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Flexing the slot regime: airport slot coordination in light of evolving market realities: a regulatory perspective

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FLEXING THE SLOT REGIME

Airport Slot Coordination In Light Of Evolving Market Realities: A Regulatory Perspective

PROEFSCHRIFT

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Lisanne Marloes van Houten
geboren te Houten, Nederland
in 1992

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Perseverance will get you anywhere.
NASA's Perseverance Mars Rover, 18 February 2021
3:55 pm EST landing on Mars

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LIST OF ABBREVIATIONS

ACI	Airports Council International
ACL	Airport Coordination Limited
ACNL	Airport Coordination Netherlands
AOC	Air Operator Certificate
Art	Article
ASA	Air Services Agreement
AT	Air Transport
ATAA	Air Transport Association of America
ATC	Air Traffic Control
ATConf	Worldwide Air Transport Conference
CAA	Civil Aviation Authority
CAAC	Civil Aviation Administration of China
CEANS	Conference on the Economics of Airports and Air Navigation Services
CJEU	Court of Justice of the European Union
COFECE	*Comisión Federal de Competencia Económica* (Mexico's Federal Economic Competition Commission)
COD	Ordinary legislative procedure
COM	European Commission
COMP	Competition
DG	Directorate-General
Doc	Document
DoT	Department of Transport
DUB	Dublin Airport
EC	European Community
ECA	European Competition Authorities
ECHR	European Convention on Human Rights
ECLI	European Case Law Identifier
edn	Edition
eds	Editors
EEC	European Economic Community
ENAC	*Ente Nazionale per l'Aviazione Civile* (Italian Civil Aviation Authority)
EU	European Union
EUACA	European Airport Coordinators Association
FAA	Federal Aviation Administration
FLUKO	*Flughafenkoordination Deutschland* (Airport Coordination Germany)
F.R.	Federal Regulations
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GBP	Great British Pound
GORMICA	General Operational Rules of Mexico City Benito Juárez Airport
HDR	High-Density Rule
IAG	International Airlines Group
IASTA	International Air Services Transit Agreement
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICJ	International Court of Justice
I.L.M.	International Legal Materials

IPCC	Intergovernmental Panel on Climate Change
KLM	*Koninklijke Luchtvaart Maatschappij* (Royal Dutch Airlines)
LCC	Low-Cost Carrier
LGW	London Gatwick Airport
LHR	London Heathrow Airport
LLP	Limited Liability Partnership
LOT	*Polskie Linie Lotnicze* (Polish Airlines)
Ltd	Limited
MFN	Most-Favored Nation
NERA	National Economic Research Associates
NEXTOR	National Center of Excellence for Aviation Operations Research
No	Number
O&D	Origin and Destination
OECD	Organisation for Economic Cooperation and Development
OFT	Office of Fair Trading
OJ	Official Journal of the European Union
PANS	Procedures for Air Navigation Services
P.L.	Public Law
Plc	Public Limited Company
PRSS	Permanent Regional Service Series
PSO	Public Service Obligation
SARPs	Standards and Recommended Practices
SAS	Scandinavian Airline System
S.D.N.Y.	Southern District of New York
SEO	*Stichting voor Economisch Onderzoek der Universiteit van Amsterdam* (Research Institute of the Economics and Business at the University of Amsterdam)
Stat	Statutory Law
Supp	Supplement
SWD	Staff Working Document
TAP	*Transportes Aéreos Portugueses* (Portuguese Air Transportations)
TDR	Traffic Distribution Rule
TFEU	Treaty on the Functioning of the European Union
T.I.A.S.	Treaties and Other International Act Series
UK	United Kingdom
U.K.T.S.	United Kingdom Treaty Series
UN	United Nations
U.N.T.S.	United Nations Treaty Series
US	United States
U.S.C.	United States Code
USD	United States Dollar
WASB	Worldwide Airport Slot Board
WASG	Worldwide Airport Slot Guidelines
WSG	Worldwide Slot Guidelines
WTO	World Trade Organization
WWACG	World Wide Airport Coordinators Group

1 CHAPTER ONE

Introduction[1]

1.1 Momentous developments relevant to slot coordination from 1944 onwards

In the early stages of international commercial air transport,[2] the right to take off from or land into an airport was allocated on a first-come, first-serve basis. Hardly any coordination took place between airports and air carriers.[3]

A logical explanation for this lack of coordination lies in the predominant spirit of the age, or *zeitgeist*, when the Chicago Convention on International Civil Aviation of 1944[4] [hereinafter: the Convention] was drafted. At the time the Convention saw the light of day, the problem of airport congestion did not exist, hence the drafters of the Convention appear to not have felt the need to address access to congested airports in the context of slot allocation. They were primarily concerned with questions related to the safety and technical aspects of air transport.[5]

Starting in the late 1960's, nonetheless, the notion of an 'airport slot' at congested airports was first developed by the Federal Aviation Administration [hereinafter: FAA] in the United States [hereinafter: US] as a result of long and inefficient queues of airplanes on taxiways and holding patterns at the major international airports.[6] Starting in 1974, airlines and dedicated 'slot coordinators'[7] have jointly developed best practices for the coordination of airport slots at congested airports around the world via the issuance of what are now known as the Worldwide Airport Slot Guidelines [hereinafter: WASG].[8]

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[1] At the time of writing, Lisanne van Houten was affiliated with Royal Schiphol Group and Airports Council International. The views expressed in this dissertation reflect only the author's personal views and cannot be considered as views of Royal Schiphol Group nor Airports Council International.

[2] From 1944, when the Chicago Convention on International Civil Aviation was drafted, and onwards. *See infra* Chapter 3, section 3.1 (analyzing the Chicago Convention on International Civil Aviation in the context of slot coordination as the principal legal instrument governing international air transport).

[3] *See* Jakub Kociubínski, *Regulatory Challenges of Airport Slot Allocation in the European Union*, 3 Wroclaw Review of Law, Administration & Economics 1 (2014), at 28; Daniele Condorelli, *Efficient and Equitable Airport Slot Allocation*, 1 Rivista di Politica Economica 2 (2007), at 81.

[4] Chicago Convention on International Civil Aviation (Chicago, 7 Dec. 1944), 15 U.N.T.S. 295, 61 Stat. 1180, T.I.A.S. No. 1591.

[5] *See* NERA Economic Consulting, *Study to assess the effects of different slot allocation schemes: A Report for the European Commission, DG TREN* (2004), at 225.

[6] *See* Kociubínski, *supra* note 3, at 28; Condorelli, *supra* note 3, at 81; Amedeo Odoni, 'Airports' in Peter Belobaba, Amedeo Odoni and Cynthia Barnhart (eds), *The Global Airline Industry* (2009), at 343.

[7] *See infra* Chapter 5, section 5.4 (addressing the role of the financially and functionally independent slot coordinator).

[8] *See* International Air Transport Association (IATA), *Worldwide Slot Guidelines (WSG) Edition 10* (2019), Preface; *infra* Chapter 2 (analyzing the contents of the WASG against the backdrop of this dissertation) and Chapter 3, section 3.4 (providing an overview of the legal status, governance and legislative history of the WASG). The latest

Many years have passed since the key principles of the current WASG were first enacted by airlines and slot coordinators almost half a century ago.[9] Fueled by air transport deregulation and liberalization measures,[10] demand for air transport services has grown considerably since the 1980's, bringing increased saturation at airports.[11]

In the past 50 years, the structure of the air transport market has advanced fundamentally. Substantial changes have occurred since steps towards deregulation and liberalization were taken. A strong trend towards privatization of airlines could be witnessed in the past 40 years, although numerous governments continue to be partial or even complete shareholders.[12] During the 1980's and 1990's, a number of States have also privatized their airports, albeit as with airlines, a substantial number of airports still remains in public ownership.[13]

By 2021, airline business models have diversified and new, privately controlled low-cost carriers [hereinafter: LCCs] have taken to the skies to vigorously compete with formerly State-owned 'flag carriers'. As a result, competition between market players intensified.[14] More than four decades of deregulation and three decades of liberalization have

> ". . . transformed flying from a luxury to an accessible necessity, bringing families and the country together, fostering economic growth, and giving ordinary people access to a wealth of experiences previously reserved for the upper-middle class."[15]

The low fares offered by LCCs has led to a greater financial accessibility of air transport and introduced a whole new part of the population to air transport,[16] feeding into the emergence of extreme levels of airport congestion. The number of so-called 'super-congested' airports[17] in

version of the WASG may be cited as Airports Council International (ACI) World, International Air Transport Association (IATA) and World Wide Airport Coordinators Group (WWACG), *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020).

[9] The Preface of the WASG reads that the document's standards have been developed since 1974.

[10] Although the economic concepts of deregulation and liberalization have identical objectives, to wit increased efficiency, they should not be regarded as a single deregulation-liberalization concept. The term 'deregulation' is primarily used in North America and refers to the removal of government regulation. The term 'liberalization', in the sense of a relaxation of government restrictions and the opening up of economic sectors to market forces, is more current in other parts of the world, the European Union in particular. Both approaches suggest the removal of unilateral State regulation of an industry that is global in nature. *See* Antigoni Lykotrafiti, *Liberalisation of international civil aviation – charting the legal flightpath,* 43 Transport Policy (2015), at 86; Steven Truxal, *Competition and Regulation in the Airline Industry: Puppets in Chaos* (2012), at 5 and 159; Margherita Colangelo, *Creating Property Rights: Law and Regulation of Secondary Trading in the European Union* (2012); Peter Haanappel, *The Transformation of Sovereignty in the Air*, 20 Air and Space Law 6 (1995), at 20.

[11] *See* Airports Council International (ACI) Europe, *Airport Slot Allocation* (2020), at 2.

[12] *See* Erwin von den Steinen, *National Interest and International Aviation* (2006), at 57.

[13] *See* Keith Boyfield, David Starkie, Tom Bass et al., *A market in airport slots* (2003), at 12.

[14] *See* John Milligan, *European Union Competition Law in the Airline Industry* (2017), at 1 and 37; Intervistas, *The Economic Impact of Air Service Liberalization: Updating the Landmark 2006 Study to Reflect the New Realities of Commercial Passenger Aviation* (2015).

[15] *See* Michael Levine, *Airport Congestion: When Theory Meets Reality*, 26 Yale Journal on Regulation 1 (2008), at 59.

[16] *See* Stamatis Varsamos, *Airport Competition Regulation in Europe* (2016); Guillaume Burghouwt, Pablo Mendes de Leon and Jaap de Wit, *EU Air Transport Liberalisation Process, Impacts and Future Considerations* (2015), at 42; Steven Truxal, *Economic and Environmental Regulation of International Aviation: From International to Global Governance* (2017), at 14; EGIS and SEO Amsterdam Economics, *Study on the Economic Developments of the EU Air Transport Market* (2020), at 107.

[17] *See infra* Chapter 2, section 2.4.2 (addressing the topic of 'super-congested' airports). No official definition of 'super-congested' or 'super-congestion' exists in 2021.

terms of the full slot capacity being historically 'occupied' by incumbent carriers are on the rise and will be carefully studied in this dissertation from a policy and legal point of view.[18]

Hence, although the reduction by States of controls within the framework of air services agreements[19] [hereinafter: ASAs], more commonly known as deregulation and liberalization measures, have certainly allowed the growth of the air transport industry,[20] they may also have been too successful in some ways, as deregulation and liberalization have presented States and jurisdictions such as the European Union [hereinafter: EU] with challenges that they so far have failed to meet.[21] Excess demand for slots has substantial implications for airports, coordinators and airlines alike: for airports in terms of connectivity preservation and traffic handling, for coordinators in terms of dealing with slot requests in excess of available capacity, and for airlines in terms of gaining access to congested infrastructure. Arguably, excess demand for slots also negatively affects the consumer in terms of increased fares, and society as a whole in the context of a suppressed route network affecting an economy's accessibility, business climate and employment opportunities.[22]

Cognizant of the fact that the COVID-19 outbreak in 2020-2021 has had a profound negative impact on air transport, and in recognition of the pandemic's potentially longer-term impacts on the industry, many still predict global air transport to continue to grow in the decades ahead.[23] The International Civil Aviation Organization [hereinafter: ICAO], a specialized agency of the United Nations [hereinafter: UN], expects global passenger demand to grow by 4,2% per annum towards 2038 with slightly lower growth rates in the maturing European market. According to ICAO, rising disposable incomes, urbanization, liberalization, competition, globalization and more efficient aircraft drive long-term growth.[24] Boeing projects similar growth rates.[25]

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[18] *See* Matthias Finger, Juan J. Montero-Pascual and Teodora Serafimova, *Navigating towards a more efficient airport slots allocation regime in Europe* (2019); Boyfield et al., *supra* note 13.

[19] *See infra* Chapter 3, section 3.2 (addressing the legal origins and contents of ASAs).

[20] For instance, the European air transport market hosts much more competition to date than it did pre-liberalization. Air traffic has more than doubled since 1990 and more than a billion passengers travelled through roughly 500 European airports in 2018 on more than 3,500 intra-EU routes. Since 2015, almost 700 new direct routes have been opened within the European Union, representing an increase of 15% until 2019 and contributing to increasing intra-European connectivity. *See* European Commission, *Commission Staff Working Document accompanying the Sustainable and Smart Mobility Strategy – putting European transport on track for the future*, SWD(2020) 331 final, at 53. *See* also EGIS and SEO Amsterdam Economics, *supra* note 16 for further data on air transport growth in the EU, and Intervistas, *supra* note 14 for an analysis of the impact of air transport liberalization around the world.

[21] *See* Francesco Munari, *Lifting the Veil: COVID-19 and the Need to Reconsider Airline Regulation,* 5 European Papers 1 (2020), at 550.

[22] *See* Thijs Boonekamp, Guillaume Burghouwt, Pere Suau-Sanchez et al., *The impact of airport capacity constraints on air fares* (2017) and Sveinn Gudmundsson, Stefano Paleari and Renato Redondi, *Spillover Effects of the Development Constraints in London Heathrow Airport*, 35 Journal of Transport Geography (2014) as cited in Lisanne van Houten and Guillaume Burghouwt, *The fight for airport slots: the case of Amsterdam Airport Schiphol*' in Rosario Macario and Eddy van de Voorde (eds), *The Air Transport Industry Book (forthcoming)* (Elsevier 2022).

[23] *See* Xiaoqian Sun, Sebastian Wandelt, Changhong Zheng et al., *COVID-19 pandemic and air transportation: Successfully navigating the paper hurricane,* 94 Journal of Air Transport Management (2021). *See* also Achim Czerny, Xiaowen Fu, Lei Zheng et al., *Post pandemic aviation market recovery: Experience and lessons from China,* 90 Journal of Air Transport Management (C) (2021) and Pere Suau-Sanchez, Augusto Voltes-Dorta and Natàlia Cugueró-Escofet, *An early assessment of the impact of COVID-19 on air transport: Just another crisis or the end of aviation as we know it?,* 86 Journal of Transport Geography (2020), as cited in Van Houten & Burghouwt, *supra* note 22.

[24] *See* ICAO, Forecast of Scheduled Passenger and Freight Traffic, *available at* https://www.icao.int/sustainability/pages/eap-fp-forecast-scheduled-passenger-traffic.aspx (last visited May 24, 2021).

[25] *See* Boeing, Commercial Market Outlook 2020-2039, *available at* https://www.boeing.com/commercial/market/commercial-market-outlook (last visited June 22, 2021).

Notable developments relevant for this dissertation comprise four main aspects:

1) Rising slot scarcity levels and the emergence of super-congested airports;
2) Airport planning and the promotion of environmental protection;
3) The apparent mismatch between the functions of slot coordination and market conditions anno 2021;
4) Slots as a multifunctional concept.

The first three aspects are further contextualized in Chapter 2 of this dissertation. The fourth aspect, titled "Slots as a multifunctional concept" will be briefly introduced in the section below. Further substance to the various ways in which slots have been utilized and have been attributed functions is given throughout Chapters 2-6 of this dissertation.

1.2 Slots as a multifunctional concept

1.2.1 Preliminary remarks on slots as a multifunctional concept

Among others, slot coordination is used to manage scarce airport infrastructure according to a set of rules and priorities to be followed for the declaration, allocation and use of airport capacity at slot coordinated airports, also known as 'Level 3' airports.[26] Oftentimes, an independent slot coordinator grants permission to airlines to use "the full range of airport infrastructure necessary . . . on a specific date and time".[27] Hence, slot coordination allows the air transport industry to manage congested infrastructure and accommodate demand for flight operations. Therefore, slot coordination is deemed to be an integral part of airport capacity management.

1.2.2 Slots as remedial commitments to alleviate competition concerns

Besides their operational character, slots are increasingly being used to satisfy a wide variety of other purposes. For instance, slots have been wagered in the EU to remedy competitive concerns in the form of slot commitments in merger and alliance cases pursuant to the provisions of EU Regulation 139/2004[28] in conjunction with those of EU Regulation 1/2003, as variously amended.[29] More specifically, the European Commission [hereinafter: the Commission] may make its approval of mergers and alliances conditional upon the offering of slot concessions in order to facilitate new entry or expansion of service by existing competitors, in particular at airports where capacity falls short of demand.[30] Examples of cases in which slots have been divested include the mergers of Air France-KLM in 2004[31], Alitalia and Etihad in

[26] *See* European Commission, *Explanatory Memorandum to the Proposal for a Regulation of the European Parliament and of the Council on rules for the allocation of slots at European Union Airports*, COM(2011) 0827 final, at 1; ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.4.1.
[27] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.6.1.
[28] Council Regulation (EU) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings, OJ L 24.
[29] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ L 1.k
[30] *See* European Commission, *Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004*, OJ C 267 (2008), paragraph 63; EU Regulation 139/2004, *supra* note 28, recital 30 and Article 6(2); EU Regulation 1/2003, supra note 29, Article 9(1).
[31] *See* Case No COMP/M.3280 – Air France/KLM. Regulation (EEC) No 4064/89 Merger Procedure, Article 6(2) NON-OPPOSITION, 11 February 2004.

2014[32], IAG and Aer Lingus in 2015[33] and Connect Airways and Flybe in 2019[34], the acquisition of Austrian Airlines by Lufthansa in 2009[35], and in the approval of the alliance between Lufthansa, SAS and United Airlines in 2002.[36] Slots were also divested in an antitrust procedure involving Air Canada, United Airlines and Lufthansa in 2013.[37]

In response to the industry's sharp downturn following the outbreak of COVID-19, the Commission has extended its practice of welcoming slot commitments to remedy competitive concerns to include State aid measures as well. *Inter alia¸* German and French State aid measures accorded to Lufthansa and Air France in 2020 and 2021 were accompanied by slot commitments.[38]

1.2.3 Slots as safeguards for market access

Another function of slots lies in ensuring regional *connectivity*. In the EU, slots may be subject to reservation by the slot coordinator through the imposition of Public Service Obligations [hereinafter: PSO's] on intra-EU routes on the basis of EU Regulation 1008/2008.[39]

Slots have also been used to safeguard market access for international carriers in the US. When the 1969 High-Density Rule[40] was still in force at a few of the most congested airports in the US,[41] under which slots could be traded, a separate slot pool was set up to exclude slots for international services. Slots for 'essential air services', the US equivalent of PSO's, and new entrants, were also exempt from the trading system.[42] This way, the US government sought compliance with its obligations under the ASAs it concluded with other States.[43]

1.2.4 Slots as collateral in insolvency and bankruptcy cases

Moreover, when airlines file for bankruptcy, its administrators can request the coordinator to 'freeze' slots pending the acquisition of the airline's activities by third parties.[44] As evidenced by the *Monarch*-case[45], this is the case even if the slots are not used in practice.

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[32] *See* Case No COMP/M.7333 – Alitalia/Etihad. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) in conjunction with Article 6(2), 14 November 2014.
[33] *See* Case No M.7541 – IAG/Aer Lingus. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) in conjunction with Article 6(2), 14 July 2015.
[34] *See* Case M.9287 – Connect Airways/Flybe. Regulation (EC) No 139/2004 Merger Procedure, Article 7(3), 21 February 2019.
[35] *See* Case No COMP/M.5440 – Lufthansa/Austrian Airlines. Regulation (EC) No 139/2004 Merger Procedure, Article 9(2), 28 August 2009.
[36] *See* European Commission, *Commission Notice concerning the alliance between Lufthansa¸ SAS and United Airlines (Cases COMP/D-2/36.201¸ 36.076¸ 36.078)*. Procedure under Article 85 (ex 89) EC, OJ C 181 (2002).
[37] *See* Case COMP/AT.39595 – Continental/United/Lufthansa/Air Canada. Antitrust Procedure, Council Regulation (EC) 1/2003, Article 9 Regulation (EC) 1/2003, 23 May 2013.
[38] *See* State Aid SA.57153 – Germany – COVID-19 – Aid to Lufthansa, C(2020) 4372 final, paragraph 71; State Aid SA.59913 – France – COVID-19 – Recapitalisation of Air France and the Air France-KLM Holding, C(2021) 2488 final, paragraph 257.
[39] Council Regulation (EC) No 1008/2008 of 24 September 2008 on common rules for the operation of air services in the Community, OJ L 293/3, Article 16(1). *See infra* Chapter 4, section 4.4.4 (addressing the imposition of PSO's positioned against the backdrop of slot coordination).
[40] United States Code of Federal Regulations, Title 14 Aeronautics and Space, part 93, subparts K and S.
[41] *See infra* Chapter 4, section 4.5.3 (providing (historic) overview of the rules and procedures flor slot coordination in the US, including the High-Density Rule).
[42] *See* NERA Economic Consulting, *supra* note 5, at 234.
[43] *Id.¸* at 234. *See infra* Chapter 3, section 3.3 (researching the link – if there is one – between traffic rights exchanged under ASAs and slots allocated by a coordinator).
[44] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.15.3.
[45] Court of Appeal (Civil Division) on Appeal from the High Court of Justice, Queen's Bench Division, Administrative Court, *R (Monarch Airlines) v Airport Coordination Limited* [2017] EWCA Civ 1892.

