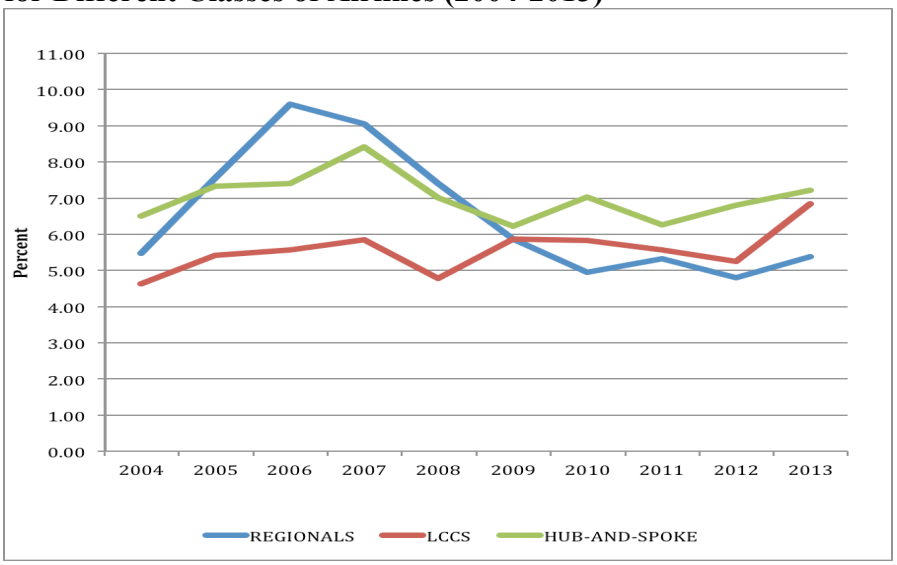
[12] NPRM, *supra* note 1, at 1284.
[13] NPRM, *supra* note 1, at 1288.
[14] GAO, *supra* note 11 at 39-53; Hideki Fukui, *Do Carriers Abuse the Slot System to Inhibit Airport Capacity Usage? Evidence from the U.S. Experience*, 24 J.TRANSP. MGMT. 1 (2012).
[15] See Diana L. Moss, *Delivering the Benefits? Efficiencies and Airline Mergers*, American Antitrust Institute, November 21, 2013, *available at* http://antitrustinstitute.org/sites/default/files/AAI_BTC_USAir-AA_White%20Paper_8-7.pdf.
[16] *See, e.g., Jan K. Brueckner, Airport Congestion When Carriers Have Market Power,* 92 AMERICAN ECONOMIC REVIEW 1357 (2002), *See also,* Christopher Mayer and Todd Sinai, *Network effects, congestion externalities, and air traffic delays: Or why all delays are not evil.* 93 AMERICAN ECONOMIC REVIEW 1194 (2003) and Nicholas G. Rupp, *Do carriers internalize congestion costs? Empirical evidence on the internalization question,* 65 JOURNAL OF URBAN ECONOMICS 24 (2009).

control (e.g., weather delays) are not internalized. All of these costs, whether they are internalized or not, however, create ripple effects throughout airline networks.

The implications of carrier-caused congestion provides an important frame of reference for evaluating policies designed to address congestion and competition at the New York City airports—and airports more generally. Data for carrier-caused delays for the period 2004-2013 are shown in Figure 1. The highest level of average carrier-caused delays over the period is associated with the hub-and-spoke airlines, followed by regional airlines (e.g., Alaska, Hawaiian), then LCCs (Jet Blue, Spirit). [17] *Changes* in delays over the period reveal a different pattern. Delays for LCCs increase by about 47%, while those for hub-and-spoke airlines increase by 11%, and regional airlines fall by about 2%.

[17] Data derived from the *Air Travel Consumer Report,* U.S. Department of Transportation, Office of Aviation Enforcement and Proceedings, Table 9: Causes of Delay, by Carrier, September 2004-2013, *available at* http://www.dot.gov/airconsumer/air-travel-consumer-report-archive. Southwest is included in the LCC group from 2004-2008 and the hub-and-spoke group from 2009-2013, based on changes in the airline's pricing and capacity decisions.