Slots held at airports where a secondary market in slots is formalized, such as the super-congested airport of London Heathrow, have been proven valuable to pay off creditors in bankruptcy and insolvency proceedings.[46] Even where no secondary market in slots exists, slots may play a role in financial acquisitions "between parent and subsidiary companies, and between subsidiaries of the same parent company", "as part of the acquisition of control over the capital of an air carrier", or "in the case of a total or partial take-over when the slots are directly related to the air carrier taken over".[47]

Another development in the financial sphere is the mortgaging of slots by airlines to financial institutions and the vesting of security interests.[48] In June 2013, American Airlines secured a five-year one-billion dollar credit facility by putting up, among others, slots as collateral.[49] Slots have also been pledged by British Airways owner IAG to raise 1,5 billion euros in funds to fortify its finances.[50]

1.2.5 Slots as instruments to attain policy objectives

In addition to safeguarding balanced access to coordinated airports for both incumbent and new entrants alike, as well as the financially motivated utilization of slots, the slot regime is being increasingly explored as an instrument to attain a host of other policy objectives. For instance, in 2020 and 2021, a relaxation of the slot rules has been employed around the world to combat so-called 'ghost flights' in the wake of COVID-19 and to allow financially heavily-hit airlines time to restore connectivity.[51] Moreover, governments are exploring the potential of slots to steer certain connectivity and/or environmentally-oriented coordination decisions.[52]

1.2.6 Conclusions as to slots as a multifunctional concept

As Mendes de Leon (2013) rightfully stated, "slots are multi-faceted instruments".[53] The various roles assigned to slots also calls into question their ownership. This dissertation strives to identify who holds the legal title to a slot in order to decide which law(s) govern(s) their creation and their consequent declaration by airports, allocation by coordinators and utilization by airlines. Although it is clear that slots are the object of relevant social and legal interests,[54]

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[46] *See* Keith Boyfield, *Who owns airport slots? A market solution to a deepening dilemma,* in Keith Boyfield, David Starkie, Tom Bass et al. (eds), *A market in airport slots* (2003), at 39.

[47] Council Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports, OJ L 14/1, as amended, Article 8a(1)b.

[48] *See* Pablo Mendes de Leon, *A Multifunctional Approach Towards Slot Allocation*, 62 Air and Space Law 4 (2013), at 571.

[49] *See* Debevoise & Plimpton LLP, Re-awakening American (Airline Economics, May/June 2014), *available a*t https://www.debevoise.com/-/media/files/insights/publications/2014/05/reawakening-american/airline-economics-mayjune-2014_debevoise.pdf (last visited November 10, 2021).

[50] *See* Philip Georgiadis, BA owner offers landing slots as collateral to secure $1.8bn funding (Financial Times, 23 March 2021), *available at* https://www.ft.com/content/e32c78b6-1c68-4e0d-9fa9-bd71c1813b05 (last visited November 10, 2021).

[51] *See,* among others, Airports Council International (ACI) World, International Air Transport Association (IATA) and World Wide Airport Coordinators Group (WWACG), Airport slot alleviation measures for Northern Winter 2021 – WASB Recommendation (May 2021), *available at* https://www.iata.org/contentassets/4820c05b19f148e2855db91f2a579369/wasb-northern-winter-2021-slot-relief.pdf (last visited November 12, 2021); European Commission, *Commission Staff Working Document – Slot relief measures in light of the COVID-19 pandemic*, SWD(2020) 341 final; United Kingdom Airports Slot Allocation (Alleviation of Usage Requirements) Regulations 2021, UK S.I. 2021/185.

[52] *See*, for instance, *Ministry of Infrastructure and Water Management, Luchtvaartnota 2020-2050 (in Dutch)* (2020), at 41-42, in which the Dutch Ministry of Infrastructure and Water Management emphasizes that scarce airport capacity should contribute in the most optimal way to the welfare and wellbeing of Dutch citizens.

[53] *See* Mendes de Leon, *supra* note 48 at 578.

[54] *See* European Commission, *Explanatory Memorandum to the Proposal for a Regulation of the European Parliament and of the Council on common rules for the allocation of slots at European Union Airports*, COM(2001) 0335 final, at 11.

this dissertation argues in Chapter 5 that they are not in any sense the object of property rights.[55]

Once meant as a primarily operational tool, the above developments evidence that slots to date have indeed been referred to as the "gold" or "crown jewels" of aviation.[56] After all, access to airports in the form of slots can ensure competitive advantage because they determine who can fly into a congested airport and who cannot.[57] With slots becoming increasingly scarce, especially at the world's super-congested airports, the author expects the value – however defined and/or expressed – of slots to continue to skyrocket and raise legal questions in the years to come.

One could, however, wonder if the above developments are reflective of the rationale behind the existence of slot coordination, and by extension the key principles for the coordination of slots as reflected in the WASG, which proceed from the notion that

> "Coordination is not a solution to the fundamental problem of a lack of airport capacity. In all instances, coordination should be seen as an interim solution to manage congested infrastructure until the longer-term solution of expanding airport capacity is implemented."[58]

As mentioned above, the apparent mismatch between the functions of slot coordination and market conditions anno 2021 is carefully analyzed in Chapter 2.

1.3 Research focus, aims and objectives

Slot coordination has generated much discussion, both in the popular press and industry papers, and especially market-based measures for slot coordination such as secondary slot trading, slot auctioning and peak pricing have been the subject of extensive economic and technical research and writings in academic publications. They include an investigation of how the current regime for slot coordination may lead to economically inefficient outcomes at congested hubs (Gillen and Starkie, 2016)[59] and a proposal for a novel modeling and computational approach to optimize slot coordination decisions at congested airports (Nuno Antunes Ribeiro et al., 2018).[60] In a review of the several aspects of the slot coordination process at Level 3 airports (Odoni, 2020),[61] a number of potential changes to the WASG and

[55] *See* Ruwantissa Abeyratne, *Management of airport congestion through slot allocation*, 6 Journal of Air Transport Management 1 (2000), at 36.
[56] *See* Georgiadis, *supra* note 50; Eric Kulisch, Aviation groups reach compromise on airport slot relief (Freightwaves, 29 November 2020), *available at* https://www.freightwaves.com/news/aviation-groups-reach-compromise-on-airport-slot-relief (last visited November 10, 2021).
[57] *See,* for instance, Case M.8672 – easyJet/certain Air Berlin assets. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) NON-OPPOSITION, 12 December 2017, paragraph 26.
[58] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.1.2.
[59] *See* David Gillen and David Starkie, *EU Slot Policy at Congested Hubs, and Incentives to Add Capacity*, 50 Journal of Transport Economics and Policy 2 (2016).
[60] *See* Nuno Antunes Ribeiro, Alexandre Jacquillat, António Pais Antunes et al., An optimization approach for airport slot allocation under IATA guidelines, 112 Transportation Research Part B: Methodological (2018).
[61] *See* Amedeo Odoni, *A review of certain aspects of the slot allocation process at Level 3 airports under Regulation 95/93* (2020).

EU legislation on slots are identified. Other publications include Boyfield et al. (2003)[62], Mott MacDonald (2006)[63], DotEcon (2006),[64] Starkie (2008)[65], Fukui (2014)[66] and SEO (2018)[67].

Yet, so far few academic publications have appeared in the field of law regarding slot reform at congested airports. Reports by NERA (2004)[68], Steer Davies Gleave (2011)[69] and Guiomard (2018)[70] contain legal reviews of the slot rules in the EU as laid down in EU Regulation 95/93 on common rules for the allocation of slots at Community airports[71], as variously amended [hereinafter: the Slot Regulation]. The United Kingdom Office of Fair Trading and the Civil Aviation Authority (2005)[72] analyze potential competition issues related to the market-based mechanism of secondary slot trading.

Much water has flown under the bridge in terms of airport congestion since the majority of the above publications surfaced. The legal possibilities for reflecting socio-economic objectives in coordination decisions at super-congested airports is a relatively new topic, albeit one that is expected to gain traction in the upcoming years as capacity shortages and the focus on the negative externalities of aviation and maintaining air connectivity are growing.[73] A multitude of socio-economic objectives are identified in this dissertation, including but not limited to the environment in terms of noise and carbon reduction policies, the role of airports in society and the development of the route network.

Although it is not the aim of this dissertation to theorize on the economic impacts of such market-based measures for slot coordination, it is hoped, and anticipated, that this dissertation will *first* provide awareness to international organizations, regulators, industry stakeholders and academia of how market conditions have changed since the key principles for slot coordination were first developed, and how this has affected the function of slots to change from a purely operational concept to a multi-faceted one.

Second, and in supplement of all of the aforementioned contributions, the aim of this dissertation is to provide an original contribution to legal science. It aims to do so by offering legal guidance in amending the framework for slot coordination at super-congested airports in such a way that it allows for the most optimal coordination of scarce airport capacity from a socio-economic perspective, both at the international as well as at the European and national level. To do so, this dissertation will put forward concepts and/or measures to flex the slot regime at super-congested airports.

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[62] *See* Boyfield et al., *supra* note 13.
[63] *See* Mott MacDonald, *Study on the Impact of the Introduction of Secondary Slot Trading at Community Airports* (2006).
[64] *See* DotEcon Ltd., *Alternative allocation mechanisms for slots created by new airport capacity* (2006).
[65] *See* David Starkie, *The Dilemma of Slot Concentration at Network Hubs*, in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (2008).
[66] *See* Hideki Fukui, Effect of slot trading on route-level competition: Evidence from experience in the UK, 69 Transportation Research Part A: Policy and Practice (2014).
[67] *See* Christiaan Behrens, Valentijn van Spijker and Joost Zuidberg, *Secundaire slothandel op Schiphol (in Dutch)* (2018).
[68] *See* NERA Economic Consulting, *supra* note 5.
[69] *See* Steer Davies Gleave, *Impact assessment of revisions to Regulation 95/93* (2011).
[70] *See* Cathal Guiomard, *Airport slots: Can regulation be coordinated with competition? Evidence from Dublin airport,* 114 Transportation Research Part A: Policy and Practice (2018).
[71] EU Regulation 95/93, as amended, *supra* note 47.
[72] *See* Office of Fair Trading (OFT) and Civil Aviation Authority (CAA), *Competition issues associated with the trading of airport slots, OFT832* (2005).
[73] *See* Airports Council International (ACI) Europe, *supra* note 11, at 2.

Any proposed concepts and/or measures supportive of a revision of the slot regime are particularly interesting in light of the Commission's intention to revise the Slot Regulation, after the most recent structural 2011 proposal for revision remained blocked in the Council since 2013 pending resolution of the disputed question over Gibraltar's status and has yet to be adopted.[74] Although discussions as to a thorough revision of the Slot Regulation were picked up just prior to the global outbreak of COVID-19 in early 2020, these discussions are still at an infant's stage, although the issues experienced with the workings of the Slot Regulation are far from resolved.

In 2019, the Commission has launched a new evaluation process so as to reflect changing market conditions over the past 10 years. A fact-finding study commissioned to Steer Davies Gleave was to update the market analysis, data, and information which seeks to build on the 2011 proposal in order to assess options for evolving the regime.[75] It is the author's hope and anticipation that this dissertation may guide the Commission in its decision-making trajectory, in particular when it concerns taking into account the socio-economic value of a slot in coordination decisions at super-congested airports.

Another development on the global stage relevant to this dissertation is the new industry-wide governance on slot coordination. In June 2019, three air transport organizations – Airports Council International [hereinafter: ACI], the International Air Transport Association [hereinafter: IATA] and the World Wide Airport Coordinators Group [hereinafter: WWACG], have signed a new governance agreement in Seoul, South Korea that will see airport operators, airlines, and slot coordinators jointly and equally determine the global guidelines – previously introduced in this chapter as the WASG – for the overall management and coordination of airport slots. All parties agreed the new governance framework provides an opportunity to further align slot coordination mechanisms with current market realities to the benefit of the consumer and the aviation community at large.[76]

As it will be shown in Chapter 2 of this dissertation, the general and specific objectives of slot coordination listed in the WASG's policy section, have been modified with the coming into existence of the WASG, whereas the key contents governing the process have largely remained the same. This dissertation aims to provide the legal tools to identify the newly identified objectives of the WASG with its contents against the backdrop of incorporating the full socio-economic potential of a slot into the coordination of airport capacity at super-congested airports.

Considering all of the above aims and objectives, the focus of this dissertation is to explore, from a legal point of view, the compatibility of the global and specific regimes governing airport slot coordination at super-congested airports with the particular socio-economic challenges that international organizations, governments and air transport industry

[74] A dispute between the UK and Spain over the sovereignty of Gibraltar, including the airport located in Gibraltar, continued to block all EU air transport legislation, including slot reform, until the issue was solved when the UK left the EU as a Member State. *See* European Parliament, *Legislative Train 02.2020: Allocation of Slots at EU Airports* (2020).

[75] *See* Steer Davies Gleave, DG Move Workshop on a fact-finding study on the allocation of slots at European airports (2020), *available at* https://www.eraa.org/steer-presents-main-findings-slot-study (last visited November 10, 2021); Finger et al., *supra* note 18, at 6.

[76] *See* International Air Transport Association (IATA), Industry Collaboration Brings New Era for Airport Slot Allocation (3 June 2019), *available at* <https://www.iata.org/en/pressroom/pr/2019-06-03-03 (last visited November 10, 2021).

stakeholders are experiencing today, particularly in the field of growing airport access issues and environmental protection.

The author seeks to provide solutions to optimize the use of airport capacity from a socio-economic perspective, meanwhile taking note of the inherently cross-border nature of civil aviation, efforts to mitigate the negative externalities of aviation and applicable rules relating to national treatment, non-discrimination and market access. To this end, a host of measures are explored to flex the slot regime. The two main questions to be addressed in this dissertation are formulated as follows:

1. To what extent can the global and specific legal regimes pertaining to airport slot coordination be used as an instrument to influence coordination decisions at super-congested airports?

2. What concepts or measures related to slot coordination can be identified to flex the current slot regime to better reflect the socio-economic value of a slot in coordination decisions at super-congested airports?

Furthermore, multiple sub-research questions are identified to help provide an answer to this dissertation's main research questions:

1. Around what basic notions and principles is the slot coordination process, including the declaration ('supply-side') and allocation ('demand-side') of capacity, centered at (super-)congested airports?

2. Are the basic principles and objectives of slot coordination set forth by the WASG reflective of air transport market conditions anno 2021, and if not, how could this potential mismatch be alleviated?

3. How has the global regime for access to airports evolved since the establishment of the Convention, and what role does ICAO have in relation to slot coordination?

4. Is and/or should there be a link between the granting of traffic rights in ASAs as concluded between sovereign States, and the coordination of slots? If a link may be established, is a lack of slots at super-congested airports liable to affect the bilateral or multilateral relationship between the States which concluded the ASA?

5. How do the specific rules and/or procedures for slot coordination in selected jurisdictions differ from the global regime for access to airports, and are there lessons to be learned from the perspective of influencing coordination decisions at super-congested airports?

6. Who holds the legal title to a slot and, if no party can as of yet be identified as the designated title holder, who should hold the legal title to a slot and for what reasons?

7. To what extent are the proposed concepts or measures to flex the slot regime put forward by this dissertation compatible with the principles of national treatment and non-discrimination?

8. What should the respective roles of States vis-à-vis the role of slot coordinators and air transport industry stakeholders entail in relation to defining concepts or measures for slot coordination through which coordination decisions may be influenced?

1.4 Dissertation structure, methodology and limitations

In order to provide answers to the research questions defined in section 1.3, a thorough understanding of the global framework in the context of access to airports, more specifically slot coordination, is required. Moreover, rules on slot coordination in selected jurisdictions are carefully considered if and where relevant for the purposes of this dissertation, as well as the latest version of the WASG and local procedures adopted by slot coordinators.

The author furthermore intends to present the dissertation's findings on the basis of analysis of available literature regarding access to airports, including books and journal articles by leading academics in the field of air transport law and air transport economics. Other relevant sources include case law, official documents of ICAO and the EU, reports and working papers published by, among others, air transport trade association, the Organisation for Economic Cooperation and Development, Eurocontrol, leading economists including SEO Amsterdam Economics, NERA and DotEcon, consultancy and research firms including Steer Davies Gleave, Mott MacDonald, CAPA Centre for Aviation and InterVISTAS, universities and government white papers.

A series of interviews with representatives from across the air transport industry, government officials and academics, oftentimes with a strong practical and/or academic track record in air law or practical experience relating to slot coordination, have been undertaken. Furthermore, the contents of this dissertation are inspired by the author's own (applied) knowledge of (inter)national developments related to access to airports, visits to international conferences and conventions, participation in several task forces and boards related to airport slot coordination, including membership of the WASG Strategic Review, task forces of ACI Europe and ACI World, a six-month secondment to ACI Europe, and hands-on legal and strategic experience of the topic gained while being a full-time employee of Royal Schiphol Group, the owner and operator of, among others, the super-congested airport of Amsterdam Airport Schiphol.

This dissertation is thus designed to yield descriptive, interpretative, analytical, comparative, qualitative and also normative elements. These research methods are applied across the dissertation's six chapters in no particular order, depending on the specific topic. This includes the introduction, which as its name implies is introductory. Chapters 1 and 2 are outlined using a qualitative as well as a normative approach in order to gain a better understanding of the connotation of airport slots in contemporary air transport, and how this connotation has changed since the coming into existence of the concept of airport slots.

Other topics, including the clarification of the global regime for access to airports in Chapter 3, benefit from a more descriptive approach in order to clearly set out the applicable regime and its relevance for airport slot coordination. Hence, Chapter 3 mainly reflects descriptive elements. Chapter 4 is more comparative in nature, whereas Chapter 5 comprises primarily analytical elements. Chapter 6 offers conclusions and recommendations combining all elements, with specific reference to the use of an interpretative approach of the contents of Chapters 1-5.

Throughout the dissertation, special emphasis is placed on the WASG as global reference document for slot coordination and the European slot regime, given the EU's leadership role in the context of a multitude of air law and policy developments.

Chapter 2: The connotation of airport slots in contemporary air transport

Chapter 2 provides definitions and illustrates how and by whom airport capacity is currently declared and subsequently allocated in the form of airport slots to the parties that use them: airlines. In its assessment of the connotation of airport slots in contemporary air transport, Chapter 2 focuses primarily on the principles of the WASG and how these are applied in practice. Chapter 2 also takes into account the Slot Regulation, albeit to a lesser extent.

Chapter 2 demonstrates that issues arising in relation to slot scarcity have become more widespread and challenging, in particular at super-congested airports where capacity falls short of demand for the majority of slot requests.

Chapter 3: The global regime for access to airports

Chapter 3 intends to clarify the global legal regime for access to airports in force, including slot coordination, and to determine if, and to what extent, the air transport community and States are bound by the rules set forth by the global regime. In the context of access to airports, a distinction will be made between access to airports located in the territories of States via scheduled and unscheduled services within the framework of ASAs as well as varying charter regimes based on Articles 5 and 6 of the Convention on the one hand, and access to airports via slots on the other hand. The question if, and if so, to what extent there is or should be a link between traffic rights and slots will also be explored in more detail.

To this end, Chapter 3 will assess the ability of the global regime for access to airports via traffic rights and slots on a multilateral, *id est* on the basis of the Convention, or bilateral, *id est* on the basis of ASAs concluded between States, to reflect evolving market realities. Special attention is reserved for the functions of the national treatment and non-discrimination principle and their application to the coordination of slots. Chapter 3 proceeds with an exploration of the mandate of ICAO to ameliorate issues related to slot coordination, owing to ICAO's long-standing experience as the global forum for inter-State relations pertaining to aviation-related developments.[77]

Chapter 4: Slot coordination in selected jurisdictions

Chapter 4 considers that States may also have their own legislation on slot coordination, though often drawing from the principles of the WASG.[78] Under considerable scrutiny is the slot regime in Europe for reasons explicated above. Among others, the application and contents of the Slot Regulation are analyzed, with special reference to the non-discrimination principle set forth by the Slot Regulation.

[77] *See* Truxal, *supra* note 16, Preface; ICAO, Vision and Mission, *available at* https://www.icao.int/about-icao/Council/Pages/vision-and-mission.aspx (last visited November 10, 2021).
[78] *See* ICAO, Worldwide Air Transport Conference (ATConf) Sixth Meeting, Montréal, 18 to 22 March 2013 (2013), paragraph 4.1.

Another element of EU legislation that is relevant to slot coordination is EU Regulation 1008/2008, which establishes rules on PSO's, traffic distribution, and which subjects the exercise of traffic rights to, among others, the allocation of slots. Although to a lesser extent in comparison with the EU, the specific legal frameworks for slot coordination in the US, China, Mexico and Australia are also subject to brief analysis.

Chapter 5: Slots as a conceptual instrument

The definition of a slot in the current slot regime is expressed in purely factual terms.[79] Both airlines and airports have argued that slots constitute their property rights.[80] To determine which laws govern their creation, and in order to create a solid basis for a future coordination system, the author argues that there is an apparent need to clarify who holds the legal title to a slot. Settling the debate also provides an answer to the long-standing question if airlines can monetize the value of slots as intangible assets on their balance sheets.[81] In this light, an analysis of case law, such as the landmark judgments provided by the *Guernsey* and *Monarch*[82] cases will be covered by Chapter 5.

Besides shedding light on the complex debate as to who should legitimately hold the legal title to a slot, Chapter 5 discusses several other aspects related to slot coordination in the context of selected topics, including the relationship between slot coordination and competition law, the extent to which slots can be referred to as so-called 'essential facilities' in line with the Court of Justice of the – then - European Communities' (now: Court of Justice of the European Union [hereinafter: CJEU]) decision in *Bronner*[83] and subsequent cases, and the functionally and financially independent role of the coordinator. Finally, alternatives through which regulators and competition authorities have tried to ease competitive entry at congested airports are discussed, with special attention to the EU's stance as adopted in merger and alliances proceedings, secondary slot trading and the workings of the new entrant rule.

Chapter 6: General conclusions and recommendations

Chapter 6 summarizes the general and specific legal regimes governing access to airports, and in particular slot coordination, as well as a series of concepts and measures related to slot coordination to help solve the principal tensions that exist between ensuring the stability and continuity of international air transport services on the one hand, and the incorporation of socio-economic objectives and easing market access on the other hand, which come together in the nexus of scarce airport capacity. The lessons learned from Chapters 1-5 are displayed in Chapter 6 and formulated into general conclusions.

Furthermore, Chapter 6 seeks to identify administrative and/or market-based provisions that could be used to flex the slot regime by means of a reflection of the socio-economic value of a slot in the declaration, allocation and use of airport capacity. Among others, Chapter 6 turns attention to recommendations as to the inclusion of airport-specific strategic objectives, the application of the new entrant rule at route level and a reflection of the balance between

[79] *See* European Commission, *supra* note 54, paragraph 11.
[80] *Id.,* paragraph 11.
[81] *See* Odoni, *supra* note 61, at 94.
[82] *Monarch Airlines v. Airport Coordination Limited*, *supra* note 45.
[83] Case C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others* [1998], ECLI:EU:C:1998:569.

different traffic segments. It also addresses the role of States vis-à-vis the role of the slot coordinator and the air transport industry in defining the rules and guidelines for slot coordination, and the tenability of the current division in a framework in which the socio-economic value of airport capacity plays a leading part. Cognizant of the limitations of this dissertation, recommendations for further research are also provided.

2 CHAPTER TWO

The connotation of airport slots in contemporary air transport

2.1 The concept and objectives of slot coordination

2.1.1 The definition of an airport slot in light of the arrangement of this dissertation

According to the Worldwide Airport Slot Guidelines [hereinafter: WASG], the international reference document for slot coordination, an airport slot inhabits

> ". . . the permission given by a coordinator for a planned operation to use the full range of airport infrastructure necessary to arrive or depart at a Level 3 airport on a specific date and time".[84]

The definition used in European Union [hereinafter: EU] law is similar to the one in the WASG.[85] Airport slots are expressed in block time, which is the total amount of time a flight takes to use the range of airport infrastructure.[86] An airport slot is not to be confused with a runway slot or air traffic management slot, which both refer to an allocated period of time by the local air traffic control [hereinafter: ATC] authorities within which landing or take-off of the aircraft has to take place. Whilst airport slots are allocated at capacity-constrained airports, runway slots require an on-the-day permission to use a congested air route.[87] Slots can only be allocated to and held by airlines.[88] Further analysis on who holds the legal title to a slot will follow in Chapter 5, section 5.2 of this dissertation.

Section 2.1 reviews the concept and objectives of slot coordination, followed by an analysis of the basic notions and principles of the coordination process in section 2.2. A central question that this dissertation aims to answer is whether slot coordination as we know it is reflective of the needs of society that we witness to date. Although this dissertation will not provide a definitive answer to this question until Chapter 6, Chapter 2 sets out how times have changed for air transport, and by extension slot coordination, since the signing of the Chicago Convention on International Civil Aviation of 1944 [hereinafter: the Convention] nearly

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[84] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.6.1.

[85] Article 2(a) of EU Regulation 95/93, as amended, *supra* note 47, provides the following definition: "[A] "slot" shall mean the permission given by a coordinator in accordance with this Regulation to use the full range of airport infrastructure necessary to operate an air service at a coordinated airport on a specific date and time for the purpose of landing or take-off as allocated by a coordinator in accordance with this Regulation." *See infra* Chapter 4, section 4.1 (analyzing EU Regulation 95/93, as amended, *supra* note 47).

[86] The 'clock' starts ticking from the arrival at the gate, that is 'on-block' time, to the moment the aircraft is ready for pushback from the stand, that is 'off-block' time.

[87] *See* Eurocontrol, What is a slot? (23 December 2016), *available at* https://www.eurocontrol.int/article/what-is-a-slot (last visited November 10, 2021).

[88] EU Regulation 95/93, as amended, *supra* note 47, Article 8(1); ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.7.2(b).

seventy years ago.[89] Key concerns include foreclosed airport access due to the rising slot scarcity levels at (super-)congested airports, and the growing public concerns related to the negative externalities of air transport, including aircraft noise exposure and atmospheric emissions. These concerns are analyzed in sections 2.3 and 2.4 respectively.

2.1.2 The inextricable link between airport slots and airport infrastructure

Airport slots have been compared with other commodities which are subject to quantitative restrictions such as spectrum rights, fishing and emissions quotas, *see* NERA (2004) and MottMacDonald (2006).[90] The main difference between airport slots and other commodities is that airport slots are considerably more heterogeneous, and their value to airlines varies greatly depending on the season, time of day and airport they are allocated for. Instead of simply conveying the right to catch a certain quantity of fish or produce a certain quantity of emissions within a given timeframe, an airport slot is inextricably linked to the capacity of a specific airport at a particular date and time.[91]

Slots at different times and at other airports may therefore be very imperfect substitutes. As described in section 2.2.3 below, the coordinator only accepts a slot request if there is sufficient airport capacity available at the date and time sought after. Slots at both ends – that is, airports – of a route are linked to one another, hence an airline cannot accept a slot at any available moment offered by the coordinator. Slots have substantial interdependencies. Besides the fact that there needs to be capacity available for a specific service, a change in one slot has knock-on effects at destination airports, and throughout the network.[92]

A report drawn up on behalf of the European Commission [hereinafter: the Commission] by PricewaterhouseCoopers in 2000 confirms that slots are linked to various types of airport infrastructure, and not to runway capacity only.[93] Stand, terminal and airspace capacities may well be the most constraining factors, as well as environmental limitations at an increasing number of airports.[94] Only if all airport resources are available, an airline can have access to a slot-controlled airport in order to operate an air service.[95] In this light, PricewaterhouseCoopers recommended to the Commission that the definition of a slot in EU Regulation 95/93, as amended [hereinafter: the Slot Regulation] should recognize that slots are linked to all resources necessary to operate air services at an airport, except traffic rights.[96]

The Commission followed this recommendation in its 2004 revision of the Slot Regulation by changing the definition of a slot to include the use of "the full range of airport infrastructure", instead of merely referring to an "aircraft movement" in the first version of the Slot Regulation, implying runway usage only.[97]

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[89] *See infra* Chapter 3, section 3.1 (analyzing the Convention on International Civil Aviation, *supra* note 4, and the legal instruments which are attached to or made under the Convention).
[90] *See* NERA Economic Consulting, *supra* note 5, at 234; Mott MacDonald, *supra* note 63, Chapter 6.
[91] *See* NERA Economic Consulting, *supra* note 5, at 72.
[92] *See id.,* at 174 and 177; Mott MacDonald, *supra* note 63, at 12-16. Moreover, and not without reason, John Balfour already described the coordination of slots as an "extremely complex business" nearly 20 years ago, particularly in light of the need for global coordination, as to which *see* John Balfour, *Air Transport – A Community Success Story*?, 31 Common Market Law Review 5 (1994), at 1030.
[93] *See* PricewaterhouseCoopers, *Study of certain aspects of Council Regulation 95/93 on common rules for the allocation of slots at Community airports* (2000), at 28.
[94] *See infra* sections 2.3 and 2.3 (addressing the diverse nature of the capacity constraints faced by airports).
[95] *See* PricewaterhouseCoopers, *supra* note 93, at 29.
[96] *See* NERA Economic Consulting, *supra* note 5, at 9; *infra* Chapter 3, section 3.3 (further analyzing the extent of the relationship between slots and traffic rights).
[97] EU Regulation 95/93, as amended, *supra* note 47, Article 2(a).

When allocated, however, slots are not route, aircraft or flight number specific. With narrow exceptions[98] and if the declared capacity allows for it,[99] slots may be changed from, *inter alia,* one route to the other after confirmation of the coordinator responsible for slot allocation at the airport concerned to meet changing demand patterns.[100] Airlines may also exchange slots with other airlines to improve schedules, again subject to the confirmation of the coordinator.[101]

2.1.3 General and specific objectives of slot coordination

At most airports where demand for air transport services exceeds supply, slot coordination is used to define a set of rules and priorities to be followed for the allocation of airport capacity.[102] Thus, airport slots are essentially planning tools for the rationing of capacity at airports where the available capacity falls short of air travel demand. Slot coordination is also portrayed by the drafters of the WASG as a process to "maximize the efficient use of airport infrastructure".[103]

The prime objective of slot coordination is reflected in paragraph 1.2.1 of the WASG:

> "The prime objective of airport slot coordination is to ensure the most efficient declaration, allocation and use of available airport capacity in order to optimize benefits to consumers, taking into account the interests of airports and airlines."[104]

The first edition of the WASG under joint supervision of airlines, airports and coordinators, has been in effect since 2020.[105] Since 2020, the specific objectives of slot coordination according to the WASG are as follows:

> "a) To facilitate consumer choice of air services, improve global connectivity and enhance competition at congested airports for passengers and cargo.
> b) To provide consumers with convenient schedules that meet demand, are consistent from one season to the next, and reliable in terms of their operability.
> c) To ensure that slots are allocated at congested airports in an open, fair, transparent and non-discriminatory manner by a slot coordinator acting independently.
> d) To realize the full capacity potential of the airport infrastructure and to promote regular reviews of such capacity and demand that enable effectual capacity declarations for slot allocation on a seasonal basis.
> e) To balance airport access opportunities for existing and new airlines.
> f) To provide flexibility for the industry to respond to regulatory and changing market conditions, as well as changing consumer demand.
> g) To minimize congestion and delays."[106]

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[98] Pursuant to Article 8a(3) of EU Regulation 95/93, as amended, *supra* note 47, slots allocated to new entrants ". . . may not be transferred to another route . . . for a period of two equivalent scheduling periods". They may also not be transferred or exchanged between airlines. *See infra* section 2.2.3 (mentioning the so-called 'new entrant rule' as part of the allocation priorities set forth by the slot allocation process) and Chapter 5, section 5.5 (providing further analysis on the new entrant rule and questioning if it is still fit for purpose).

[99] *See infra* section 2.2.2 (addressing the setting of declared capacities).

[100] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.10.

[101] *See* Mott MacDonald, *supra* note 63, at 1-11 and 2-1; ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.10; EU Regulation 95/93, as amended, *supra* note 47, Article 8a(2).

[102] *See* European Commission, *supra* note 26, at 1.

[103] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.1.1.

[104] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1.

[105] Before 2020, the document was under the supervision of airlines and coordinators and published by airlines alone. *See infra* Chapter 3, section 3.4 (further elaborating upon the history and governance of the WASG).

[106] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1.

Interestingly enough, the Worldwide Slot Guidelines [hereinafter: WSG] – the WASG predecessor which remained in force until 1 June 2020 – seemingly only pursued the following, more narrowly worded objective:

> "The prime objective of airport coordination is to ensure the most efficient use of airport infrastructure in order to maximize benefits to the greatest number of airport users."[107]

Instead of putting "benefits to consumers" at the center of the coordination process, previous editions of the document put "benefits to the greatest number of airport users" at the heart of the system. Although the document did not specify what should be understood by "airport users", the wording appears narrower than the current reference to "consumers".

2.1.4 Concluding remarks

With the coming into existence of the first edition of the WASG in 2020, the prime objective of slot coordination appears to have changed, whereas the key principles governing the slot coordination process have largely remained the same. Whilst it is, in the author's opinion, certainly important "to maximize benefits to the greatest number of airport users", it seems tenuous at best that a host of ambitious objectives has been added to the document when the WASG came into existence, without first performing a wholesale review of the key principles that need to meet said objectives, or an explanation as to why the current principles are receptive of the revised objectives.

Indeed, a 'Strategic Review' of the WSG has taken place between 2016 and 2019 by airlines, coordinators and for the first time also airports, but only brought marginal changes as to which *see* Chapter 3, section 3.4 of this dissertation. The absence of a wholesale review is noticeable, in particular since the key principles for slot coordination have received widespread criticism from leading academics, competition authorities and industry professionals. Criticism is directed mainly towards the principle of historic precedence and the resulting lack of effective entry posed by the slot regime anno 2021.[108]

The current rules are blamed for creating concentrated constituencies of 'winners', *id est* incumbent airlines holding a large proportion of grandfather rights, even when there are large numbers of 'losers', *id est* new entrant airlines and other airlines experiencing difficulty to operate according to the 80% threshold, for instance airlines with a business model built around non-scheduled services.[109] *See,* among others, DotEcon (2001 and 2006)[110], Boyfield et al (2003)[111], NERA (2004)[112], Mott MacDonald (2006 and 2019)[113], Gillen and Morrison (2008)[114], the European Parliamentary Research Service (2016)[115], Haylan and Butcher

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[107] International Air Transport Association (IATA), *Worldwide Slot Guidelines (WSG) Edition 10* (2019), *supra* note 8, at 1.2.1.

[108] Among others, the principle of historic precedence is criticized for preventing an optimal use of available airport capacity, and for foreclosing market access. The principle of historic precedence lies at the heart of the current slot regime and its role in the slot allocation process is addressed in section 2.2.3. *See infra* Chapter 5, section 5.5 (providing further analysis on the 'grandfather rights clause' from the perspective of optimal capacity utilization).

[109] *See* Guiomard, *supra* note 70, at 130.

[110] *See* DotEcon Ltd.(II), *Auctioning Airport Slots: A Report for HM Treasury and the Department of the Environment* (2001); DotEcon Ltd., *supra* note 64.

[111] *See* Boyfield et al., *supra* note 13.

[112] *See* NERA, *supra* note 5.

[113] *See* Mott MacDonald, *supra* note 63; Mott MacDonald(II), *ACI Slot Policy Brief: Interim Technical Report. Enhancing the efficiency of the allocation and use of airport slots* (2019).

[114] *See* David Gillen and William G. Morrison, 'Slots and Competition Policy: Theory and International Practice' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008).

[115] *See* European Parliamentary Research Service, *Airports in the EU: Challenges Ahead* (2016).

(2017)[116], the United Kingdom [hereinafter: UK] Competition and Markets Authority (2018)[117], Airport Coordination Limited (2019)[118], Finger et al. (2019)[119], ACI Europe (2020)[120] and Odoni (2020)[121].

The next section highlights the basic notions and principles of the slot coordination process, including the setting of declared capacities (the supply-side of slot coordination) and the allocation of slots by the coordinator (the demand-side of slot coordination).

2.2 Basic notions and principles of the coordination process

2.2.1 Airport levels and the designation of an airport as 'slot coordinated'

At the date of writing of this dissertation, three categories of airports can be distinguished according to their level of congestion. The WASG defines the following three categories of airports:

- Level 1 (non-facilitated and non-coordinated) airports are airports where the capacity of the available infrastructure is generally adequate to meet demand at all times;

- Level 2 (facilitated) airports have the potential for congestion during some periods of the day, week, or season which can be resolved by schedule adjustments mutually agreed between the airlines and a facilitator. The facilitator is appointed to facilitate the planned operations of airlines using or planning to use the airport;

- Level 3 (coordinated) airports are declared to be congested, as the available infrastructure at these airports is not sufficient to meet the demands of airport users. Alternatively, governments have imposed conditions that make it impossible for these airports to meet demand. At Level 3 airports, a coordinator is appointed by the responsible government authorities to allocate slots to airlines in an independent manner.[122]

Airports are designated following a thorough demand and capacity analysis by the airport managing body or "another competent body",[123] with the objective of improving the airport's ability to accommodate demand. The analysis should "determine any infrastructure, operational, or environmental constraints that prevent demand being satisfied" and the airport managing body "should evaluate options in consultation with responsible parties for overcoming such shortages through infrastructure, operational, or policy changes and improvements, in accordance with the respective legal framework".[124]

When the demand and capacity analyses demonstrate that there is potential for congestion during some periods of the day, week, or season, an airport is designated Level 2.

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[116] *See* Andrew Haylan and Louise Butcher, *Briefing Paper: Airport Slots, CBP488* (2017).
[117] *See* UK Competition and Markets Authority, *Advice for the Department for Transport on competition impacts of airport slot allocation* (2018).
[118] *See* Airport Coordination Limited (ACL), *ACL response to Sections 3.46 to 3.65 of the consultation document of Aviation 2050: The future of UK aviation* (2019).
[119] *See* Finger et al., *supra* note 18.
[120] *See* Airports Council International (ACI) Europe, *supra* note 11.
[121] *See* Odoni, *supra* note 61.
[122] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.4.1.
[123] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.5.1.
[124] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 6.1.3.

When the demand and capacity analyses demonstrate that there is a mere risk that demand may significantly exceed the capacity of the airport, an airport is designated Level 3.[125]

The EU legislator follows a similar designation process, although the Slot Regulation is surprisingly more prescriptive on the matter of airport designation.[126] The significant shortfall in capacity must be of such serious nature that significant delays cannot be avoided at the airport and cannot be resolved in the short term.[127] Should all these criteria be fulfilled, the second step is for the Member State to appoint an independent airport coordinator.[128]

On the face of it, it appears that slot coordination should be seen as a measure of last resort. Alternatives to slot controls should be considered first, such as increasing the airport's (existing) capacity. If sufficient capacity becomes available at a later stage, slot controls could be lifted. In practice, however, airports rarely – if ever – had their coordinated status rescinded.[129]

2.2.2 The supply-side of slot coordination: capacity declaration

Following the designation of an airport as discussed in the previous section, the first step in the coordination process at any Level 3 airport is to determine the applicable coordination parameters by way of issuing a capacity declaration in consultation with the airport's coordination committee.[130] The capacity declaration is a bi-annual instruction to the slot coordinator in which the available capacity is expressed in terms of the total number of slots authorized for either the Summer or the Winter season, as well as the maximum peak-hour capacity.[131]

The formal determination of the capacity declaration by the airport or any other competent body[132] serves as a starting point for the slot coordinator to issue the declared capacity within the specified limits in terms of airport slots.[133] The underlying purpose is to reduce congestion delays to an acceptable level for both passengers and airlines, as well as to avoid short-term overloads and ensure that traffic loads in each of the individual capacity drivers are manageable, which in turn links to the prime objective of slot coordination as elucidated in section 2.1.3.[134]

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[125] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.5.1 and 1.5.2.

[126] EU Regulation 95/93, as amended, *supra* note 47, Article 3(3). Across the board, the WASG are more prescriptive. *See infra* Chapter 4, section 4.2 (providing comparative analysis of similarities and differences between the WASG and the Slot Regulation).

[127] EU Regulation 95/93, supra note 47, Article 3(5).

[128] EU Regulation 95/93, supra note 47, Article 4(b).

[129] *See* Guiomard, *supra* note 70, at 128.

[130] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 5.4.1. Furthermore, paragraph 5.6.3 of the WASG reads that the coordination committee is open to "all airlines using the airport regularly and their representative organizations, the airport managing body, air traffic control authorities, and representatives of general/business aviation".

[131] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 5.4.1 and 6.2.1; EU Regulation 95/93, as amended, *supra* note 47, Article 6.

[132] According to paragraph 6.2.1 of the WASG, "the airport managing body or *other competent body*" [italics added] should consult the airlines and other relevant stakeholders on the results of the capacity analysis, after which the coordination parameters are declared. No reference as to what constitutes a "competent body" is provided.

[133] Typically, the capacity declaration places an upper limit on the number of slots that may be allocated at each time interval of the day, usually divided in so-called 'time brackets' in order to maintain applicable service levels. *See* Nuno Antunes Ribeiro, Alexandre Jacquillat, António Pais Antunes et al*., Improving slot allocation at Level 3 airports*, 127 Transportation Research Part A: Policy and Practice (2019), at 34.

[134] *See* Odoni, *supra* note 61, at 28; Peter Forsyth and Hans-Martin Niemeier, 'Setting the Slot Limits at Congested Airports' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 64.

Until the early 2000s, the majority of capacity declarations took the relatively simple form of peak-hour capacity limits, indicating the total number of aircraft movements – landings and take-offs – that could be scheduled per hour.[135] Today's capacity declarations take into consideration the full spectrum of operating conditions observed at an individual airport.[136]

Numerous factors combine to determine an airport's capacity, many of which are not directly within the control of the airport operator. Pursuant to the WASG, the available capacity of the airport is declared on the basis of "coordination parameters", entailing the "maximum capacity available for allocation considering the functional limitations at the airport such as runway, apron, terminal, airspace, and environmental restrictions".[137] Accordingly, in addition to operational factors, other factors that can influence declared capacities include measures to address adverse environmental impacts, such as noise and emissions. Besides operational requirements, more and more airports add to the complexity of the parameter framework via the introduction of night flying restrictions or movement caps.[138]

Movement caps imposed for environmental reasons suppose that environmental impacts are linked to air transport movements. Environmentally-imposed slot constraints may be set well below the practical capacity of the airport so as to limit the noise associated with the airport, *exempli gratia* in Dusseldorf and Amsterdam.[139] In reality, matters are more complex, since different aircraft can impose different noise concerns and generate different greenhouse or toxic gas emissions, and "thus aircraft movement limits are a crude means of handling environmental costs".[140] When setting environmental constraints, there is the problem of determining at which level to set the constraint, and so the result may be more or less arbitrary, perhaps as a local political compromise.[141]

However set, declaring capacity is a complex task that requires careful analysis. The capacity declaration is an agreed benchmark for scheduling planning purposes, to be specified months in advance before the scheduled operations will actually take place. The true operating capacity of an airport may therefore be significantly different from declared capacity. For instance, variable external factors such as meteorological conditions are liable to affect the airport's actual throughput capabilities at a given date and time. Declared capacities must thus be set in the face of uncertainty, taking into consideration the full range of true operating capacities that may materialize in practice. They must also consider the trade-offs between capacity utilization and level of service, as reflected in delays and on-time performance.[142] Accordingly, coordination parameters are based on declared capacities, albeit they are not necessarily identical to them.[143]

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[135] *See* Odoni, *supra* note 61, at 27.
[136] *Id.,* at 147.
[137] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 6.2.2. Equal to the WASG, the Slot Regulation requires the coordination parameters to reflect the total capacity available for slot allocation in a particular season, and incorporating all technical, operational and environmental factors pursuant to Article 6(1) of the Slot Regulation.
[138] *See* Claus Ulrich, How the Present (IATA) Slot Allocation Works' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 11; Odoni, *supra* note 61, at 23-24; Ribeiro et al., *supra* note 133, at 50.
[139] *See* NERA Economic Consulting, *supra* note 5, at 16.
[140] *See* Forsyth and Niemeier, *supra* note 134, at 71.
[141] *See* Peter Forsyth, 'Airport Slots: Perspectives and Policies' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 383.
[142] *See* Odoni, *supra* note 61, at 138-39.
[143] *See* Ribeiro et al., *supra* note 133, at 34; Ulrich, *supra* note 138, at 11.

The complexity of the declared capacity will furthermore vary with the size and geographic location of the airport, the geometric layout of the runways and the airfield, the number and configuration of terminals, aprons and gates, the combination of runways in use, the traffic mix operating at the airport, the percentage of arrivals and departures within a given period of time and how this percentage changes during the day, staffing, security control bottlenecks, the variability of weather conditions and so on. The complexity will also depend on demand characteristics, such as seasonality. Limitations on any of these capacity elements can have a significant impact on the overall capacity of the airport.[144]

Besides the requirement *that* coordination parameters need to be determined ahead of each scheduling season, the WASG and the Slot Regulation provide little guidance on *how* to set the coordination parameters. They both lack reference pertaining to norms, standards and methods for setting the declared capacity. Actual practices vary widely within the EU and on the international stage.[145] The WASG require a capacity analysis based on "commonly recognized methods" to validate declared capacity but do not identify which methods are "commonly recognized", nor do they prescribe the roles and responsibilities involved.[146] To the best of the author's knowledge, no concrete definition or guidance exists as to the definition of "commonly recognized methods". It follows that today's practices with regard to setting declared capacities vary greatly across Level 3 airports in Europe and worldwide.[147]

Also, since the WASG does not deal with long-term reductions of capacity anywhere in the document,[148] the declared capacity should presumably be at least equal to the declared capacity in the previous equivalent season, increased by the additional capacity resulting from the improvements in fleet characteristics and flight operations, as far as this is possible within both the legal boundaries as well as operational standards. It is questionable if this 'expansion-approach' is still realistic in light of today's market realities, including the increased environmental focus on airport capacity and the growing capacity crunch, as discussed in sections 2.3 and 2.4 respectively.

Chapter 6 of this dissertation provides suggestions for guidance on the setting of declared capacities, the point of departure being an optimal declaration of the coordination parameters depending on the specific functions of the airport.