Figure 1: Air Carrier Delays as Percent of Total Flights for Different Classes of Airlines (2004-2013)



There are three periods within the 2004-2013 timeframe also worth noting. From 2004 to 2007, for example, all carriers exhibit large increases in delays, with regional delays rising by 65% (Table 1). This trend reverses between 2007 and 2009, with declines in delays for hub-and-spoke (35%) and regional carriers (36%) but no change for LCCs. From 2009 to 2013, the trend reverses again, with increases in delays of about 16% for both LCCs and hub-and-spoke carriers but little change for regionals. Hub-and-spoke delays appear to have risen, on average, since 2009. This period coincides with a series of large airline mergers. Delays for LCCs have increased substantially -- rising sharply in 2008 and again in 2012 -- and are now close to the level for hub-and-spoke carriers.

Table 1: Changes in Carrier-Caused Delays by Type of Airline (2004-2013)

Type of Carrier	Time Period			
	2004-2007	2007-2009	2009-2013	2004-2013
	(percent)			
Regionals	65.3	-35.2	-8.3	-1.7
Low Cost Carriers	26.3	0.3	16.4	47.4
Hub-and-Spoke	29.2	-26.0	15.7	10.7

The increase in LCC delays may be explained by a number of possible actors. One is congestion externalities associated with large mergers and high levels of hub concentration in the mid to late 2000s. Other explanations could include incentives for large airlines to create delays for smaller rivals. It may also be possible that LCCs are bracketing flights by hub-and-spoke carriers and scheduling in the face of congestion, rather than avoiding peak times, to compete. New York City airports display delay statistics that are symptomatic of the broader issues in the domestic airline system. Congestion at EWR, JFK, and LGA is in fact far higher than average. In 2011, for example, the average number of late arrivals and flight cancellations was about 35% at EWR, over 30% at LGA, and almost 30% at JFK. This compares to the system average of just over 20%.[18]

C. In Light of Problems at EWR, JFK, and LGA, the NPRM's Focus on New Entrants is Likely to Promote More Competitive Outcomes

Due to an inability to obtain slots at the New York are airports, new entrants and smaller competitors have faced difficulties expanding their operations and competing against incumbent network carriers with significant slot holdings. High levels of concentration and congestion at the airports at issue make modifications to existing slot management policies a priority. But such policies should promote the more efficient use of slots, access to slots in a way that enables new entrants and smaller incumbents to compete effectively (i.e., during peak times), and prevent the use of slots by large incumbents for the purposes of disadvantaging rivals.

The NPRM proposes to give preference to new entrants in awarding slots. This

[18] GAO, *supra* note 11, Figure 1, at p. 6.

approach is more likely to stimulate competition. The NPRM proposes to define a "new entrant" as a carrier with twenty or fewer slots. This is a higher ceiling than considered by the Worldwide Slot Guidelines (WSG). By setting a higher ceiling than the WSG, this definition of new entrant would not only encourage new entry but would also facilitate the growth of small carriers to minimum efficient scale. While encouraging entry, the WSG definition of new entrant would constrain the ability of new entrants to establish scale. For small carriers that do not yet have the means to acquire slots on the secondary market, the WSG definition could force them to operate at an inefficient scale, hindering them competitively.

IV. The Proposed Rule Could Be Refined to Ensure Procompetitive Aims and Consumer Benefits Are Realized

The foregoing discussion highlights a number of proposals in the NPRM that are likely to stimulate competition. However, the AAI notes that several refinements or extensions to the proposals could facilitate achievement of procompetitive goals.

A. Slot Policies at the New York Area Airports Should be Mindful of Problems at Other Airports

The proposals outlined in the NPRM would work to promote competition at one important "node" in domestic airline networks. But hubs are only one dimension of how competition is typically evaluated in airline markets. In merger investigations, for example, the DOJ considers markets at the *route* level, which necessarily involves an origin and destination airport. The availability of alternative routing using secondary (versus primary) airports is a particularly good example of the impotence of route-level competition.