2.2.3 The demand-side of slot coordination: allocation process

The subsequent step in the coordination of airport capacity is the responsibility of the functionally and financially independent slot coordinator.[149] There is no initial payment for slots. Slot allocations are made free of charge to airlines or other aircraft operators.[150] However,

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[144] *See* Odoni, *supra* note 61, at 141-42.
[145] *Id.* at 148.
[146] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 6.1.1.
[147] *See* Odoni, *supra* note 61, at 142.
[148] Paragraph 6.10 of the WASG describes what steps need to be followed in situations where airport capacity has to be reduced. However, this paragraph also prescribes that airlines' historic slots must be honored in all cases. As concluded in section 2.1.2 of this chapter, slots are inextricably linked to airport capacity. Thus, it makes sense that the number of declared slots matches the number of actually allocated slots, whether these are historic or not. Section 2.2.3 of this chapter introduces the concept of historic precedence, which shows that – if operated in conformity with the applicable regulations – airlines retain the (historic) right to use congested infrastructure in the next, equivalent season. The WASG thus appear to keep historic rights in the clear where long-term capacity reductions are concerned.
[149] *See infra* Chapter 5, section 5.4 (analyzing the independent functions of the slot coordinator).
[150] *See* Burghouwt et al., *supra* note 16, at 56; UK Competition and Markets Authority, *supra* note 117, at 6; Levine, *supra* note 15, at 63; Condorelli, supra note 3, at 83; ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.7.2(b).

airlines do often pay for the process of slot allocation,[151] for example through the promulgation of a slot fee.[152] Airlines also pay charges for the use of airport facilities and services related to lighting, the landing, take-off and parking of aircraft and the processing of passengers and freight. However, in most cases where capacity is constrained and charges are regulated, this charge is less than the value of the slot.[153] The matter of airport charges is outside the scope of this dissertation and therefore I will not discuss it in greater detail.[154]

Airlines must submit slot requests for either the Winter or the Summer season to the slot coordinator about six months before the season starts, *exempli gratia* in early October for the next Summer season which begins in late March, and mid-May for the next Winter season which begins in late October.[155] Slot requests must be made in the form of slot series, consisting of at least five slots having been requested for the same time on the same day of the week regularly in the same scheduling period. Slot requests are only accepted if the airport capacity is sufficient for the date and time sought after. In other words: a slot request may only be accorded if it fits within the limits of the capacity declaration, as discussed in section 2.2.2. The coordinator strives for slot allocations to comply as closely as possible with the requested slot times, with low overall levels of displacement.[156]

Since 1947, airlines have met bi-annually at schedule coordination conferences under the auspices of the International Air Transport Association[157] [hereinafter: IATA], now known as slot conferences, about 4 months before the start of a new season to discuss schedules. Through bilateral discussions with other airlines, coordinators and airports, airlines voluntarily adjust schedules where it is in their mutual interest and/or to reduce anticipated delays to an acceptable level.[158] In essence, the slot allocation process with its bi-annual slot conferences is governed by a system of self-regulation by airlines themselves.[159]

At the root of the slot allocation process lies the primary principle of historic precedence or 'grandfather rights', which holds that an airline is entitled to retain a series of slots for the subsequent, equivalent season, if that series of slots has been operated according to the 80% threshold at a coordinated airport.[160] If the 80% threshold has not been met, slots are reallocated to other airlines. Airlines have been provided with relief from the use-it-or-lose-it rule on various occasions where sharp demand declines were observed, the most notable one

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[151] *See* Peter Haanappel, *Airport Slots and Market Access: Some Basic Notions and Solutions*, 19 Air and Space Law 4-5 (1994), at 200.

[152] *Inter alia,* the independent slot coordinator for Level 3 airports in The Netherlands, Airport Coordination Netherlands [hereinafter: ACNL] is financed by a slot fee paid by airlines and airports. Carriers using either one of the Level 3 airports have to pay €1,58 per aircraft movement (landing or take-off). In addition, airports have to pay their part of the slot fee resulting in 50% of ACNL's budget being paid by air carriers and 50% by airports. *See* Airport Coordination Netherlands (ACNL), New organizational structure ACNL and introduction slotfee (ACNL, 1 April 2020), *available at* https://slotcoordination.nl/new-organisational-structure-acnl-and-introduction-slotfee (last visited November 10, 2020).

[153] *See* UK Competition and Markets Authority, *supra* note 117, at 6.

[154] For more information on the matter of airport charges regulation, *see* Varsamos, *supra* note 16.

[155] *See* Odoni, *supra* note 61; ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Calendar of Coordination Activities.

[156] *See* Odoni, *supra* note 61, at 31; Guiomard, *supra* note 70, at 129.

[157] *See infra* Chapter 3, section 3.4.3 (providing more information on the roles and functions of IATA to date).

[158] *See* Andrew Sentance, *Airport slot auctions: Desirable or feasible?*, 11 Utilities Policy 1 (2003), at 54; NERA Economic Consulting, *supra* note 5, at 19; Ulrich, *supra* note 138, at 15.

[159] *See* Haanappel, *supra* note 151, at 199.

[160] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.6.1. *See infra* Chapter 5, section 5.5 (further analyzing the concept of historic precedence from the perspective of optimal capacity utilization).

resulting from the outbreak of COVID-19 in 2020-2021.[161] As previously indicated in section 2.1.4, the principle of grandfather rights has accrued widespread criticism from academics, competition authorities and industry professionals, particularly for airport access-related concerns. At the same time, nonetheless, the principle of grandfather rights is generally and understandably welcomed by incumbent airlines for its acknowledgement of the investments made by airlines in the long-standing development of, among others, their fleet and networks.

When all historic slots have been allocated, there are remaining priority rules to be followed in a situation where not all slots can be accommodated to the satisfaction of the airlines concerned. After all historic slots and requests for changes to historic slots are allocated to incumbent airlines, a slot pool of newly created slots, slots returned voluntarily, and slots otherwise unclaimed is established.[162] Such a slot pool can only be set up when there are still slots remaining after the initial allocation of historic slots.[163] A maximum of 50% of the slot pool is set aside for priority allocation to new entrants, unless there are insufficient applications.[164] The Commission has clarified that the so-called 'new entrant rule' should be applied "permanently and continuously" throughout the scheduling season.[165] Despite its pro-competitive objectives, it is doubtful whether the new entrant rule has been successful at increasing competition and mitigating barriers to entry.[166]

After any new entrant requests have been satisfied, any remaining slots can be used to grant slot requests made by incumbent or other airlines, taking into account secondary criteria for competing requests, as well as local rules and guidelines at a specific airport, if applicable.[167] Practical examples of such criteria, rules and guidelines tailored to the local situation at airports are given further attention in Chapter 4, section 4.3 of this dissertation. Slot requests that cannot be satisfied will either be rejected or be placed on a waiting list for potential future in-season allocation, either after some allocated series or individual slots have been returned to the slot pool.[168]

Within each category of services, including new entrant requests, the coordinator accords priority to requests for an extension of existing flight schedules to operate on a year-round basis. We speak of year-round operations when an airline has started a new service during the Winter season and wants to continue this service throughout the coming Summer.[169] In the interest of schedule stability, such flights would have a higher priority over other requests.[170]

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[161] The use-it-or-lose-it rule has also been suspended at other times of sharp demand declines, such as after 9/11, during the Iraq war, the SARS epidemic and in the severe post-2008 economic downturn. *See* European Commission, *supra* note 51, at 13.
[162] *See* International Transport Forum, *Expanding Airport Capacity: Competition, Connectivity and Welfare* (2015), at 56; NERA Economic Consulting, *supra* note 5, at 7; Odoni, *supra* note 61, at 31.
[163] At the world's most congested airports, the total number of available slots may be taken up by historic rights, as to which *see infra* section 2.4.
[164] *See* International Transport Forum, *supra* note 162, at 56.
[165] European Commission, *Communication from the Commission on the application of Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports*, as amended, COM(2008) 0227 final, at 4.
[166] *See infra* Chapter 5, section 5.5 (providing further analysis on the new entrant rule).
[167] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.3 and 8.4; Ulrich, *supra* note 138, at 13.
[168] *See* Odoni, *supra* note 61, at 32.
[169] *See* Ulrich, *supra* note 138, at 12.
[170] *Id.*

2.2.4 Slot monitoring and slot enforcement

Airlines must ensure that their operations are conducted in accordance with the slots allocated to them.[171] Nevertheless, various instances of slot misuse can be identified. The recently added Chapter 9 of the WASG on slot monitoring seeks to address the different forms of slot misuse, *inter alia,* operating without a slot, operating a flight at a significantly different time or in a significantly different way from the allocated slot, holding slots that the airline does not intend to operate and requesting slots that the airline does not intend to operate.[172]

For instance, if an airline does not intend to use a slot, it should return said slot to the coordinator for allocation to another airline.[173] Holding slots that the airline does not intend to use is deemed slot misuse,[174] which may result in enforcement actions by the coordinator or other enforcement body if the misuse is proven to be intentional and/or where the misuse happens repeatedly. Nonetheless, airlines are generally not charged for not using the slots they hold. The slot rules require that slots are returned in advance of the relevant season, but failure to meet this deadline has no associated penalty under the WASG nor the Slot Regulation.[175]

The coordinator shall perform slot monitoring activities to identify and record instances of slot misuse and pursue corrective actions.[176] Slot monitoring has multiple objectives. It intends to reconcile airline operations to the slots allocated, it ensures that slots are used to the 80% threshold, it helps ensure that scarce airport capacity is not wasted, it helps ensure smooth airport operations for all stakeholders, and it prevents slot misuse.[177]

Enforcement actions shall be considered by the coordinator for intentional and/or repeated slot misuse. Airlines may, for example, lose historic rights, receive lower priority for future slot requests, and/or have slots withdrawn. Depending on applicable national or regional laws, (financial) sanctions may also be imposed.[178]

Article 14, recitals 4 and 5 of the Slot Regulation provide that EU Member States should establish an effective enforcement and sanctioning scheme to combat slot misuse. However, the Article restricts itself to sanctions for air services that have not been operated in conformity with the initial slot request made. The Slot Regulation does not refer to instances where airlines do not return slots they do not intend to use, or where airlines operate without having been allocated a slot.

Given the increasing risk of judicial review of allocation decisions,[179] it is questionable whether coordinators feel comfortable enough to impose sanctions for slot misuse, since the Slot Regulation only explicitly provides for the possibility of slot withdrawal in Article 14(4). The Slot Regulation does not include a range of sanctions, including fines, for slot misuse appropriate to the circumstances, nor does it impose the coordinator with the legal authority to impose such sanctions. The introduction of Article 14 presumably aimed to lift potential concerns in this area by requiring Member States to set up adequate sanctioning and

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[171] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.1.3.
[172] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.2.2.
[173] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.5.1 and 8.5.2.
[174] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.2.2.
[175] *See* NERA Economic Consulting, *supra* note 5, at 53.
[176] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.1.5.
[177] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.2.1(a).
[178] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 9.4.4.2.
[179] *See infra* Chapter 4, section 4.3.3.2 and Chapter 5, section 5.4 (providing further analysis on the increased risk of judicial review faced by coordinators).

enforcement schemes to combat instances of slot misuse at the national level in its fifth recital.[180]

Following the introduction of Article 14(5) of the Slot Regulation, several Member States, including Ireland and Spain, have developed infringement procedures which ultimately may lead to the imposition of high fines onto airlines for non-compliance with applicable slot rules.[181]

2.2.5 Concluding remarks

Both the issuing of the capacity declaration and the allocation of slots are essentially advance planning processes. The capacity declaration determines the supply-side of the coordination process, *id est* how many slots will be made available to airlines and is therefore critical for the coordination process to commence. All subsequent steps involve demand-side questions, *id est* whom the available slots will be allocated to. In the words of Prof. Amedeo Odoni of the Massachusetts Institute of Technology, the capacity declaration addresses "50% of the equation",[182] whereas the allocation of slots constitutes the remaining 50%. Day-to-day practice may vary depending on operational circumstances, with the final day-to-day landing and take-off slot clearances in the hands of ATC authorities.[183] Besides the *ex ante* declaration of capacity and allocation of slots, *ex post* slot monitoring and slot enforcement may be imposed.

The recent (2020) addition of Chapter 9 on slot monitoring to the WAGS shows that by and large, the air transport industry considers slot monitoring an integral tool to improve the usage of available resources.[184]

2.3 Renewed importance of airport slots in contemporary society

2.3.1 The impact of deregulation and liberalization on slot availability

As global demand for air services considerably outpaces available airport capacity, the air transport industry worldwide is operating in an increasingly capacity-constrained environment.[185] There is no or limited outlook for sufficient capacity increases in order to meet demand at many coordinated airports around the world, either because of infrastructural and/or environmental limitations.[186]

The freedom to enter and exit airports triggered by deregulation and liberalization,[187] combined with a growing world population, is also the explanation for congestion and slot

[180] EU Regulation 95/93, as amended, *supra* note 47, Article 14(5).
[181] Ireland has introduced sanctions through the Irish European Communities (Airport Slots) Regulations 2013, S.I. No. 460/2013, accompanied by the Commission for Aviation Regulation, Decision on Updating the Slot Sanctions Scheme Implementation Guidelines, Commission Paper 12/2017 (3 October 2017). In Spain, slot monitoring is governed by Spanish Law 21/2003 of 7 July 2003, Aviation Safety, supplementing Royal Decree 15/2001, Articles 49 and 55. Although no longer a Member State, the UK also has an extensive sanctioning and enforcement scheme in place for slot misuse, *see* United Kingdom Airports Slot Allocation Regulations 2006, UK S.I. 2006/2665, which requires the coordinator to adopt and publish an enforcement code in Regulation 18(1). The Netherlands appears to be working towards improved slot compliance, *see* PA Consulting, *Improving slot compliance: addressing slot scarcity at Schiphol Airport* (August 2019).
[182] *See* Odoni, *supra* note 61, at 148.
[183] *See* Haanappel, *supra* note 151, at 199.
[184] *See* Ulrich, *supra* note 138, at 18.
[185] *See* Airports Council International (ACI) Europe, *supra* note 11, at 2.
[186] *See* Odoni, *supra* note 61, at 17 and 23.
[187] *See* Chapter 1, n.10, for an explanation of both terms, including differences as between them.

concentration at hub airports.[188] Incumbent airlines were quick to consolidate into increased joint ventures and large global alliances in order to remain competitive and reach almost global network coverage.[189] Moreover, incumbent airlines swiftly adapted to the liberalized environment by developing 'hub and spoke'[190] route structures in order to accommodate larger volumes of traffic from an increased number of city-pairs.

Critical factors in establishing a hub network are a high degree of coordination of connecting times and frequencies between arriving and departing aircraft. The hub airline thus accumulates most of the slots during these arrival and departure banks, which may in turn lead to slot concentration at peak times. Although hub-and-spoke networks produce powerful network externalities and are thus valuable to consumers in connectivity terms, they also increase movements, particularly by smaller aircraft, and inevitably exacerbate airport capacity problems.[191]

When hub-and-spoke networks were developed, airports generally still had ample slot capacity available, which allowed incumbent airlines to build large historical legacies in terms of grandfather rights over airport slots. As a consequence, slots at large hub airports remain concentrated with their respective hub carriers.[192]

Despite hub airlines holding the lion's share of slots at their respective hub airports, traffic in the EU is not only concentrated around hub airlines. Owing to the extensive liberalization process of the EU air transport market, Ryanair and easyJet managed to gain competitive foothold at EU airports, including secondary airports. Nonetheless, traffic in the EU remains concentrated around a small number of legacy carriers and LCCs, or groups of operators. In 2018, 71% of passenger traffic was operated by only five operators, to wit Ryanair, Lufthansa, IAG, Air France-KLM and easyJet.[193]

Slot scarcity at airports represents the inability of an airline to obtain the slot they want in order to operate a specific route.[194] The lack of slots at congested airports, especially at the ones where all available slots are covered by incumbents' historic rights,[195] may act as a barrier to market access. Airlines wishing to start or expand their services at a coordinated airport may

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[188] *See* Andrew R. Goetz and Paul Stephen Dempsey, *Airline Deregulation Ten Years After: Something Foul in the Air,* 54 Journal of Air Law and Commerce 4 (1989), at 941-960.

[189] *See* Varsamos, *supra* note 16, at 108.

[190] In a 'hub and spoke' network, a hub airline operates from a selected 'hub' to or from which traffic would be concentrated for air services to or from another airport, be it other hubs or secondary airports (spokes). Most of the spoke-to-hub flights land during 'arrival banks', whereas hub-to-spoke flights take-off in 'departure banks'. Examples of airlines and airports hosting hub operations are British Airways at London Heathrow, Lufthansa at Fraport, KLM at Amsterdam Airport Schiphol and Air France at Paris Charles de Gaulle. For an explanation of the economics and the demand and supply-side gains of a hub-and-spoke network, *see* NERA Economic Consulting, *supra* note 5, at 36; Gillen and Starkie, supra note 59; Robert Hardaway and Paul Stephen Dempsey, *Airlines, Airports and Antitrust: A Proposed Strategy for Enhanced Competition*, 58 Journal of Air Law and Commerce 2 (1993); David Starkie, 'The economics of secondary markets for airport slots' in Keith Boyfield, David Starkie, Tom Bass et al. (eds), *A market in airport slots* (The Institute of Economic Affairs 2003).

[191] *See* Brian Graham and Claire Guyer, *Environmental sustainability, airport capacity and European air transport liberalization: Irreconcilable goals?,* 7 Journal of Transport Geography 3 (1999), at 178; Varsamos, *supra* note 16, at 33; International Transport Forum, *supra* note 162, at 14; Goetz and Dempsey, *supra* note 188, at 941-960; Hardaway and Dempsey, *supra* note 190.

[192] *See* Gillen and Morrison, *supra* note 114, at 173; Goetz and Dempsey, *supra* note 188, at 941-960.

[193] *See* EGIS and SEO Amsterdam Economics, *supra* note 16, at 116.

[194] *See* Batool Menaz and Bryan Matthews, 'Economic Perspectives on the Problem of Slot Allocation' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 24.

[195] Examples of these airports include London Heathrow and Amsterdam Airport Schiphol. *See infra* section 2.4.2 on super-congested airports.

be hindered or prevented from doing so, as slots are an essential input for airlines wanting to compete.[196] The enormous growth of LCCs such as Ryanair and easyJet took place, both by choice but also by necessity, at secondary airports.[197] At congested airports where pool slots are still available, they tend to only be available at unattractive times, or they are not available as a series.[198]

Understandably, the grandfather rights-based slot system is popular with incumbent airlines, which hold large slot portfolios at their preferred airports. Unsurprisingly, it is less popular with newer, less established airlines for whom it is difficult if not impossible to start or expand services from a coordinated airport. This is especially a concern in continental Europe and parts of the Asia Pacific.[199] Although expanding airport capacity appears to be the most logical solution to solve market access-related issues, adding slot capacity is a difficult task at the best of times.[200] It is expensive, and expansion plans often encounter environmental problems, as section 2.3.3 will illustrate below.

In 2021, roughly 204 out of 4000 airports offering commercial air services are operating at congestion levels that require slot coordination.[201] Despite this relatively small number, slot coordinated airports, also known as 'Level 3 airports', are of major importance to the global air transport system. Altogether, they served 4,2 billion arriving and departing passengers in 2018, which equals about half of the total number of the world's airport passengers.[202]

Eurocontrol forecasts that 16 European airports will be operating at 'Heathrow-like' conditions in 2040 (up from 6 in 2018).[203] At the global stage, the Economic Commission of the International Civil Aviation Organization [hereinafter: ICAO] noted during ICAO's 39th Assembly in Fall 2016 "the need to optimize the use of scarce capacity, particularly at capacity constrained airports".[204]

2.3.2 The apparent mismatch between the functions of slot coordination and market conditions anno 2021

Despite momentous developments at a global stage as explained in Chapter 1 and section 2.3.1 above, the industry 'standards' recognized by many regulatory authorities for the coordination of airport capacity as embodied in the WASG have remained largely unchanged since their inception in the 1970's. The guidelines of the WASG, although not legally binding, have been implemented in the Slot Regulation, and may also have been implemented in national law.[205]

Despite annual revision, the changes that have been made to the WASG are predominantly of a practical or clarifying nature.[206] In the author's opinion, substantive changes to key provisions are few, save for the introduction of the new entrant rule in 1993 following concerns of the Commission that the grandfather rights-system could be deemed anti-

[196] *See* Milligan, *supra* note 14, at 137; Balfour, *supra* note 92, at 1037.
[197] *See* Guiomard, *supra* note 70, at 132. There are, however, more factors of relevance when an airline decides to move to a secondary airport other than a lack of slots. Such airports may have lower charges and/or incentive schemes in place to attract LCCs.
[198] *See* NERA Economic Consulting, *supra* note 5, at 51.
[199] *See* Forsyth, *supra* note 141, at 379.
[200] *See* Gillen and Starkie, *supra* note 59, at 152.
[201] *See* Airports Council International (ACI) Europe, *supra* note 11, at 2.
[202] *See* Odoni, *supra* note 61, at 7.
[203] *See* Eurocontrol, *European Aviation in 2014 – Challenges of Growth* (2018), at 5.
[204] *See* ICAO, *Report of the Economic Commission on Agenda Item 39* (2016), paragraph 39.30.
[205] International Air Transport Association (IATA), *Worldwide Slot Guidelines (WSG) Edition 10* (2019), *supra* note 8, Preface. *See infra* Chapter 3, section 3.4.1 (discussing, *inter alia,* the legal status of the WASG).
[206] *See* Odoni, *supra* note 61, at 19.

competitive.[207] Likewise, the Slot Regulation continues to largely reflect the principles of the WASG. Accordingly, the essential principles for slot coordination that still apply to the air transport industry today have broadly remained the same since the introduction of the Slot Regulation in 1993.

A 2007 consultation exercise by the Commission shows that airlines pinpoint the lack of airport capacity as the main problem that lies at the heart of the slot scarcity experienced at congested airports. Instead of addressing the symptoms of slot scarcity, airlines have primarily advocated physical expansion.[208] Likewise, Haanappel (1994) opinionated that the "sole purpose of slot allocation should be to alleviate congestion".[209] This line of reasoning does not come as a surprise, given that the current rules were never written to provide a solution to the fundamental problem of a lack of airport capacity. Capacity-wise, the WASG continue to underline that

> "Coordination is not a solution to the fundamental problem of a lack of airport capacity. In all instances, coordination should be seen as an interim solution to manage congested infrastructure until the longer-term solution of expanding airport capacity is implemented."[210]

In 2016, ICAO acknowledged the WASG approach by confirming that "[t]he air transport industry and States should concentrate efforts on providing sufficient capacity, so that less slot coordination is needed than we currently have today. . .".[211] In 2018, ICAO moderated its capacity growth-oriented stance by clarifying that environmental and physical constraints may make "substantial expansion of the existing facilities impractical or prohibitively expensive", although reiterating that incremental capacity increases are possible at these airports.[212]

The above function of slot coordination set forth by the WASG and as confirmed by ICAO appears somewhat archaic to say the least. *First,* although it would be more evident to treat the problem instead of the symptoms in most situations, the question is whether the problem at hand *can* actually be treated. Whereas supply in most sectors strives to grow against excess demand, and airport capacity expansion would indeed reduce congestion and increase airport access opportunities for some time,[213] adding slot capacity and matching supply with demand in air transport is a difficult task at the best of times, which will take me to another notable development in air transport relevant to this dissertation in section 2.3.3 below: the promotion of environmental protection.[214]

Second, it implies that at airports with no outlook for moderate or significant capacity increases, slot coordination as we know it may not constitute the right means to manage scarce infrastructure and evokes questions as to the qualifications of the WASG, and by extension the Slot Regulation, to govern the declaration, allocation and use of slots at airports where slot scarcity is of a long-term or permanent nature, and where persistent impediments to airport

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[207] *See infra* Chapter 4, section 4.1.2 (explaining the Commission's concerns and considerations paired with the adoption of the Slot Regulation).
[208] *See* European Commission, *Communication from the Commission on the application of Regulation (EC) 793/2004 on common rules for the allocation of slots at Community airports*, COM(2007) 704 final, at 2.
[209] *See* Haanappel, *supra* note 151, at 202.
[210] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.1.2.
[211] *See* ICAO, *Agenda Item 39: Economic Regulation of International Air Transport – Policy,* A39-WP/340 (2016), paragraph 1.5.
[212] *See* ICAO, *Doc 9626: Manual on the Regulation of International Air Transport*, Third Edition (2018).
[213] *See* Gillen and Starkie, *supra* note 59, at 152.
[214] *See* Colangelo, *supra* note 10, at 35; Gillen and Starkie, *supra* note 59, at 152; Graham and Guyer, *supra* note 191, at 165.

access are experienced as a result, the so-called 'super-congested airports'. This special category of airports is analyzed in section 2.4.2 below.

2.3.3 Airport planning and the promotion of environmental protection

Although insufficient airport capacity has a negative impact on air carriers' ability to acquire slots at congested airports, the lack of airport capacity is oftentimes a physical impediment that cannot be resolved with short-term solutions.[215] In fact, the notion that the demand for air transport can be entirely met by physical capacity expansion is now seen as unrealistic.[216]

Since the implementation of policies designed to liberalize air transport in the EU in the 1980's, a lot has changed regarding society's perspective on air transport. It is evident that air transport is intricately linked with the well-being of a nation's whole economy.[217] Yet, air transport is also widely perceived as generating significant negative externalities, notably in the form of emissions of pollutants affecting local air quality, in particular nitrogen oxides and volatile organic compounds, as well as emissions of carbon dioxide and other greenhouse gases, which have global impacts.[218] In the words of the Intergovernmental Panel on Climate Change, an international scientific body established jointly by the UN and the World Meteorological Organization, the impact of aviation on the global environment has become one of the most politically contentious issues in international aviation law and policy.[219]

In particular younger generations are becoming increasingly sensitive to the climate impact of air transport.[220] The phenomenon of 'flight shaming' has encouraged individuals to take the train over a plane and has seemingly gained popularity.[221] A negative shift in public attitude towards air transport has already put into question aviation's societal license to continue to grow its activities and unlock more slots to enhance market access for new or expanded services.[222] For instance, environmental impacts were the main reason for delays in capacity investment at the airports of Dusseldorf, Vienna and Munich.[223] The construction of a new airport in Karlstad, Sweden in the 1990's was also motivated primarily by environmental

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[215] *See* ICAO, *supra* note 78, paragraph 4.3.

[216] *See* Michael A. Madas and Konstantinos G. Zografos, *Airport slot allocation: From instruments to strategies*, 12 Journal of Air Transport Management 2 (2006), at 53.

[217] *See* European Commission, *supra* note 20, at 71; Peter McManners, *Fly and Be Damned: What Now for Aviation and Climate Change?* (Zed Books 2012), at 1-10; David L. Greene and Michael Wegener, *Sustainable Transport,* 5 Journal of Transport Geography 3 (1997), at 177; Kenneth Button, *Studying the empirical implications of the liberalization of airport markets,* 21 Competition and Regulation in Network Industries 3 (2020), at 13; Mike Feintuck, 'Regulatory Rationales Beyond the Economic: In Search of the Public Interest' in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010), at 39.

[218] *See* NERA Economic Consulting, *supra* note 5, at 121-22; Graham and Guyer, *supra* note 191, at 179; McManners, *supra* note 217; Paul Stephen Dempsey, *Market failure and regulatory failure as catalysts for political change: The choice between imperfect regulation and imperfect competition*, 46 Washington and Lee Law Review 1 (1989), at 17; Truxal, *supra* note 16, at 78; European Commission, *supra* note 20, at 100.

[219] The Intergovernmental Panel on Climate Change has provided substantial scientific evidence that global temperatures are on the rise due to rapid increases in greenhouse gas emissions caused by human activity. *See* Intergovernmental Panel on Climate Change (IPCC), Climate Change 2021: The Physical Science Basis. Summary for Policymakers, *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf (last visited November 10, 2021).

[220] *See* EGIS and SEO Amsterdam Economics, *supra* note 16, at 75.

[221] *See* Forbes, *The Spread Of Flight Shame In Europe – Is Greta Thunberg The Reason Why?* (13 January 2020), *available at* https://www.forbes.com/sites/jamesasquith/2020/01/13/the-spread-of-flight-shame-in-europe-is-greta-thunberg-the-reason-why/#45a47d0e69bd (last visited November 10, 2021). *See* James Asquith, The Spread Of Flight Shame In Europe – Is Greta Thunberg The Reason Why? (Forbes, 13 January 2020), *available at* https://www.forbes.com/sites/jamesasquith/2020/01/13/the-spread-of-flight-shame-in-europe-is-greta-thunberg-the-reason-why/#45a47d0e69bd (last visited November 10, 2021).

[222] *See* EGIS and SEO Amsterdam Economics, *supra* note 16, at 75.

[223] *See* NERA Economic Consulting, *supra* note 5, at 16; Van Houten and Burghouwt, *supra* note 22.

considerations, because of the old airport's proximity to the city center.[224] Amsterdam Airport Schiphol equally has a long history of strong environmental opposition to airport expansion and flight volume growth.[225]

In addition to aviation emissions, aircraft noise exposure is increasingly being seen as an important public health issue.[226] Noise around airports and in airport hinterlands in particular is a principal source of complaints.[227] The right to a quiet life has been recognized by the European Court of Human Rights in 2001 in the *Hatton*-case[228], which was brought before the court by residents who suffered from noise around London Heathrow.[229] The court ruled that the government must strike a fair balance between the competing interests of the individual and the community as a whole. In doing so, the government enjoys a certain margin of appreciation in determining the steps to be taken. A "mere reference to the economic well-being of the country" was deemed "not sufficient to outweigh the rights of others".[230]

Even where expansion plans are authorized, projects take many years to complete. For example, the London airport system – the world's largest for the combined number of destinations served – is suffering from congestion and severe capacity shortfalls, particularly at London Heathrow and London Gatwick. There is a long history of strong environmental opposition to the expansion plans of both of these sites.[231] London Heathrow's third runway is on a lengthy timescale, if the runway will see the light of day at all. In early 2020, the UK Court of Appeal ruled that the government's decision to give the go-ahead for London Heathrow expansion did not adequately consider the government's commitments to tackle the climate crisis in line with the Paris Agreement.[232] Alternatively, moving the largest UK airport to an island in the Thames would take twenty years to complete.[233]

Comparing airports to other businesses – perhaps with the exception of harbors – is like comparing apples to oranges. Airports have limited flexibility with regard to where they are located and the demands placed on them owing to their public functions.[234] In 2004, the Commission expressly highlighted that an airport always fulfils a public function.[235] Many of the world's busiest airports are located in densely populated urban areas where geographic conditions, environmental and public health concerns are liable to make expansion plans

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[224] *See* European Commission, Commission Decision of 22 July 1998 on a procedure relating to the application of Council Regulation (EEC) No 2408/92 (*Access to Karlstad Airport*), L 233/25, recital 9.
[225] *See* EGIS and SEO Amsterdam Economics, *supra* note 16, at 104-06; Van Houten and Burghouwt, *supra* note 22.
[226] *See* European Commission, *supra* note 20, at 104.
[227] *See* NERA Economic Consulting, *supra* note 5, at 49; Graham and Guyer, *supra* note 191, at 169-174.
[228] *See Hatton and others v. The United Kingdom* 36022/97 [2003] ECLI:CE:ECHR:2003:0708JUD003602297.
[229] *See* Mendes de Leon, *supra* note 48, at 566.
[230] *See Hatton and others v. The United Kingdom, supra* note 228, at 86.
[231] Both airports are large contributors to the international air transport system: London Heathrow is the world's second largest international airport, having been superseded by Dubai in 2014, whereas London Gatwick is the world's busiest single runway airport. *See* Gillen and Starkie, *supra* note 59, at 159-60.
[232] Court of Appeal (Civil Division) on Appeal from the Queen's Bench Division, *R (Friends of the Earth) v. Secretary of State for Transport and Ors* [2020] EWCA Civ 214; Laura Hughes-Gerber, *A Third Runway for Heathrow? To Build or Not to Build?: A Brief Review of the Supreme Court's Recent Judgment*, 46 Air and Space Law 2 (2021).
[233] *See* Brian F. Havel and Gabriel S. Sanchez, *The Principles and Practice of International Aviation Law* (Cambridge University Press 2014), at 116.
[234] For instance, the Dutch Aviation Act of 1992, Article 8.24(a) required Dutch airports to accommodate all traffic which has acquired traffic rights pursuant to ASAs or EU Regulation 1008/2008, *supra* note 39. *See infra* Chapter 3, section 3.2 (explaining the concept of traffic rights) and Chapter 4, section 4.3 (addressing the key principles of EU Regulation 1008/2008).
[235] *See* European Commission, *Commission Decision of 12 February 2004 concerning advantages granted by the Walloon Region and Brussels South Charleroi Airport to the airline Ryanair*, OJ L 137, paragraph 156.

problematic.[236] The location of many of the world's major airports close to urban centers, and hence dense residential areas, is logical, because airports and urban areas are complementary forces. They feed each other business, industry, trade, commerce, transport and communications.[237]

Yet, the closer an airport is located to a densely populated area, the more geographical and environmental planning restrictions it will likely face affecting its use and growth. Invariably, airports cannot be built or expanded without the permission of public authorities. The lack of political will to authorize airport expansion projects or develop new airports owes much to the environmental opposition that such plans encounter, which is illustrated by the airports facing environmental restrictions mentioned above.[238] The application of environmental restrictions at these airports are no isolated cases, for they are more likely to be exemplars that will be followed elsewhere in the future.[239]

The above paragraphs illustrate the mounting recognition that present and projected trends in mobility cannot be sustained,[240] that is to say at least until alternative means are found to eliminate the negative externalities of air transport, *exempli gratia* large scale electric flying. The 2015 Paris Agreement[241], adopted by 196 States parties, includes a pledge to limit carbon emissions in order to hold the global average temperature rise to well below 2 degrees Celsius, compared to pre-industrial levels.[242]

Initiatives to assess the responsibility of the air transport industry with regard to climate change or 'global warming' are already ongoing.[243] Under the umbrella of ICAO, many States around the world are working to achieve targets of carbon neutral growth from 2020 onwards and to reduce air transport industry emissions by 50% by 2050 compared to 2005 levels.[244] Moreover, ICAO is pursuing a "basket of measures" including improvements in aircraft technology and operations, sustainable aviation fuels, and market-based measures, for example through its Carbon Offsetting and Reduction Scheme for International Aviation.[245] The 2021 Work Programme of the Commission lists the European Green Deal as the Commission's first priority.[246]

Despite the above efforts undertaken by States and air transport industry stakeholders, it appears that a completely 'de-carbonized' and 'de-noised' aviation industry seems out of reach for some decades. Technology for electric engines in aviation is taking its first steps nowadays, however, the industrialization of this technology will require years.[247] It thus appears that only

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[236] *See* European Commission, *Commission Staff Working Document – Evaluation of the Directive 2009/12/EC of 11 March 2009 on airport charges*, SWD(2019) 291 final, at 7.
[237] *See* Truxal, *supra* note 10, at 90; Haanappel, *supra* note 151, at 198.
[238] *See* Haanappel, *supra* note 151, at 198; Graham and Guyer, *supra* note 191, at 170.
[239] *See* Graham and Guyer, *supra* note 191, at 179.
[240] *See* Greene and Wegener, *supra* note 217, at 177.
[241] Paris Agreement to the United Nations Framework Convention on Climate Change (Paris, 12 Dec. 2015), T.I.A.S. No. 16-1104, *entered into force* 4 Nov. 2016.
[242] *Id.*, Article 2(1)a.
[243] *See* Havel and Sanchez, *supra* note 233, at 217.
[244] *See* ICAO, *Resolution A40-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change* (2019).
[245] *See* ICAO, Climate Change, *available at* https://www.icao.int/environmental-protection/pages/climate-change.aspx (last visited November 10, 2021).
[246] *See* European Commission, Communication from the Commission – Commission Work Programme 2021: A Union of vitality in a world of fragility, COM(2020) 690 final.
[247] *See* Munari, *supra* note 21, at 542.

enhancements of existing capacity can bring solutions at many congested airports, perhaps partially through the coordination of slots.[248]

The debate on climate change and the reduction of carbon emissions at the worldwide level – with Europe at the forefront – puts pressure on the governmental and societal support for the development of the air transport sector, and by extension the number of newly available slots. A growing socio-political focus on limiting the negative externalities of air transport may culminate into discussions as to how a flight's environmental footprint could be reflected in the declaration, allocation and use of airport capacity. Hence, airport capacity presumably is, or is soon to become, environmental capacity, with environmental constraints increasingly determining the magnitude of air transport movements.[249]

Exemplary to initiatives in tackling air transport's environmental externalities is that an increasing number of airports add to the complexity of their capacity parameter framework via the introduction of night flying restrictions or air traffic movement caps as illustrated above, further exacerbating the capacity crunch.[250] Hence, in addition to operational factors, other factors that can influence declared capacities include measures to address environmental impacts, such as noise and emissions.

In sum, a paradigm shift may be required in order for the slot regime to shy away from its seemingly growth-oriented focus to bring it more in line with market conditions anno 2021. The positive externalities of air transport[251] may be better served by extending the functions of slot coordination to achieving a better balance between the legitimate interests of all stakeholders involved, *inter alia,* regulators, airports, incumbent airlines and new entrants, local residents and citizens, for the benefit of society as a whole. In other words: the time may have come for socio-economic considerations[252] or an airport's function to society as a whole to play a role in the regulatory regime in place for slot coordination at congested airports.[253]

2.3.4 Concluding remarks

Despite the fact that the first enactment of the WASG principles in 1974 and the Slot Regulation in 1993 made a significant contribution in terms of a slot coordination process offering global synergies,[254] the slot regime provided for by both the WASG and the Slot Regulation still reflect the pre-liberalization situation into a more liberalized and congested world.[255]

Hence, the coordination of slots increasingly involves broader policy questions as to how capacity is used to its most optimal level, taking into account both operational and environmental concerns, as well as the compatibility of liberal airport access provisions with high slot scarcity levels, imposing insuperable entry barriers.[256]

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[248] *See* Haanappel, *supra* note 151, at 198.
[249] *See* Graham and Guyer, *supra* note 191, at 169.
[250] *See* Odoni, *supra* note 61, at 23-24; Ribeiro et al., *supra* note 133, at 50; Ulrich, *supra* note 138, at 11.
[251] Air transport contributes significantly to economic growth. Increased (inter)national connectivity has a positive impact on a nation's productivity, the business climate and general socio-economic welfare. *See*, among others, Air Transport Action Group, *The economic & social benefits of air transport* (2005).
[252] Socio-economic considerations are, for the purposes of this dissertation, understood to mean the balancing of the positive and negative externalities of air transport, which includes topics as sustainability in a broad sense, including aircraft noise exposure, air quality, employment levels, the business climate and competitive relations.
[253] *See* Odoni, *supra* note 61, at 21; DotEcon Ltd., *supra* note 64, at 4.
[254] *See* European Commission, *supra* note 26, at 6; Gillen and Starkie, *supra* note 59, at 154.
[255] *See* Finger et al., *supra* note 18, at 3.
[256] *See* ICAO, *Circular 283-AT/119: Regulatory Implications of the Allocation of Flight Departure and Arrival Slots at International Airports* (2001)*;* Varsamos, *supra* note 16, at 115-16.

As airport congestion is expected to only worsen over time – with Europe at the forefront – and more airports will become congested in the future, as to which *see* section 2.4 below, the issues experienced with the current slot rules will become more widespread and have a greater impact should they not be addressed adequately.[257] The capacity issues encountered by numerous slot coordinated airports have become highly diverse as well, potentially requiring tailor-made solutions reflective of the nature of the issues experienced as argued in this dissertation.[258]

2.4 The deepening of the 'Airport Capacity Crunch'

2.4.1 Growth trends exacerbating slot scarcity: facts and figures

The World Bank reports that the number of passengers carried by air transport at a global level have increased from 310 million in 1970, to 1,025 billion in 1990, to 2,628 billion in 2010 and to 4,233 billion in 2018.[259] Between 2010 and 2018, the number of passengers carried by air transport in the EU has increased by 43% from 776 to 1106 million, this increase being substantially higher than that experienced in other transport modes.[260]

Similarly, the number of Level 3 slot coordinated airports worldwide continues to increase: 136 in 2000, 155 in 2010 and 197 in 2021.[261] In 2019, Level 3 airports accounted for 46% of global seat capacity offered and 38% of the number of scheduled passenger flights.[262] At an aggregate level, the world's airports thus lack sufficient capacity to accommodate projected growth trends in air transport.[263]

The congestion problem is especially prevalent in Europe, which is home to about half of all Level 3 airports worldwide.[264] This number is deemed to reflect the chronic difficulty that many European States face when it comes to increasing the physical capacity of their airports and/or environmental concerns.[265] Nonetheless, excess demand for airport infrastructure is a global phenomenon. As shown by the specific regimes for slot coordination analyzed in Chapter 4, congested airports are also found in, among others, Australia, the US, Mexico, and China.

The COVID-19 outbreak in 2020-2021 has had a profound negative impact on air transport. Health measures and travel restrictions designed to contain the outbreak have resulted in a dramatic reduction in air transport activity, especially so for passenger operations.[266] This dissertation does not analyze in detail the impacts of the COVID-19 crisis. What is relevant for this dissertation, however, is that many predict global air transport to continue to grow in the decades ahead, despite the COVID-19 pandemic in 2020-2021, the pandemic's potentially longer-term impacts on the industry and ongoing investment in airport infrastructure where possible.[267]

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[257] *See* Steer Davies Gleave, *supra* note 69, at 3.
[258] *See* Odoni, *supra* note 61, at 21.
[259] *See* Finger et al., *supra* note 18, at 3. *See* also data.worldbank.org (input: air transport, passengers carried).
[260] *See* Eurostat, Air passenger transport in the EU of 6 December 2019, *available at* https://ec.europa.eu/eurostat/documents/2995521/10265946/7-06122019-AP-EN.PDF/8f2c9d16-c1c4-0e1f-7a66-47ce411faef7 (last visited November 10, 2021).
[261] *See* International Air Transport Association (IATA), Annex 12.7 – Contact list for Level 2 and Level 3 Airports (21 October 2021), *available at* https://www.iata.org/contentassets/4ede2aabfcc14a55919e468054d714fe/wasg-annex-12.7.xlsx (last visited November 12, 2021).
[262] *See* Van Houten and Burghouwt, *supra* note 22.
[263] *See* Graham and Guyer, *supra* note 191, at 165.
[264] *See* Odoni, *supra* note 61, at 8, as cited in Van Houten and Burghouwt, *supra* note 22.
[265] *Id.,* at 8; Gillen and Starkie, *supra* note 59, at 152.
[266] *See* EGIS and SEO Amsterdam Economics, *supra* note 16, at 34; European Commission, *supra* note 51, at 2.
[267] *See* Sun et al., *supra* note 23; Czerny et al., *supra* note 23; Suau-Sanchez et al., *supra* note 23.

ICAO still expects global passenger demand to grow by 4,2% per annum towards 2038 with slightly lower growth rates in the maturing European market. Rising disposable incomes, urbanization, liberalization, competition, globalization and more efficient aircraft drive long-term growth.[268] Hence, the number of Level 3 airports around the world is also expected to increase.

The fact that passenger demand is expected to continue to grow only exacerbates the problems experienced at existing congested airports and introduces delays at other airports that currently still have spare capacity.[269] If traffic volumes continue to increase and capacity keeps falling short of demand, it is inevitable that many of the airports that are currently eligible for Level 2 designation will become Level 3 airports in the (near) future.[270]

2.4.2 The emergence of super-congested airports

Besides the fact that capacity in the entire aviation system will become increasingly scarce, what is more important is that half of global air traffic is concentrated at just 4% of the largest 100 airports.[271] These are the airports that are or will be confronted with severe capacity problems, because increasing demand has outpaced or will outpace increases in declared capacity. At this newly emerged category of 'super-congested' Level 3 airports, a deepening of slot scarcity levels is observed, to such an extent that these airports have little to no slots available for coordination.[272]

Accordingly, besides the fact that more airports are declared Level 3 as discussed in section 2.4.1 above, the level of congestion experienced by different congested airports has become diversified as well. At super-congested Level 3 airports, slot limits are effective more or less all of the day. Others are likely to still have spare (peak) slot capacity left for coordination.[273] At the latter category of airports, market entry is not foreclosed. Most of the slot requests can be dealt with, potentially after rescheduling them to another date and time than initially requested. Nonetheless, not only the complete absence of slots represents an entry barrier. The lack of slots during peak hours experienced at many coordinated airports may also be a serious entry barrier to potential entrants, particularly those targeting time-sensitive business customers.[274]

The airports in the super-congested category have in common that they have little to no slots available to accommodate new requests, since the slots are covered by incumbents' historic rights. No-slot waitlists are expanding, as coordinators are confronted with having to reject slot requests season after season. The competitive pressure exerted by other airlines in the same market is minimal, and much latent demand exists at these airports. Should the capacity of these airports increase, numerous additional slot requests are likely to be submitted immediately to claim any newly available slots.[275]

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[268] *See* ICAO, Forecast of Scheduled Passenger and Freight Traffic, *supra* note 24.
[269] *See* Gillen and Starkie, *supra* note 59, at 152.
[270] *See* ICAO, *supra* note 78, paragraph 2.1.
[271] *See* Marc C. Gelhausen, Peter Berster and Dieter Wilken, *Do airport capacity constraints have a serious impact on the future development of air traffic?*, 28 Journal of Air Transport Management (2013), at 6; Graham and Guyer, *supra* note 191, at 178.
[272] *See* European Commission, *supra* note 20, at 193.
[273] *See* Peter Forsyth and Hans-Martin Niemeier, *Prices and Regulation in Slot Constrained Airports*, in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 128.
[274] *See* Case No COMP/M.3770 – Lufthansa/Swiss. Regulation (EC) No 139/2004 Merger Procedure, Article 6(2) NON-OPPOSITION, 4 July 2005, paragraph 33.
[275] *See* Odoni, *supra* note 61, at 23-24.