Consolidation, strategic competitive conduct (e.g., entry, predatory behavior, etc.) and policies governing competition at particular hubs will have effects on potentially all connecting airports served through that hub. "Carving out" nodes on a network for special treatment or policies, no matter how well-intended, therefore runs the risk of creating distortionary effects through the entire network. The AAI suggests, therefore, that it is important to develop slot allocation that are mindful of how changes at EWR, LGA, and JFK will affect connecting airports in airline networks. Moreover, the policies adopted in this NPRM— if they prove successful in promoting entry and competition— will serve as a template for other congested domestic airports. But the policies and procedures ultimately adopted may also be suitable for non-congested airports as well. This would promote continuity, particularly in how slot transfers and any secondary markets for slots are designed.

The NPRM currently does not address slot allocation procedures at any airports other than EWR, JFK, and LGA. The AAI suggests that while the NPRM is a good starting point, the proposals should articulate, at a minimum, how the FAA proposes to monitor for the effects of slot policies at EWR, JFK, and LGA on other parts of the airline networks of which they are an integral part. The AAI also suggests that the proposal consider the effects of the slot allocation procedures on competition on the routes using the three airports as a destination or origin, with an eye to how such procedures may ultimately be generalizable to other congested and non-congested airports, particularly those in metropolitan locations where multiple airports serve the traveling population.

B. Modifications to Procedures for Reviewing Slot Transactions

The AAI suggest that the FAA consider a number of modifications to the NPRM's proposals regarding the review of slot transactions. First, the proposal states that the DOT has 14 days from receipt of the request for approval to decide whether to review a transaction and request additional information.[19] Further, the proposed rule allows that the DOT "*may* monitor bulletin board postings, if that option is adopted in a final rule, to determine whether it suspects anticompetitive behavior."[20] The AAI suggests that the 14-day review period be lengthened to allow for careful competition and public interest review, or there should be a provision included that would allow the agency to extend the review period when more time is necessary. Studying the competitive effects of slot transfers can be time-consuming, as it often requires complex analysis of market structure and firm conduct at both the particular airport and connecting destinations. The obligation to meet such a tight deadline could lead to systemic under-enforcement.

Second, despite high levels of passenger traffic and slot concentration at the New York area airports, the proposal states "[t]he DOT expects very few proposed standalone transactions would raise significant competitive or public interest concerns."[21] In light of concentration statistics, the AAI suggests that the DOT might scale back on this optimistic expectation and instead exercise constant vigilance toward slot transfers. This should include affirmative monitoring of bulletin board postings and a presumption of anticompetitive effects in any slot transfer that increases the slot holdings of the largest carriers at any of the airports.

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[19] NPRM, *supra* note 1, at 1292.
[20] NPRM, *supra* note 1, at 1293, (italics added).
[21] *Id.*

Third, the NPRM proposes to review multiple small transactions on a case-by-case basis.[22] The proposed rule states that "the DOT would seek to ensure that carriers not enter into multiple small transactions with the purpose of evading the review process; multiple transactions within a three-year period could be reviewed if they constituted a pattern and raised competitive or public interest issues."[23] The DOT is correct to consider the aggregate impact of small transactions on competition, proposals to focus on large transactions could permit airlines to fly below the regulatory "radar." For example, a series of small transactions can be used to effectively exclude small carriers and new entrants, which may result in wide-ranging anticompetitive effects.

In light of the foregoing, slot review provisions in the NPRM could be strengthened in three ways. First, the rule as currently formulated states that "multiple transactions within a three-year period could be reviewed."[24] Instead, the Agency might consider reviewing multiple transfers of small numbers of slot if the number of transfers exceeds a certain threshold within a three-year period. Second, in light of the DOJ's comparative advantage in evaluative competitive effects, the DOT should make explicit that any review of multiple, repetitive transactions should include "coordinat[ion] and cooperat[ion]" with the DOJ[25] in the same way as standalone transactions that raise competitive concerns.