Amongst this super-congested category are the world's busiest airports, oftentimes providing their countries with the majority of available long-haul destinations.[276] Airports operating at saturation levels with excess demand all year round include London Heathrow, Amsterdam Airport Schiphol, Paris Orly and Hong Kong International.[277] At these airports, slots are extremely valuable.[278] At airports such as Fraport, Munich, Dusseldorf and Vienna, slots are still available, although all or most of the slots may be fully used during peak times, particularly in the Summer season.[279] Eurocontrol already forecasted that 16 European airports will experience 'Heathrow-like' congestion in 2040.[280]

Where few or no slots are available at super-congested airports, the coordinator continuously has to make trade-offs between competing slot requests. By nature, this comes down to making decisions which airlines can operate to and from an airport and which airlines cannot. With the number of slot requests rising, these decisions will be increasingly difficult to make.[281]

Besides varying levels of congestion, the nature of the capacity constraints and the particular issues encountered by different (super-)congested Level 3 airports differ considerably.[282] Specific airport characteristics stem from, *inter alia,* public functions, markets served, the availability of regional alternatives, business strategies, geographical constraints, the nature and origin of capacity constraints, et cetera.[283] Moreover, facilitating hub-and-spoke networks requires a different level of airport infrastructure and service than facilitating mainly origin and destination traffic, which cannot be provided by all airport operators.[284]

The heterogeneity of airport infrastructure discussed in section 2.2.2 reduces the likelihood of finding general capacity declaration or slot allocation principles matching the particular situation of each and every airport.[285] The growing demand in terms of both aircraft movements and passengers has forced many airport operators to increase the number and complexity of coordination parameters appropriate to their specific situation.[286] Extensive sets of coordination parameters have by now become the rule, rather than the exception, at the busiest Level 3 airports.[287] At an increasing number of airports, today's declared capacities are also reflective of environmental objectives, as to which *see* section 2.3.3 above.

2.4.3 Impacts of growing excess demand at super-congested airports on competition, connectivity and airport operations

A study undertaken by NERA (2004) shows that where excess demand is greatest, there exists greater potential for an inefficient coordination of slots.[288] Growing excess demand has

[276] *See* Jagoda Egeland and Paul Smale, *Capacity building through Efficient Use of Existing Airport Infrastructure* (2017), at 12.
[277] *See* Ribeiro et al., *supra* note 133, at 50.
[278] *See* Boyfield, *supra* note 46, at 22-23; Odoni, *supra* note 61, at 44; EGIS and SEO Amsterdam Economics, *supra* note 16, at 106; Ribeiro et al., *supra* note 133, at 50; European Commission, *Commission Implementing Decision (EU) 2019/1585 of 24 September 2019 on the establishment of traffic distribution rules pursuant to Article 19 of Regulation (EC) No 1008/2008 for the airports Amsterdam Schiphol and Amsterdam Lelystad*, OJ L 246, paragraph 23.
[279] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraphs 187-209.
[280] *See* Eurocontrol, *supra* note 203, at 5.
[281] *See* ICAO, *supra* note 256, at (v).
[282] *See* Odoni, *supra* note 61, at 101.
[283] *See* Varsamos, *supra* note 16, at 217; Madas and Zografos, *supra* note 216.
[284] *See* Varsamos, *supra* note 16, at 217.
[285] *See* Button, *supra* note 217, at 14.
[286] *See* Odoni, *supra* note 61, at 27.
[287] *Id.*, at 27-29.
[288] *See* NERA Economic Consulting, *supra* note 5, at 31 and 47.

substantial implications for super-congested airports, relating not only to increasing average aircraft size and load factors, but also to the crowding out of certain traffic segments such as full freighter flights, traffic spill to other airports, higher ticket prices, and foreclosed route entry, making the markets served to and from the hub less contestable. Other issues that may arise include increased legal pressure on the coordinator and a suboptimal use of capacity because uncertainty with regard to future development opportunities will lead airlines to hold onto slots.[289]

Capacity constraints are also liable to affect the number of available direct connections and therefore the development of a diverse route network, which is especially detrimental to hub-and-spoke operations discussed in section 2.3.1. When capacity constraints start to bite, *id est* at super-congested airports, the route network may become suppressed and scarcity rents are accrued along the air transport value chain, including to airlines and airports and eventually to passengers.[290]

When faced with a limited number of slots and virtually no room to expand, airlines may abandon their weaker routes in the interest of redeploying their aircraft to denser, higher yielding routes where they might get a better contribution over variable costs, the result being wholesale deterioration of service on thinner, lower yielding routes and concentration on the stronger routes. For example, owing to the introduction of the 480,000 air transport movement limit at London Heathrow in 2008, many regional routes were crowded out at Heathrow while the long-haul traffic spill to other airports inside and outside London has been substantial.[291] Thus, slot scarcity may negatively impact an airport's connectivity.

The difference between growth rates of passenger numbers and air transport movements, the latter of which increases more slowly compared to passenger numbers, is consistent with a global pattern of concurrent trends: new aircraft models tend to have a larger seating capacity compared to the models they are replacing, tighter cabin seating arrangements and increasing load factors.[292] As excess demand for slots increases, higher average loads are observed, which indicates that there is greater demand from passengers to travel to and from congested airports.[293] Average load factors and seat capacities at London Heathrow are amid the highest in the world, reflecting among other things the severe constraints.[294] From an airport operations perspective, these developments bear the need to manage airport capacity more efficiently and invest in capacity enhancements where possible in order to meet demand for larger aircraft with higher load factors.

2.4.4 Concluding remarks

Although they share their Level 3 designation, the increasing number of Level 3 airports around the world are very non-homogeneous in terms of the level of congestion and the particular issues experienced. Super-congested airports are both qualitatively and quantitatively different from other Level 3 airports. Despite their differences, both 'regular' and 'super-congested' categories of airports are currently governed through the same set of rules and policies, that is to say through the WASG and regional legislation on slot coordination such as the Slot Regulation, with the principle of grandfather rights at the center.

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[289] *See* Van Houten and Burghouwt, *supra* note 22; Odoni, *supra* note 61.
[290] *See* Egeland and Smale, *supra* note 276, at 14.
[291] *See* Melvin A. Brenner, *Need for Continued Economic Regulation of Air Transport*, 41 Journal of Air Law and Commerce (1975), at 807; Gudmundsson et al., *supra* note 22 as cited in Van Houten and Burghouwt, *supra* note 22.
[292] *See* Odoni, *supra* note 61, at 15.
[293] *See* NERA Economic Consulting, *supra* note 5, at 32.
[294] *See* Van Houten and Burghouwt, *supra* note 22.

The shortcomings of this one-size-fits-all approach to airport coordination at all Level 3 airports appears to be unworkable should regulators want to ensure that scarce slots are declared, allocated and used in the most optimal way appropriate to specific airport characteristics, and ultimately to the benefit of society. Evidently, the expected enlargement of the capacity crunch in the coming years prompts the need to manage the coordination of slots effectively and appropriate to the particular issues faced at the local level.[295]

2.5 Concluding remarks

As the availability of slots is directly connected to the capacity of an airport at a particular date and time, a slot is a scarce resource by definition.[296] The coordination of slots cannot generate additional capacity – slots are merely a tool for managing scarce capacity.[297] As Sanchez (2009) put it: "They [slots] are a secondary concept which overlay the primary concept of congestion."[298] Since slots are distributed at Level 3, or slot coordinated, airports with significant capacity shortfalls, a system for slot coordination has to be put into place at airports where constraints cannot be solved by a voluntary cooperation between airlines.

The inability to provide capacity in keeping up with demand conflicts with the increasing demand levels created by, among others, liberalization efforts and a growing world population. Combined with the severity of political, geographic and institutional constraints in matching airport capacity supply with demand, a purely supply-side solution seems rather impossible.[299] Hence, according to the Commission, "airport congestion is an enduring challenge to the orderly development of a competitive international air transport market."[300] Coupled with growing public concerns regarding noise exposure, carbon emissions and land use planning, it is expected that the issue of slot coordination will continue to place constraints on the development of the air transport industry worldwide and will become more prevalent.[301]

On top of a deepening of the 'Airport Capacity Crunch' and the emergence of super-congested airports, especially in the EU, a lot has changed with regard to society's perspective on air transport. Quality-of-life factors increasingly influence the economic development of air transport, including slot coordination. Moreover, each capacity-constrained airport is constrained for a different reason and will have different needs and coordination parameters which are liable to affect the allocation of slots. To add to that complexity, each airport fulfills different functions to society and therefore serves different markets, passenger needs and traffic mixes.[302] It is clear that the societal focus has changed since the 20th century, which has its impact on the aviation industry as we know it. As Lykotrafiti (2015) put it, "the industry's *modus operandi* points to a different reality".[303]

It is questionable, however, whether the current slot rules are reflective of the needs of contemporary society and thus of the public value of slots. With the coming into existence of the first edition of the WASG in 2020, the prime objective of slot coordination is the efficient

[295] *See* Abeyratne, *supra* note 55.
[296] *See* Colangelo, *supra* note 10, at 35.
[297] *See* European Commission, *supra* note 26, at 9.
[298] *See* Gabriel S. Sanchez, *An overview of the airport slot challenge in the US and EU,* Panel Paper for the 2009 Annual Meeting of the American Bar Association Forum on Air & Space Law – Chicago, Illinois' (DePaul University College of Law 2009).
[299] *See* Michael A. Madas and Konstantinos Zografos, *Airport slot allocation: A time for change?,* 17 Transport Policy (2010), at 274.
[300] *See* Havel and Sanchez, *supra* note 233, at 116.
[301] *See* ICAO, *supra* note 78, paragraph 2.3; Van Houten and Burghouwt, *supra* note 22.
[302] *See* ACL, *supra* note 118, at 2.
[303] *See* Lykotrafiti, *supra* note 10, at 85.

declaration, allocation and use of scarce airport capacity to *consumers* by establishing an unequivocal coordination process, subject to international, regional and national regulations, which will be discussed in detail in Chapters 3 and 4. Interestingly, previous editions of the WASG – up until 2019 – put "benefits to the greatest number of airport users" instead of the wider term "consumers" at the heart of the system. It seems tenuous at best that the prime objective of slot coordination appears to have changed, without subjecting the key principles governing the process that need to meet the system's objectives to a wholesale review.

Chapter 2 has illustrated that the role of slots has changed from a purely productive instrument used to cope with congestion to a multi-faceted concept. The declaration, allocation and use of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition. Since the key principles guiding the WASG and the Slot Regulation go back decades, it is questionable whether they are equipped for reconciliation with the multi-faceted role of slots in contemporary society.

Chapter 3 and Chapter 4 respectively provide an analysis of the question whether the general and specific legal regimes for airport access can alleviate the particular coordination issues encountered to date. Chapter 5 analyzes the slot regime through various related concepts, including but not limited to slot ownership, the functioning of the new entrant rule, the tenability of the role of the functionally and financially independent coordinator, and market-based mechanisms for slot coordination. Chapter 6 of this dissertation provides general conclusions as well as suggestions for measures to flex the slot regime which take into account the key criticisms of the current slot regime and allow for a reflection of the public value of slots in coordination decisions.

3 CHAPTER THREE

The global regime for access to airports

3.1 The Chicago Convention on International Civil Aviation of 1944 as the Magna Carta of international air transport

3.1.1 Preliminary remarks on the Chicago Convention of 1944

The Convention on International Civil Aviation of 1944[304] [hereinafter: the Convention] is widely regarded as the principal legal instrument governing international aviation,[305] with 193 contracting States at the date of writing.[306] To date, its provisions are the fundamental source of law in the field of international civil aviation.[307] The Convention was signed at Chicago on 7 November 1944 and entered into force in 1947. It also includes the constitution of the International Civil Aviation Organization [hereinafter: ICAO].[308]

On 4 April 1947, parallel to the entry into force of the Convention, ICAO came into being as a specialized agency of the United Nations [hereinafter: UN] and was tasked with the coordination and regulation of the development of international aviation.[309] Regional organizations are increasingly carrying out tasks which are also exercised by ICAO, particularly in Europe.[310] The challenge is to harmonize the international legal framework which covers the activities of the various actors involved in air transport, including States and industry stakeholders, for the purposes of fostering the development of air transport.

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[304] Convention on International Civil Aviation, *supra* note 4.

[305] *See* Milligan, *supra* note 14, at 2.2.1.

[306] *See* ICAO, Member States List, *available at* https://www.icao.int/MemberStates/Member%20States.English.pdf (last visited November 10, 2021).

[307] *See* Michael Milde, *International Air Law and ICAO* (2016), at 50.

[308] *See* Truxal, *supra* note 16, Preface.

[309] Article 43 of the Convention provides that ICAO is formed by the Convention. Membership of ICAO is open to all States who are members of the UN, as to which *see* Articles 92(a), 93 and 93bis of the Convention. ICAO is made up of two governing bodies: the General Assembly and the Council. Though not mentioned by the Convention, a third body is the Secretariat headed by ICAO's Secretary General. The 'tripartite' structure of ICAO's bodies has evolved to be the standard organizational chart of all intergovernmental organizations since the 19th century. *See* Paul Stephen Dempsey, *The Role of the International Civil Aviation Organization on Deregulation, Discrimination and Dispute Resolution*, 52 Journal of Air Law and Commerce 3 (1987), at 530; Michael Milde, *The Chicago Convention – Necessary or Desirable 50 Years Later*, 19 Annals of Air and Space Law (1994), at 479; Ruwantissa Abeyratne, *Convention on International Civil Aviation: A Commentary* (2013), at 474-524 and Milde, *supra* note 307, at 129-198 for further details on the establishment, composition, status and functions of ICAO.

[310] Since the late 1980s, with the establishment of the internal air transport market, the European Union [hereinafter: EU] has considerably strengthened its role in international air transport matters. Although the EU has explored ways to become a member of ICAO, the Organization's membership is only open to States under the terms of Articles 91-93bis of the Convention. All EU Member States are, however, also contracting States to the Convention and ties between the EU and ICAO also exist in the form of the Memorandum of Cooperation between the EU and ICAO. *See infra* Chapter 4, section 4.3.5 (addressing the supranational nature of the EU).

The following sections will analyze ICAO's aims and objectives, explain the legal instruments which are attached to or made under the Convention, creating the 'Chicago Convention' regime. In addition, the basic concepts of this Convention which are relevant for the analysis carried out in this dissertation will be studied from the perspective of access to airports in terms of traffic rights and, more specifically, airport slots.

3.1.2 ICAO's Aims and Objectives

ICAO's purpose is derived from the Preamble to the Convention, which states that the Organization's contracting States have agreed on "certain principles and arrangements" in order that international civil aviation may be developed in a safe and orderly manner and that international air transport services should be established "on the basis of equality of opportunity" between airlines.[311] To this end, Article 44 of the Convention lays down ICAO's aims and objectives as follows:

> "The aims and objectives of the Organization are to *develop the principles and techniques* of international air navigation to *foster* the planning and development of international air transport so as to: (a) ensure the safe and orderly growth of international civil aviation throughout the world . . ., (d) meet the needs of the peoples of the world for safe, regular, efficient and economical air transport, (e) prevent economic waste caused by unreasonable competition, (f) insure that the rights of contracting States are fully respected and that every contracting State has a fair opportunity to operate international airlines, (g) avoid discrimination between contracting States . . ." [italics added][312]

These objectives are multiple, and embrace several categories of competences and functions, including technical, administrative, supervisory, legislative and juridical functions.[313]

Among others through the adoption of Annexes to the Convention, ICAO can *develop principles and techniques* of air transport to safeguard a host of aims and objectives, which are reflected in the citation of Article 44 of the Convention above. However, it can only *foster* the development of air transport via the issuance of guidelines on air transport economics.[314] As such, the intention of the drafters of the Convention not to delegate regulatory powers to ICAO in the economic area is reflected in the wording of Article 44 of the Convention. When it comes to the "planning and development of international air transport", ICAO's aims and objectives are merely to foster this planning and development instead of effectively taking the reins themselves.[315] This dichotomy of functions, split between developing principles and techniques and fostering planning and development, implicitly reflects the agreement of contracting States to the Convention that ICAO could adopt Standards and Recommended Practices [hereinafter: SARPs] in the technical field of air navigation and could only draft guidelines in the economic field as addressed in section 3.1.3 below.

According to Milde (2016), the Convention was drafted with foresight and flexibility that commands full respect and endured for over seventy years without substantive amendments.[316] The basic principles of the Convention, as discussed in section 3.1.4, have remained unchanged following the Convention's entry into force in 1947. Since then, international air transport has seen far-reaching technical, political and structural developments which have had a profound impact on modern-day transportation and society in

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[311] Convention on International Civil Aviation, *supra* note 4, Preamble.
[312] *Id.,* Article 44.
[313] *See* Abeyratne, *supra* note 309, at 477.
[314] *Id.,* at 515.
[315] *See* Lykotrafiti, *supra* note 10, at 90.
[316] *See* Milde, *supra* note 307, at 210.

general, with elements of liberalization unimaginable at the time the Convention was drafted. Hence, 21st century international air transport bears little resemblance to what it was during World War I and World War II, and so it is questionable if the Convention responds to the needs of contemporary air transport.[317]

A little over seventy-five years after the signing of the Convention, a very different geopolitical, social and economic landscape with different angles on the development of air transport has appeared.[318] As shown in Chapter 2 of this dissertation, market realities have evolved, including growing capacity scarcity and related market access issues, as well as growing concerns related to the environment and public health.[319]

3.1.3 Principal components of the 'Chicago Convention' regime

The Convention and its Annexes, hereinafter referred to as the 'Chicago Convention regime', can be viewed as a multilateral regime between States, creating rights and obligations for States under public international law.[320] It has 'dual personality', that is to say two functions. In the *first* place, the Convention is a comprehensive unification of public international air law. In the *second* place, it is a constitutional instrument of an international intergovernmental organization of universal character.[321] Where most constitutional instruments of other specialized agencies of the UN, including the Charter of the UN[322] itself, stipulate general principles governing the work of the organization, the Convention contains a detailed and self-contained "*corpus* of public international air law".[323]

The Convention was adopted during the final year of World War II, as a result of the International Civil Aviation Conference, held in Chicago from 1 November until 7 December 1944.[324] It is the product of a multilateral consensus reached by 52 States, composed of the "war-time allies" calling themselves "the United Nations", by States associated with them and by invited States that remained neutral during the war".[325] Although the Convention was signed on behalf of 52 States, it entered into force by the ratification of 26 signatory States pursuant to Article 91(b) of the Convention.[326]

The Convention's functions in the technical field are straightforward and clear.[327] Unlike their solidity with regard to uniform technical and safety standards, the 52 States participating in the International Civil Aviation Conference appeared to be far from capable of adopting provisions regulating the economic side of air transport. As such, the drafters could not agree on standards for the operation of international air services, apart from establishing the legal basis for States to negotiate such standards provided by Articles 5 and 6 of the Convention.[328]

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[317] *See* Ludwig Weber, *International Civil Aviation Organization* (2012), at 279; Milde, *supra* note 307, at 107.
[318] *See*, among others, Pablo Mendes de Leon and Niall Buissing, *Behind and Beyond the Chicago Convention: The Evolution of Aerial Sovereignty* (2019).
[319] *See* ICAO, *supra* note 78, paragraph 4.4.
[320] *See* Weber, *supra* note 317, at 310.
[321] *See* Truxal, *supra* note 16, Preface.
[322] Charter of the United Nations (San Francisco, 26 Jun. 1945), 1 U.N.T.S. 16.
[323] *See* Milde, *supra* note 307, at 403.
[324] *See* ICAO, Proceedings of the International Civil Aviation Conference, *available at* https://www.icao.int/ChicagoConference/Pages/proceed.aspx (last visited May 25, 2021).
[325] *See* David Grant, Regulation of Air Transport Economic Rationale and Impact, UK ESSAYS (2017), https://www.ukessays.com/essays/economics/regulation-air-transport-economic-rationale-2023.php?vref=1 (last visited February 19, 2021; Milde, *supra* note 307, at 31.
[326] *See* Milde, *supra* note 307, at 31.
[327] *See* Abeyratne, *supra* note 309, at 517.
[328] The drafters had hoped to reach agreement on both economic regulation and technical and operational aspects but were only successful as to the latter. While World War II had emphasized the military importance of aviation, it had equally demonstrated the potential for civil aviation for economic and political purposes. Different positions

Although the Convention is a product of balancing the conflicting interests of its drafters, it is one of the most generally accepted multilateral law-making instruments, with 193 contracting States at the date of writing of this dissertation as mentioned in section 3.1.1 above. Like all international conventions, it embodies the 'common denominator' of political wills of the negotiating States at the time of its drafting.[329]

Apart from the establishment of airport charges, the drafters of the Convention decided that the economic regulation of international civil aviation was left to the discretion of States. Separate regulatory instruments for economic regulation emerged accordingly,[330] to wit the International Air Services Transit Agreement[331] [hereinafter: IASTA] and the International Air Transport Agreement,[332] as well as a host of bilateral air services agreements [hereinafter: ASAs], which are subject to discussion in section 3.2.

Article 37 of the Convention provides that ICAO shall adopt and amend from time to time, as may be necessary, international SARPs and Procedures for Air Navigation Services[333] [hereinafter: PANS] designed to implement the articles of the Convention.[334] Standards are any specifications of which the uniform application is recognized as necessary for the safety or regularity of international air navigation and have been attributed legal force. Normally, compliance with standards is a prerequisite for the exercise of traffic rights by an air carrier under a bilateral or plurilateral ASA between States.[335] Recommended practices are not of a mandatory nature but are considered as desirable.[336] For approval by the ICAO Council, ICAO's Air Navigation Commission[337] considers and recommends SARPs and PANS for the safety and

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were taken in preparation of the Convention. In particular, the views of the US and UK delegations were diametrically opposed as to the economic regulation of air transport, although both delegations insisted on maintaining the sovereignty of airspace. The US, however, advocated minimum restrictions on the economic operation of air services, whereas the UK, which was severely weakened by World War II and faced the collapse of its colonial empire, was strongly committed to regulation in the technical ánd economic field in order for each State to have a share in international civil aviation. It is against that backdrop that the Convention was established. As a result, ICAO has mainly operated as a technical standard-setting body. The Convention's scope is curtailed to solve technical coordination problems relating to, inter alia, aircraft registry, air traffic management, cross-border recognition of licensing certificates, and taxes and charges that are imposed on international air services. *See* Stephan Hobe, *Sovereignty as a Basic Concept of International Law and a Core Principle of Air Law*, in Pablo Mendes de Leon and Niall Buissing (eds), *Behind and Beyond the Chicago Convention: The Evolution of Aerial Sovereignty* (2019); José Ignacio García-Arboleda, *Bilateralism and Equality of Opportunity under Scheduled Services: Are Air Services Agreements the Sole and Absolute Source for Traffic Rights?*, in Pablo Mendes de Leon and Niall Buissing (eds), *Behind and Beyond the Chicago Convention* (2019); Alain Lumbroso, *Aviation liberalization: What headwinds do we still face?*, 74 Journal of Air Transport Management (2019), at 23; Milde, *supra* note 307, at 13-16; Von den Steinen, *supra* note 12, at 10; Havel and Sanchez, *supra* note 233, at 28; Milde, *supra* note 307, at 13-16; Dempsey, *supra* note 309, at 533.

[329] *See* Milde, *supra* note 307, at 19.

[330] *See* NERA Economic Consulting, *supra* note 5, at 11.

[331] International Air Services Transit Agreement (Chicago, 7 Dec. 1944), 59 Stat. 1693, 84 U.N.T.S. 389.

[332] International Air Transport Agreement (Chicago, 7 Dec. 1944), 59 Stat. 1701, 171 U.N.T.S. 387.

[333] PANS are documents approved by the ICAO Council and recommended to States for worldwide applications. As such, they attempt to make air navigation services uniform across the world.

[334] Convention on International Civil Aviation, *supra* note 4, Article 37.

[335] *See infra* section 3.2 for a discussion on the exchange of traffic rights under ASAs between States.

[336] The uniform application of Standards is recognized as necessary, whereas the uniform application of Recommended Practices is recognized as merely desirable. *See* ICAO, Doc 9902: Assembly Resolutions in Force (as of 28 September 2007), Resolution A36-13: Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation, Appendix A. In the words of Truxal, *supra* note 16, at 27, "SARPS are in effect legislation on one hand and guidelines on the other".

[337] The Air Navigation Commission is established by the ICAO Council pursuant to Article 54 of the Convention. The Commission assists the Council with regard to the development of SARPs and PANS and advises the Council on all matters which may help to advance air navigation.

efficiency of international air services.[338] At present, there are around 12,000 SARPs contained in the form of Annexes to the Convention, with which contracting States must comply.[339] Currently, the Convention hosts 19 Annexes,[340] of which 17 deal with aviation safety.[341]

The mandatory nature of the Convention is underlined by Article 82, which reads that contracting States committed themselves to not act in breach of any of the Convention's provisions.[342] Should a contracting State deem it necessary to adopt national standards different from those prescribed by the Convention, it shall immediately notify ICAO of its intention.[343] When a contracting State has not registered its disapproval with ICAO, the standard is regarded as binding upon that contracting State by virtue of Article 90 of the Convention.[344] Moreover, Article 31 of the Vienna Convention on the Law of Treaties[345] and Article 2(2) of the Charter of the UN[346] hold the principle of good faith, *id est* the principle that States must fulfil in good faith their international legal principles.[347]

Article 47 of the Convention provides that ICAO "shall enjoy in the territory of each contracting State such legal capacity as may be necessary for the performance of its functions" and that "[f]ull juridical personality shall be granted to the Organization wherever compatible with the constitution of the laws of the State concerned". ICAO needs legal personality to, *inter alia*, perform its functions and to conclude agreements with States or other organizations.[348] The legal personality of intergovernmental organizations needs to be different from that of its Member States in order to avoid confusion with the parallel function of governments.

While ICAO serves as a forum for the Convention's contracting States to negotiate and adopt treaties relating to civil aviation, States are the ultimate decision-makers to adopt said treaties and to accept them as binding.[349] Hence, ICAO has limited enforcement powers, as these are left to the contracting States of the Convention.[350]

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[338] *See* Abeyratne, *supra* note 309, at 477.
[339] *See* Jiefang Huang and Mathieu Vaugeois, *The Impact of Sovereignty on the Administration of International Civil Aviation Through International and Regional Organizations: The Role of ICAO*, in Pablo Mendes de Leon and Niall Buissing (eds), *Behind and Beyond the Chicago Convention: The Evolution of Aerial Sovereignty* (2019), at 58.
[340] The Convention's 19 Annexes are as follows: Annex 1 (Personnel Licensing), Annex 2 (Rules of the Air), Annex 3 (Meteorological Service for International Air Navigation), Annex 4 (Aeronautical Charts), Annex 5 (Units of Measurement to be Used in Air and Ground Operations), Annex 6 (Operation of Aircraft), Annex 7 (Aircraft Nationality and Registration Marks), Annex 8 (Airworthiness of Aircraft), Annex 9 (Facilitation), Annex 10 (Aeronautical Telecommunications), Annex 11 (Air Traffic Services), Annex 12 (Search and Rescue), Annex 13 (Aircraft Accident and Incident Investigation), Annex 14 (Aerodromes), Annex 15 (Aeronautical Information Services), Annex 16 (Environmental Protection), Annex 17 (Security), Annex 18 (The Safe Transport of Dangerous Goods by Air) and Annex 19 (Safety Management).
[341] *See* Peter Paul Fitzgerald, *A Level Playing Field for "Open Skies": The Need for Consistent Aviation Regulation* (2016), at 17.
[342] Article 82 of the Convention reads as follows: "The contracting States accept this Convention as abrogating all obligations and understandings between them which are inconsistent with its terms, and undertake not to enter into any such obligations and understanding . . .".
[343] Convention on International Civil Aviation, *supra* note 4, Article 38.
[344] *See* Weber, *supra* note 317, at 297.
[345] Vienna Convention on the Law of Treaties (Vienna, 23 May 1969), 1155 U.N.T.S. 331.
[346] Charter of the UN, *supra* note 322.
[347] Article 31 of the Vienna Convention on the Law of Treaties, *supra* note 345, states that "[e]very treaty in force is binding upon the parties to it and must be performed by them in good faith . . .".
[348] *See* Milde, *supra* note 307, at 136.
[349] *See* Jiefang Huang, Aviation Safety and ICAO (2009), at 181.
[350] According to Paul Stephen Dempsey, *Compliance & Enforcement in International Law: Achieving Global Uniformity in Aviation Safety*, 30 North Carolina Journal of International Law 1 (2004), the sovereign State has ". . . corpse of police, jails, courts, and prisons to coerce and punish those who violate his or her edicts. But in international law, no equivalent institutions exist. Outside of the powers held by the UN Security Council to exert force against States that violate international law, no UN agency has unrestricted power to punish an errant State. Global governance

Hence, the above-mentioned instruments together constitute the 'Chicago Convention regime', including the Convention and its 19 Annexes, the IASTA and the International Air Transport Agreement. Besides SARPs and PANS, ICAO has also developed other forms of regulatory material, including but not limited to Assembly Resolutions, Supplementary Procedures, regional air navigation plans, model clauses and other guidance materials.[351] The next section sheds light on the basic concepts of the 'Chicago Convention' regime.

3.1.4 Basic concepts of the 'Chicago Convention' regime relevant to slot coordination

3.1.4.1 *Safety as a primary goal of the Chicago Convention regime*

Since the drafters of the Convention were primarily concerned with questions related to safety and technical aspects of aviation, as discussed in section 3.1.3, the Convention failed to provide a global framework for the economic regulation of air transport, including airport access via slots, with the exception of the regulation of airport charges. It is for that reason that the Convention and its 19 Annexes do not include provisions on slot coordination.[352]

Moreover, at the time when the Convention was drafted, the problem of airport congestion did not exist. Thus, the drafters of the Convention may not have felt the need to address this issue.[353] The Convention does, however, include basic concepts regarding access to airports that may be linked to slot coordination.[354] The principal provisions of the Convention relevant to slot coordination discussed in this section are Article 1, 2, 5, 6, 11, 15 and 68 of the Convention. Article 44 of the Convention on ICAO's aims and objectives has been discussed in section 3.1.2. ICAO policy guidance in the field of slot coordination is presented in section 3.1.7.

3.1.4.2 *The principles of complete and exclusive aerial sovereignty and jurisdiction*

Like its predecessor, the 1919 Paris Convention[355], the Chicago Convention upholds the principle of *complete and exclusive sovereignty*. According to Article 1 of the Convention, "the contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory." The territory of a State ". . . shall be deemed to be the land areas and territorial waters adjacent thereto under the sovereignty, suzerainty, protection or mandate of such State," pursuant to Article 2 of the Convention.[356]

Article 1 addresses the legal status of the airspace above the territory of any State, not only of that of the contracting States.[357] Thus, every State is sovereign in its own territory in the sense that it has the supreme power, including the jurisdiction, to deal with its internal and external affairs in an independent manner.[358] All States are deemed to be equally sovereign.[359]

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instead works in a system of compliance, rather than enforcement". *See* also Mendes de Leon, *supra* note 48, at 559; Truxal, *supra* note 16, at 57.

[351] *See* Huang, *supra* note 349, at 182.

[352] *See* Hobe, *supra* note 328, at 38.

[353] *See* NERA Economic Consulting, *supra* note 5, at 225.

[354] *Id.,* at 226.

[355] Convention relating to the Regulation of Aerial Navigation (Paris, 13 Oct. 1919), 11 L.N.T.S. 173.

[356] The principle of sovereignty in international air transport emerged in the 20th century, after the Wright brothers carried out the first heavier-than-air manned flight on 17 December 1903 in North Carolina, US. However, the awareness of the link between national security and the control over the national airspace of States became more widespread with the development of aircraft manufacturing and related technologies during World War I and World War II. Thus, the proclamation of sovereignty has, at least in part, a military background. *See* Hobe, *supra* note 328, at 37; Haanappel, *supra* note 10, at 311-317; Peter Haanappel, *The Law and Policy of Air Space and Outer Space: A Comparative Approach* (2003), at 1-3.

[357] *See* Milde, *supra* note 309, at 416.

[358] *See* Varsamos, *supra* note 16, at 13; Huang and Vaugeois, *supra* note 339, at 56.

[359] *See* Varsamos, *supra* note 16, at 13.

As opposed to the Paris Convention, the Chicago Convention applies only to civil aviation with an attempt to legally separate civil aircraft from State aircraft in Article 3.[360] The Convention does not create a global commercial airspace analog to the freedom of the high seas, also known as the *mare liberum*.[361]

Sovereignty and jurisdiction are related concepts, because *jurisdiction* ought to be seen as an essential element of sovereignty.[362] The concept of complete and exclusive sovereignty comes down to a State possessing the ultimate legal authority within its territory. It refers in the first place to the exclusive jurisdiction of the State concerned to adopt laws and regulations for the users of its airspace, and to implement such laws and regulations by administrative decisions and sanctions, all to the exclusion of any other State's jurisdiction.[363] In other words, where sovereignty comes down to a State possessing the ultimate legal authority within its territory, jurisdiction is the authority to exercise legal power.[364] Since slot coordination takes place within the territory of States, oftentimes with the intervention of an independent coordinator, slot coordination is subject to Articles 1 and 2 of the Convention as implemented in other provisions of international law as explained below.

The Convention does not in itself create the principle of sovereignty, it rather recognizes it as a rule that is generally applicable for all States. ICAO is by no means sovereign in its own right.[365] The drafters of the Convention considered the principle of sovereignty to be rooted in customary international law,[366] that was only to be formally recognized by a codified instrument.[367]

The principle of sovereignty is to be interpreted and applied in the spirit of the Convention's Preamble,[368] which stresses the preservation of friendship and understanding

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[360] The Paris Convention applied to all aerial navigation. *See* Peter Haanappel, Aerial Sovereignty: From Paris 1919, Through Chicago 1944, to Today' in Pablo Mendes de Leon and Niall Buissing (eds), *Behind and Beyond the Chicago Convention: The Evolution of Aerial Sovereignty* (2019), at 26.

[361] Under Grotius' idea of *mare liberum*, it is viewed that the sea cannot be occupied, and therefore cannot be possessed. It is common property to be used by all. An analogy with the concept of airspace can be made, arguing that it is impossible to occupy and thus possess an enormous portion of airspace, even if it is located directly above land over which a State exerts territorial control. However, because of safety and security concerns, a comparison with *mare liberum* may fall out of favor as aircraft flying above populated land may present certain risks and dangers to those below the aircraft, including military installations, that are not present at the high seas. Therefore, a State's sovereign authority over land extends upward to the airspace above the territory controlled by the State. *See,* for instance, Havel and Sanchez, *supra* note 233, at 38. Moreover, unlike maritime law, international air law does not recognize the rule of 'innocent passage'. A special permission or other authorization is required for both the operation of international air services to or from points in a foreign State pursuant to Article 6 of the Convention, but also for the mere overflight of that State, *see* Haanappel, *supra* note 10, at 315.

[362] *See* Regula Dettling-Ott, *Sovereignty in the Context of European Law and Policy*, in Pablo Mendes de Leon and Niall Buissing (eds), *Behind and Beyond the Chicago Convention: The Evolution of Aerial Sovereignty* (2019), at 223.

[363] *See* Varsamos, *supra* note 16, at 13; Milde, *supra* note 307, at 11.

[364] *See* various book sections included in Mendes de Leon and Buissing, *supra* note 318, for further explanations on the concepts of sovereignty and jurisdiction, including Dettling-Ott, *supra* note 356 at 223. *See* also James Crawford, *Brownlie's Principles of Public International Law* (2019), Part III; Truxal, *supra* note 16, at 33-35.

[365] *See* Abeyratne, *supra* note 309, at 480.

[366] The principle of airspace sovereignty is a presumptive extension of the customary international law doctrine of State sovereignty. In Roman times, the principle of airspace sovereignty has been expressed through the Latin maxim *cuius est solum, eius est usque ad coelum et ad inferos* ("for whomever owns the soil, it is theirs up to Heaven and down to Hell"). The Statute of the International Court of Justice (San Francisco, 26 Jun. 1945), 33 U.N.T.S. 993, Article 38(d), defines international custom as "evidence of a general practice accepted as law". For an historical overview of the background of custom in air law, *see* Haanappel, *supra* note 360, at 26.

[367] *See* Milde, *supra* note 307, at 11.

[368] According to Article 26 of the Vienna Convention on the Law of Treaties, *supra* note 345, "[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty *in their context and in the light of its object and purpose*" [italics added]. The context of a treaty is given, among others, by

among the nations and peoples of the world as a function of the future development of international civil aviation. States are urged to "avoid friction and to promote the cooperation between nations and peoples upon which the peace of the world depends".[369] Given the wider framework of the Convention's Preamble, Milde (2016) has rightfully concluded that States should interpret the principle of complete and exclusive sovereignty as a right for mutual international benefit and cooperation, instead of as a self-centered entitlement.[370]

A prime corollary of the principle of sovereignty is expressed in Article 6 of the Convention, which subjects the operation of international air services to the discretionary permission of States. Each State is free to use its jurisdictional powers and impose limitations as it deems fit on the aircraft of a foreign State, as evidenced by bilateral or plurilateral ASAs. Accordingly, national airspace is *de iure* closed for foreign aircraft and their operators, unless a State decided to open it for civil aviation activities.[371] Article 5 of the Convention furthermore establishes that States may impose "regulations, conditions or limitations" as it may consider desirable for aircraft not engaged in scheduled international air services. In other words, the principle of sovereignty only applies insofar as States have not made other arrangements.[372] The application and practice of Articles 5 and 6 of the Convention is studied in section 3.2.1.

By way of international agreement between States, the concept of sovereignty may also be made subject to specified conditions and limitations.[373] For instance, Article 15 of the Convention in particular limits jurisdiction by obligating States to make available the airports in their territory under uniform conditions to the aircraft of all contracting States subject to Article 6 of the Convention. Another limitation is found in Article 68, according to which States may designate within its territory the routes to be followed by any international air services, as well as the airports which may be used.

3.1.4.3 *National treatment and non-discrimination*

Another fundamental principle underlying the Convention, which is relevant to this dissertation, is the principle of *equality of opportunity*, or *fair and equal opportunity,* entailing that all contracting States should be able to participate in air transport on the basis of equality of opportunity. It is designed to maintain a level playing field for the designated carriers under an ASA and for carriers engaged in non-scheduled services.[374] The Convention's Preamble refers to the good faith of States in establishing international air transport services, be it scheduled or non-scheduled, with regard for equal opportunity and participation.

Over the years, an increasing number of States have applied the principle of equality of opportunity to promote effective competition for the benefit of national economies and consumers, as opposed to interpreting the principle of equality of opportunity narrowly to

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its Preamble. The Preamble to a treaty determines the way the rest of the treaty is interpreted, *see* also Article 31 of the Vienna Convention on the Law of Treaties.

[369] Convention on International Civil Aviation, *supra* note 4, Preamble.

[370] *See* Milde, *supra* note 307, at 36.

[371] *See* Pablo Mendes de Leon, *Introduction to Air Law* (2017), at 45.

[372] In the words of Wassenbergh (1962): ". . . the provision of Article 1 applies only insofar as it is not expressly restricted by other provisions of the Convention or by engagements entered into elsewhere". *See* Henri Wassenbergh, *Post-War International Civil Aviation Policy and the Law of the Air* (1962), at 100; Pablo Mendes de Leon, Cabotage in Air Transport Regulation (1992).

[373] *See* García-Arboleda, supra note 328, at 267.

[374] The principle of equality of opportunity is interpreted differently by different States. Some are of the opinion that it entails equal access to the market, and/or non-discrimination in all respects. Others may interpret 'equality of opportunity' as 'equality of advantage' or 'balance of benefit' in a sense that neither party to a bilateral or plurilateral ASA draws a bigger benefit from the agreed international air services. For further explanations, *see* Mendes de Leon, *supra* note 48, at 566; Milde, *supra* note 307, at 116.

achieve "equality of benefits".[375] In addition to ensuring the principle of equality of opportunity is adhered to, States cannot discriminate as to the nationality of any aircraft, implying that national aircraft must be treated in the same way as foreign aircraft.[376]

To give substance to the principle of equality of opportunity, Article 11 of the Convention sets out the *national treatment* principle:

> "Subject to the provisions of this Convention, the laws and regulations of a contracting State relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of all contracting States without distinction as to nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of that State."[377]

It could be argued that rules and procedures on slot coordination can be regarded as "laws and regulations of a contracting State", even though this may not have been envisaged at the time the Convention was drafted as previously mentioned in section 3.1.4.1. Henceforth, slot coordination rules must be applied "to the aircraft of *all* contracting States without distinction as to nationality" [italics added].[378]

Subsequently, Article 15 of the Convention relates to the establishment of airport charges. Slot coordination may not be regulated directly under the Convention, but access to airports is.[379] The first sentence of Article 15 contains a relevant provision that may lend itself for an extension to the slot rules:

> "Every airport in a contracting State which is open to public use by its national aircraft shall likewise . . . be open *under uniform conditions* to the aircraft of all the other contracting States. . ." [italics added][380]

Accordingly, when traffic rights are secured or when the regulations, conditions or limitations for non-scheduled flights have been complied with, contracting States to the Convention must adhere to the non-discrimination principle with respect to access to airports located in their territory. The *non-discrimination* principle entails that all foreign aircraft must be treated in the same way when flying into or departing from an airport located in the territory of a contracting State. It embodies the potential to successfully operate on a certain market on equal terms. It is imperative that access to airports does not only guarantee equal treatment *de iure*, but also *de facto*.[381] Thus, Article 15 also encompasses the *national treatment* principle.

The next section applies the principles of national treatment and non-discrimination to the coordination of slots, during which the difference between national treatment and non-discrimination also comes to light.

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[375] *See* ICAO, *ATConf/6-WP/4: Fair Competition in International Air Transport* (2013), paragraph 3.1.
[376] *See* NERA Economic Consulting, *supra* note 5, at 227.
[377] Convention on International Civil Aviation, *supra* note 4, Article 11.
[378] The national treatment principle holds that national and foreign airlines should be treated equally. Therefore, States party to the Convention are required to apply the same conditions regarding access to airports to both national and foreign airlines. *See* Mendes de Leon, *supra* note 48, at 558.
[379] *See* Mendes de Leon, *supra* note 48, at 559.
[380] Convention on International Civil Aviation, *supra* note 4, Article 15.
[381] *See* NERA Economic Consulting, *supra* note 5, at 226; José Ignacio García-Arboleda, *Airport Slot Regulation in Latin America: Between Building the Fortress and Protecting the Newcomers*, 12 Aviation Law and Policy (2013), at 583.

3.1.5 An application of the national treatment and non-discrimination principle to slot coordination

Access to airport infrastructure is an essential condition of engaging in air transport activity.[382] Per Articles 15, 28 and 68 of the Convention, States are obliged to provide the infrastructure needed for the safe operation of air services. This obligation includes access to airport infrastructure and all related facilities, such as runways, platforms, air navigation services, et cetera. Article 15 of the Convention on airport access requires all contracting States to keep their airports open to international air transport and apply uniform conditions as to the use of the airports, including air navigation facilities and services.[383]

A main competitive issue at stake with regard to airport access is the application of discriminatory practices between airport users in the granting or refusal of airport access through traffic rights, slots, and airport charges. These issues are getting more serious with the increasing capacity crunch.[384] Article 15 of the Convention deals with the use of airports, which is generally interpreted as encompassing the use of slots.[385] It follows that slot coordination can be considered part of the process concerning access to airports, thus it must be performed in a non-discriminatory manner and subject to the national treatment principle.[386]

Since the non-discrimination principle appears to merely forbid discrimination *as between foreign carriers* by requiring the application of "uniform conditions to the aircraft of all the other contracting States",[387] granting national carriers a better treatment in respect of slot coordination may be allowed under the non-discrimination principle. It may, however, not be allowed under the national treatment principle, which is designed to give all carriers of all contracting States to the Convention, whether national or foreign, the same treatment, save for the option of positive discrimination.[388] Since Article 15 also encompasses the national treatment principle as concluded in the above section, States are required to apply the same conditions in respect to slot coordination to both national and foreign carriers.[389]

In line with the national treatment principle, slot coordination rules must be applied "to the aircraft of *all* contracting States without distinction as to nationality" [italics added], since rules and procedures on slot coordination can be regarded as "laws and regulations of a contracting State" referred to in Article 11 of the Convention.[390] Although States may apply and enforce slot coordination rules against all foreign and national aircraft in their territories, States are not allowed to discriminate as to the nationality of any airline. Consequently, local airlines[391] must be treated in the same way as non-local airlines when local, national and regional slot coordination rules are applied and enforced.[392]

Provided that any criteria used to accord allocation priority or in the management of slots in a general sense are equally applicable to the aircraft of all contracting States, it appears that the national treatment principle is not breached. Regulators must thus be cautious not to give preferential treatment to national (hub) carriers, for instance, that may result in a

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[382] *See* Milligan, *supra* note 14, at 105.
[383] *See* Varsamos, *supra* note 16, at 13.
[384] *See* Milligan, *supra* note 14, at 105.
[385] *See* Haanappel, *supra* note 151, at 204. *See infra* section 3.3 (providing further analysis on the link between slots and traffic rights as prerequisites for airport access).
[386] *See* Mendes de Leon, *supra* note 48, at 558.
[387] Convention on International Civil Aviation, *supra* note 4, Article 15.
[388] *See* NERA Economic Consulting, *supra* note 5, at 234; Mendes de Leon, *supra* note 48, at 562; García-Arboleda, supra note 381, at 581-582.
[389] *See* Mendes de Leon, *supra* note 48, at 559.
[390] Convention on International Civil Aviation, *supra* note 4, Article 11.
[391] Airlines licensed by the State in which the airport is located are referred to as 'local airlines' in this dissertation.
[392] *See* NERA Economic Consulting, *supra* note 5, at 227.

distinction as to nationality. Differential treatment can only be supported on the equation 'giving equal treatment to equal situations' using relevant and objective criteria, or put differently, where it concerns 'unequal situations' and provided these differences in situations can be adequately proportioned.[393] Where this is not the case, the slot coordination scheme is liable to non-compliance with Article 15 of the Convention, and very likely also with the relevant provisions of the applicable ASA, more specifically the principle of equality of opportunity.[394] Sections 3.2.3 and 3.2.4 respectively discuss ICAO's model clause on slots for States to use in ASAs and slot provisions used in specific ASAs in relation to the principle of equality of opportunity.