Finally, **t**he rule should make clear that if DOT and DOJ conclude upon review that a series of small transfers has had anticompetitive effects, the DOT would retain the

[22] *Id.* at 1293. ("the DOT would seek to ensure that carriers not enter into multiple small transactions with the purpose of evading the review process.").
[23] NPRM, *supra* note 1, at 1293.
[24] *Id.,* at 1293.
[25] *Id.,* at 1292.

power to retroactively remedy the anti-competitive transfers by either undoing the transaction or mandating divestiture to a third party to ensure competition is restored to pre-transfer levels. These changes would be beneficial for all parties involved. Airlines seeking to transfer slots would have more certainty about the regulatory environment in which they are operating. DOT enforcement decisions would be more uniform and easier to defend against judicial challenges if a brighter line test for review of slot transfers were established. And consumers would be better protected from anticompetitive slot transfers.

C. Modifying the 80 Percent Usage Requirement

The proposal "retain[s] the current 80 percent usage requirement"[26] in an effort to balance between planned and unplanned cancellations and potentially anticompetitive exclusionary tactics. Under the former approach, the airline would have to use a slot for at least 80 percent of the time for the same flight or series of flights during the scheduling season, or otherwise forfeit it to the FAA. The change in calculating slot usage under the new rules is commendable. Measuring use on a per-slot basis would likely reduce the incidence of airlines hoarding slots to foreclose competitors and would allow rivals to acquire and better utilize those slots.[27] Slot shortages have historically been a barrier to entry, especially for LCCs.[28] Increasing the usage requirement would ensure that slots are not being withheld, increase the slot availability for smaller rivals, and promote more efficient use of constrained airport capacity.[29]

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[26] *Id.* at 1287.
[27] GAO, *supra* note 11, at 37.
[28] *Id.,* at 49.
[29] *See* James D. Reitzes et al., *Competitive Effects of Exchanges or Sales of Airport Landing Slots*, The Brattle Group 14 (Aug. 2014) *available at* http://www.brattle.com/system/publications/pdfs/000/005/078/original/Competitive_Effects_of_Exchanges_or_Sales_of_Airport_Landing_Slots.pdf?1411070204.

The AAI suggests that based on historical practices, a higher usage requirement is unlikely to be sufficient to prevent anticompetitive exclusion. For example, the usage minimum for the use-or-lose rule does not address alternative means of underutilization. The GAO has found that in slot-controlled airports, as compared to other like-sized airports without slot controls, large slot-owners tend to use smaller aircraft and offer greater flight frequency, and have a lower load factors.[30] These practices lead to inefficient utilization of constrained airport slots.[31] To prevent large slot owners from artificially constraining available seats per slot through the deliberate use of smaller aircraft, the final rule might consider either adding average load factor requirements or consider adopting minimum aircraft size requirements such as those proposed by the FAA to manage congestion at LaGuardia in 2006.[32] More generally, the NPRM might consider incrementally increasing the minimum usage requirement over time (e.g., increasing the usage requirement by 2% per year for the next ten years).

V. The DOT and FAA Might Consider a Hybrid of Alternatives 4 and 5 for the Design of a Secondary Slot Market

The creation of a secondary slot market would promote new entry and competition. New entrants have cited an inability to obtain slots at the three New York City airports as a major obstacle to their growth in the nation's largest metropolitan area.[33] In some cases, they have not even been aware of the availability of slots necessary

[30] GAO, *supra* note 11, at 39.
[31] *Id.* ("some inefficiencies . . . were related to airlines using smaller aircraft and that increasing the overall number of passengers without increasing the number of flights would result in a more efficient use of the national airspace system.").
[32] Congestion Management Rule for LaGuardia Airport, 71 Fed. Reg. 51360, 51367 (proposed Aug. 29, 2006).
[33] *E.g.*, Susan Stellin, *Seeking a Place at Airports*, N.Y. TIMES, Jan. 25, 2010, *available at* http://www.nytimes.com/2010/01/26/business/26slots.html.

to expand their operations.[34] Such difficulties in obtaining the rights to serve EWR, JFK, and LGA have likely impeded competition. A transparent secondary market would facilitate access by smaller carriers to obtain airport access, enhancing competition on price and potentially service quality.[35]

The NPRM asks for comment on five secondary slot market design proposals. There is much to be learned from the design of secondary markets and auctions from other regulated, quasi-regulated, and unregulated products and services. Auctions for spectrum, wholesale electricity (in organized markets), and natural gas pipeline capacity provide excellent examples of market design approaches and associated challenges. As a general matter, the AAI encourages the FAA to design a secondary market that promotes the greatest use of the market mechanism to match buyers and sellers of slots and to determine the price of those slots. Such an approach should incorporate market design and rules that prevent the unilateral or coordinated exercise of market power.

A number of the proposed options in the NPRM allow for either private or "off-line" negotiation of slot transactions or a non-transparent process that otherwise does not give all interested parties the opportunity to bid on slots, or involve the open, real-time, and public posting of bids by qualified, participating parties. Because such approaches are unlikely to facilitate competition in slot allocation, the AAI suggests that alternatives 1 through 3 be eliminated from contention. The remaining alternatives for the design of a secondary market—4 and 5—feature the posting of bids on the FAA bulletin board in a more open and transparent process. Alternative 4 requires revealing bidder identities.

[34] GAO, *supra* note 11, at 52.
[35] *Id.* at 50.

Alternative 5 would keep bidder identifies secret, but require cash-only bids to cloak bidder identify information that a non-cash bid could reveal. The seller would be required to accept the highest bid.

Alternatives 4 and 5 feature the following pros and cons. Revelation of bidder identifies in auction markets—as envisioned in Alternative 4—is a key factor in facilitating bid rigging (collusion) in auction markets. Knowledge of competing bids and their market positions—particularly in markets with relatively few participants and where only a few large incumbents hold the majority of slots—provides critical information in facilitating agreements not to compete. This is likely to adversely affect slot prices and slot allocations. The requirement for cash-only offers, as opposed to a showing of creditworthiness, may ensure that winning bidders actually acquire the bid-on slots, but they can also prevent smaller, less financially endowed competitors from gaining access.

In light of the foregoing considerations, the AAI suggests that the FAA consider some combination of alternatives 4 and 5. We also suggest that the FAA consider additional issues in regard to designing secondary slot markets. One is to set a cap on the number of slots that may be acquired. This works to prevent market cornering or to enhance an incumbent carrier's dominance.[36] Second, the FAA might consider allowing bidding on "bundles" or "packages" of slots. To the extent that obtaining a cluster of slots at peak times may be critical for a new entrant to gain a foothold, bundling may improve market entry and competition. Finally, the FAA might consider multiple rounds of auctions where results are made available to all the bidders only after each iteration or

[36] *See, e.g.,* Robert C. Marshall and Michael J. Meurer, *Bidder Collusion and Antitrust Law: Refining the Analysis of Price Fixing to Account for the Special Features of Auction Markets*, 72 ANTITRUST L. J. 83 (2004-2005).

round is complete. Successive rounds would continue until all bidding activity stops. As noted by the Federal Communications Commission in regard to spectrum auctions, multiple round auctions "provide[] information about the value of the licenses to all bidders and increases the likelihood that the licenses will be assigned to the bidders who value them the most. The period between auction rounds also allows bidders to take stock of, and perhaps adjust, their bidding strategies."[37]

Respectfully submitted,

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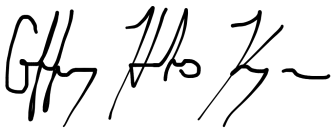

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[37] Federal Communications Commission, About Auctions, *available at* http://wireless.fcc.gov/auctions/default.htm?job=about_auctions&page=2.