With regard to the principle of non-discrimination, it is also relevant that the Worldwide Airport Slot Guidelines [hereinafter: WASG] describe a non-discriminatory slot coordination process by an independent slot coordinator as one of the objectives of slot coordination, as to which *see* Chapter 2, section 2.1.3.[395] In States where the WASG guidelines are applied, non-discriminatory access to slots appears to be upheld, either through an implementation of WASG guidelines in national law or because a State has appointed an independent slot coordinator which observes the WASG guidelines in a non-discriminatory manner.[396] In the absence of internationally binding rules on slot coordination,[397] however, States do not necessarily abide by non-discriminatory slot coordination. In China, for instance, slot coordination falls within the control of the central government, and Chinese hub carriers often receive preferential treatment.[398] The reverse situation occurs in the United States [hereinafter: the US] where international flights are excluded from the so-called 'High-Density Rule' and are placed in a separate slot pool to safeguard airport access for international flights. Comments on the process for slot coordination as practiced in China and the US are found in Chapter 4, sections 4.5 and 4.6.3 of this dissertation.

Also relevant for slot coordination is that each contracting State may designate airports within its territory that are open for use by international air services pursuant to Article 68 of the Convention. A contracting State may have congested airports in its territory designated as Level 3 and may opt to refer international air services to less-congested airports, if available. This allows States certain room to maneuver in the distribution of traffic within their territories and partly mirrors the intention behind the European Union [hereinafter: EU] legislation on Traffic Distribution Rules at EU airports, which is addressed in Chapter 4, sections 4.4.2 and 4.4.3 of this dissertation.

The next section assesses briefly the national treatment principle in light of the framework offered by the World Trade Organization [hereinafter: WTO], more specifically the so-called 'Most Favored Nation' clause, in the context of slot coordination.

3.1.6 The national treatment principle vis-à-vis the WTO's Most Favored Nation clause

In light of States' complete and exclusive sovereignty over their airspace as discussed in section 3.1.4.2 above, States have not transferred most of their competencies in the economic field of

[393] *See* García-Arboleda, supra note 381, at 584.
[394] *Id.,* at 584.
[395] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1(c), 1.7.2(i), 5.2.3 and 5.5.1(a).
[396] In the EU, for instance, the principle of non-discrimination is explicitly upheld in law. EU Regulation 95/93, *supra* note 47, echoes the non-discrimination principle in its Preamble and the main text.
[397] Although the WASG are widely applied by coordinators, they have the legal status of mere guidelines. *See infra* sections 3.4.1 and 3.4.2 (analyzing the application, legal status and governance of the WASG).
[398] *See* Xiaowen Fu and Tae Hoon Oum, *Dominant Carrier Performance and International Liberalisation: The case of North East Asia* (2015), at 9-11.

air transport to the WTO, a global intergovernmental organization which deals with the global rules of trade between nations,[399] Unlike the economic regulation for air transport, international trade regulation increasingly tends to develop multilaterally, for example through institutions such as the WTO.[400]

The WTO embodies post-war efforts to liberalize international trade in a broad sense in the 1995 General Agreement on Tariffs and Trade[401] [hereinafter: GATT].[402] The central aim of the GATT is to reduce customs barriers to international trade in a non-discriminatory manner through the 'Most-Favored Nation' [hereinafter: MFN] clause. The MFN clause holds that the best commercial treatment offered to one State must equally be extended to all other commercial partners.[403] In other words, State A has the obligation to grant to State B the minimum favorable conditions it has granted to State C.[404]

Hence, where the national treatment principle embodied in Article 11 of the Convention merely forbids a State to discriminate between national and foreign carriers in slot coordination decisions, the MFN clause appears to have a broader definition. It implies that if one State were to accord, for instance, slot allocation priority to the designated carriers of another State, the grantor State must accord the same allocation priority to the aircraft of all other States.

However, save for limited 'soft' traffic rights, including aircraft repair and maintenance services, the selling and marketing of air transport services and computer reservation system services, the bilateral regime set forth by the Convention remains untouched by the General Agreement on Trade in Services[405], which is included as Annex 1B to the GATT and is relevant for air transport.[406] Therefore, the MFN clause and the settlement of differences under WTO procedures, for instance, are not available for application to inter-State disagreements on the relationship between slots and traffic rights as discussed in section 3.3.4, or slot coordination decisions in general.

The inapplicability of the MFN clause means that State A may discriminate between its trading partners in air transport, and is under no obligation to grant to State B the same favorable slot coordination conditions it has granted to State C.[407] It is, however, imperative that the national treatment principle set forth by the Convention is complied with.

The next section addresses to what extent the policy guidance on slot coordination, as developed by ICAO, can alleviate the concerns brought along by capacity scarcity and air transport's negative externalities.

3.1.7 Policy guidance on slot coordination, as developed by ICAO

Traditionally, and as highlighted in section 3.1.3 of this chapter, ICAO has focused on technical and navigation issues rather than the economic regulation of international civil aviation. ICAO has not yet adopted SARPs in the field of slots, and there are no binding rules from ICAO on

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[399] *See* World Trade Organization (WTO), Who we are, *available at* https://www.wto.org/english/thewto_e/whatis_e/who_we_are_e.htm (last visited February 5, 2021).
[400] *See* Von den Steinen, *supra* note 12, at 31.
[401] General Agreement on Tariffs and Trade (Geneva, 30 Oct. 1947), 55 U.N.T.S. 194, 61 Stat. A-11.
[402] *See* Milde, *supra* note 307, at 125.
[403] *Id.,* at 125.
[404] *See* García-Arboleda, supra note 328, at 263.
[405] General Agreement on Trade in Services (Marrakesh, 15 Apr. 1994), Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S. 183, 33 I.L.M. 1167, Annex on Air Transport Services.
[406] *Id.,* recital 2.
[407] *See* García-Arboleda, supra note 328, at 263.

slot coordination. However, while ICAO may not be directly involved in slot coordination, it was directed to ensure that the impact on airport capacity is taken into account when SARPs and PANS are developed.[408]

At the 27th Session of the ICAO Assembly in 1989, for instance, ICAO already took note of the forthcoming airport capacity crunch. ICAO adopted Resolution A27-11 which urged States "to take measures that have positive effects on airport and airspace capacity" and "to take into account the effects on other States of their airport and airspace congestion problems and the implications of actions taken to deal with those problems".[409] A meeting of ICAO's Economic Commission in 2016 again acknowledged "the need to optimize the use of scarce capacity, particularly at capacity-constrained airports".[410]

Annex 9 to the Convention, pertaining to the facilitation of air services, relates indirectly to the coordination of slots. Standard 6.1.4 of Annex 9 requires that "each Contracting State, in consultation with airport operators, shall ensure that facilities and services provided at international airports are, where possible, flexible and capable of expansion to meet traffic growth . . .".[411] Similar to the objectives mentioned in the WASG,[412] this provision seems to mean that slot coordination is a measure that should only be taken as a last resort to deal with airport congestion.[413] Evidently, investing in long-term infrastructure development is the best solution to relieve capacity constraints at (super-)congested airports. However, given the growing number of airports where environmental or physical constraints are prevalent, the expansion solution is not always feasible as discussed in Chapter 2, sections 2.3 and 2.4.

ICAO is also active in providing *guidance* to States in areas of economic policy, airports and air navigation services economics, including slot coordination. Already twenty years ago, in its 2001 ICAO Circular 283-AT/119 on *Regulatory Implications of the Allocation of Flight Departure and Arrival Slots at International Airports*[414], ICAO noted that the increase in commercial air services had continued to outstrip available capacity at an increasing number of airports in and outside Europe from 1991 on. Despite the relatively oblivious wording used in Annex 9 to the Convention, ICAO acknowledges that it is insuperable that more States and coordinators will be confronted with excess demand for slots and will have to make trade-offs in coordination decisions as a result.[415] Because air transport is an international, inter-connected activity, capacity constraints at one airport impact the capacity situation at other airports within the international air transport system. Constraints on increasing the capacity of an airport, whether they are environmentally, economically, politically or physically driven, have exacerbated this problem, as to which *see* Chapter 2.[416]

ICAO's Manual on the Regulation of International Air Transport, henceforth referred to as 'the Manual', encompasses multiple regulatory topics, including slot coordination. ICAO acknowledges that economic regulation is not inseparable of the technical aspects of

[408] *See* García-Arboleda, supra note 381, at 585.
[409] *See* ICAO, Doc 9790: *Assembly Resolutions in Force (as of 5 October 2001),* Resolution A27-11: Airport and airspace congestion, at II-23.
[410] *See* ICAO, *supra* note 204, paragraph 39.30.
[411] Convention on International Civil Aviation, *supra* note 4, Annex 9, Standard 6.1.4.
[412] As discussed in Chapter 2, section 2.3.2 of this dissertation, paragraph 1.1.2 of the WASG explicates that slot coordination is not a solution to the fundamental problem of a lack of airport capacity, and that it should be seen as an interim solution to manage congested infrastructure until the longer-term solution of expanding airport capacity is implemented.
[413] *See* García-Arboleda, supra note 381, at 586.
[414] *See* ICAO, *supra* note 256.
[415] *Id.*
[416] *Id.*

international air transport laid down in the Convention and its Annexes, for instance in matters like airport access.[417] The Manual merely provides an overview of the process of slot coordination[418] and refers to 2001 ICAO Circular 283-AT/119, as discussed above, for additional information on the matter, as well as to ICAO's model clause on airport slot coordination for optional use by States in their ASAs, as to which *see* section 3.2.3 below. In addition to content-related aspects, the Manual acknowledges that the increase in commercial air services has continued to outstrip available capacity at more and more airports. It also briefly mentions the existence of broader policy questions in the coordination of slots at capacity-constrained airports, such as the compatibility of broad market access with capacity-constrained airports.[419]

Furthermore, the Airport Economics Manual is focused primarily on Article 15 of the Convention in relation to airport charges and provides States and airports with practical guidance for the efficient management of airports and in implementing *ICAO's Policies and Charges for Airports and Air Navigation Services*, as laid down in ICAO Doc 9082.[420]

A 2008 ICAO report mentions the report of the Fifth Worldwide Air Transport Conference [hereinafter: ATConf/5] of 2003 as practical guidance document on slot coordination for States.[421] Though nowhere explicitly mentioned by ICAO, it appears likely that the 2013 report of the Sixth Worldwide Air Transport Conference [hereinafter: ATConf/6] has replaced its 2003 predecessor as ICAO guidance document on slot coordination. Although the report to ATConf/5 still proceeds from the notion that "airport congestion has not thus far been a significant constraint on the conclusion by States of liberalized ASAs", in the report to ATConf/6 ICAO expressed its concern that the lack of available slots at capacity-constrained airports affects the ability of airlines to exercise market access rights granted under ASAs in a fundamental way.[422] Much water has flown under the bridge since ICAO's 2003 ATConf/5 report, which is illustrated through ICAO's different stance on airport congestion *vis-à-vis* the inability of air carriers to exercise their entitled traffic rights at ATConf/6 in 2013.

The report to ATConf/6 furthermore clarifies that a key driver of ICAO guidance in the field of slot coordination is that any future coordination system should be fair, non-discriminatory and transparent, although ICAO recognizes that the situation at each capacity-constrained airport is different.[423] Given the cross-border nature of international aviation, the principles in place for slot coordination should be globally compatible, practicable, economically sustainable and take into account the interests of all stakeholders. Consideration should be given to capacity constraints and long-term infrastructure needs in particular. ICAO's contracting States must adhere to the legal framework for slot coordination, comprising of the Convention, obligations under ASAs as discussed below in section 3.2, as well as regional and national rules for the coordination of slots, including the WASG.[424] Moreover, States should give due consideration to the results of ICAO's studies and relevant guidance on slot coordination at their discretion

[417] *See* ICAO, *supra* note 212, at (v).
[418] For the purposes of this dissertation, the slot allocation process as the demand-side of slot coordination is described in Chapter 2, section 2.2.3.
[419] *See* ICAO, *supra* note 212, section IV-11-2. I
[420] *See* ICAO, Doc 9562: *Airport Economics Manual* (2020).
[421] *See* ICAO, Report of the Conference on the Economics of Airports and Air Navigation Services (CEANS) of 15 to 20 September 2008, ICAO Headquarters, Montréal, Canada (2008), paragraph 2.4.4
[422] *See* ICAO, supra note 78, paragraph 2.4.
[423] *Id.,* paragraph 3.2.
[424] *Id.,* paragraph 3.2.

and in a flexible manner with the aim of harmonizing slot coordination practices around the world to the greatest extent.[425]

3.1.8 Concluding remarks

Illustrative to the political sensitivity of air transport is the Convention's drafters' inability to create an international multilateral structure for the distribution of economic rights and privileges, including traffic rights and slots. Apart from the fact that the Convention has been successful in creating a legal basis for airport access issues to be arranged by States via ASAs or on the basis of other arrangements, it appears to have been a bridge too far at the time to expect the drafters to have created multilateral solutions for airport access given the multitude of interests involved.

Also, at the time the Convention was drafted, the problem of airport congestion did not exist, and the drafters were primarily concerned with questions related to safety and technical aspects of air transport. As such, the Convention – dare I say, understandably – fails to provide a global framework for the economic regulation of air transport, including airport access, which is generally interpreted as encompassing the use of slots.[426] Thus, the Convention does not explicitly regulate slot coordination. The Convention does, however, contain principles that may be linked to slot coordination, including the *national treatment* and *non-discrimination* principles vested in Article 11 and Article 15 of the Convention respectively.[427] Consequently, States must adhere to these principles in their rules and procedures on slot coordination.

ICAO does provide guidance to States in the field of slot coordination. Policy guidance relevant to slot coordination developed by ICAO includes 2001 ICAO Circular 283-AT/119 on Regulatory Implications of the Allocation of Flight Departure and Arrival Slots at International Airports, a Manual on the Regulation of International Air Transport, the reports to ATConf/5 and ATConf/6, and the ICAO model clause for optional use by States in their ASAs, as to which *see* section 3.2.3 below. The aforementioned documents merely provide an overview of the process of slot coordination. They also acknowledge the increasing gap between the demand for and the supply of airport capacity, but neither document lays down uniform rules or procedures for States and industry stakeholders to use to combat the issues identified in Chapter 2.

An important task appears to be waiting for the upcoming 2023 Seventh Worldwide Air Transport Conference [hereinafter: ATConf/7] to create order and provide clarity to both States and industry stakeholders involved in relation to the aims, objectives and key principles for slot coordination from 2023 onwards, given that market realities have changed since the key principles for slot coordination in use to date have been developed. I shall revert to these expectations in Chapter 6.

In interplay with the more general global regime for access to airports offered by the Convention, the coordination of slots is also an increasingly relevant matter under the more specific regime offered by ASAs concluded between States, as to which *see* section 3.2 below.

[425] *See* ICAO, *supra* note 421, Recommendation 8.
[426] *See* Mendes de Leon, *supra* note 48, at 559; Hobe, *supra* note 328, at 38.
[427] *See* NERA Economic Consulting, *supra* note 5, at 225.

3.2 Traffic rights at the heart of the bilateral regime

3.2.1 Application and practice of Articles 5 and 6 of the Convention

Based on the principle of sovereignty, national airspace is *de iure* closed for foreign aircraft and the international airlines operating these aircraft. Exempted are air carriers that have been given a "special permission or other authorization" under an ASA to perform scheduled air services to and from the territory of said State pursuant to Article 6 of the Convention,[428] or based on other arrangements such as the multilateral regime laid down in Article 5 of the Convention pertaining to the operation of non-scheduled international services.

The authorization for access to foreign airspace may be granted in different forms. As stated above, traffic rights are often exchanged under ASAs and operated by carriers which are designated under the ASA at airports specified or indicated in the ASA.[429] Pursuant to the mentioned Article 5 of the Convention, aircraft not engaged in scheduled air services may also be made subject to regulations, conditions or limitations imposed by States. Moreover, Article 6 of the Convention leaves room for States to allow traffic unilaterally, without an underlying ASA. Hence, the jurisdiction of States as per Articles 1 and 2 of the Convention has been implemented with respect to the operation of non-scheduled and scheduled international air services through the multilateral provision of Article 5 of the Convention, ASAs concluded between States pursuant to Article 6 of the Convention, and/or on the basis of unilateral concessions.

Traditionally, ASAs allowed only a limited number of 'flag carriers' owned and controlled by the State and/or its nationals to operate air services between the two signatory States.[430] Traffic rights were often granted on a reciprocal basis with the aim of protecting the national airline against foreign competitors, which used to result in a duopoly on the routes in question.[431]

The choice for limitations in terms of designation of air carriers and their operation of traffic rights flows from the concept of 'complete and exclusive sovereignty over national airspace', as discussed in section 3.1.4.2 above. As a corollary, States are entitled to decide for a liberal or protectionist approach towards the operation of international air services, especially with respect to the operation of scheduled international air services by their designated air carriers.[432]

States are, however, under no obligation to treat all other States equally upon the conclusion of ASAs.[433] The bilateral regime, based on the principle of complete and exclusive sovereignty vested in Article 1 in conjunction with Article 6 of the Convention, yields that States

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[428] Convention on International Civil Aviation, *supra* note 4, Article 6.

[429] A fundamental dialogue through airline dependence on governments to negotiate traffic rights on their behalf thus exists through ASAs, *see* Truxal, *supra* note 10, at 9.

[430] *See* European Commission and United States Department of Transportation, *Transatlantic Airline Alliances: Competitive Issues and Regulatory Approaches* (2010), at 10.

[431] *See* Milligan, *supra* note 14, at 19.

[432] A common aspect of ASAs is that, irrespective of providing for single, multiple or unlimited designation, the authorization to operate into foreign markets is reserved to carriers "substantially owned and effectively controlled" by nationals of the signatory States, commonly known as the 'O&C clause'. Article I(5) of IASTA, *supra* note 331, and Article I(6) of the International Air Transport Agreement, *supra* note 332, also lay down this requirement. Substantial ownership is complied with when 50% plus one share of the designated airline is owned by that State or its nationals. Effective control is assured when the State or its nationals have decisive influence on the management of the designated airline. More information on ownership and control of airlines is provided in ICAO's Manual on the Regulation of International Air Transport, *supra* note 212, paragraph 4.4.

[433] *See* García-Arboleda, supra note 328, at 263.

may discriminate between the airlines designated by its trading partners.[434] It follows that States may grant more attractive traffic rights on more favorable conditions to airlines which are designated by the one State, whereas they may grant traffic rights and related conditions in a less favorable manner to airlines which are designated by another State.[435]

Negotiations for bilateral ASAs used to be modelled on the 1946 Bermuda Agreement[436] concluded between the US and the United Kingdom [hereinafter: UK], henceforth also referred to as the 'Bermuda I Agreement'. Because of the diverging views between the US and the UK, the wording of the agreement's provisions was kept rather vague. The drafters' choice of ambiguous wording may serve as an explanation why a majority of States were receptive of the Agreement. After all, States held different views on how restrictive or liberal the air transport market should be, and the Bermuda I Agreement could function as a compromise to bridge diverging philosophies.[437]

Under the compromise agreement of Bermuda I, tariffs were to be established by the airlines within the framework of the International Air Transport Association [hereinafter: IATA] and were subject to the prior approval from the civil aviation authorities of both States to ensure that fares were not set unreasonably low and could negatively impact the profitability of both airlines.[438] The airlines determined capacity between themselves subject to certain agreed principles, for instance that the capacity was to be used for passenger flights between the two respective States.

The Bermuda I Agreement became the vehicle for the operation of scheduled international air services and set forth an international regulatory framework for international air transport that was essentially protectionist in nature with government intervention in the management of airlines.[439] It leaves the decision of how air carriers should conduct business in the hands of each individual State, as opposed to in the hands of the market, and enables States to impose restrictions on flights operated by foreign carriers of their choice.[440]

In 1977, the US and the UK replaced the Bermuda I Agreement by the more restrictive Bermuda II Agreement[441], due to UK concerns that the market share enjoyed by US airlines on routes between the US and the UK doubled those of the UK airlines. The Bermuda II Agreement introduced elaborate controls on capacity on routes between the two States in an attempt to stimulate competition on more equal terms.[442]

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[434] *Id.,* at 263; Crawford, supra note 364, at 289-292.
[435] *See* García-Arboleda, supra note 328, at 265.
[436] Air Services Agreement between the United States of America and the United Kingdom (Bermuda, 11 Feb. 1946), 60 Stat. 1499, T.I.A.S. No. 1507.
[437] Since the Bermuda I Agreement was drafted only two years after the Convention, the diverging views of the US on the one hand, and the UK on the other hand largely resemble the diverging views between the same two States when the Convention was drafted. The US strongly favored a liberal approach to the economic conditions under which air services should be exchanged, whereas the UK had an equally strong desire for the protection of national civil aviation interests in a more regulated environment. *See* Barry R. Diamond, *The Bermuda Agreement Revisited: A Look at the Past, Present and Future of Bilateral Air Transport Agreements*, 41 Journal of Air Law and Commerce (1975).
[438] *See* Mike Tretheway and Robert Andriulaitis, *What do we mean by a level playing field in international aviation?* (2015), at 6.
[439] *See* Haanappel, *supra* note 10, at 313.
[440] *See* García-Arboleda, supra note 328, at 259.
[441] Air Services Agreement between the United States of America and the United Kingdom (Bermuda, 23 Jul. 1977), 28 Stat. 5367, U.K.T.S. 1977 No 76, T.I.A.S. 8641.
[442] *See* Fitzgerald, *supra* note 341, at 76; Pablo Mendes de Leon, *Before and After the Tenth Anniversary of the Open Skies Agreement Netherlands-US of 1992*, 28 Air and Space Law 4/5 (2002), at 281.

To date, ASAs range from restrictive agreements whereby only one carrier from each State is allowed to operate the route (single designation) to plurilateral 'Open Skies' agreements offering unlimited designation and frequencies, as discussed in the section below.[443]

3.2.2 The shift from bilateralism to liberal and plurilateral 'Open Skies' agreements

The restrictive regulatory framework for market access in air transport set forth by the Bermuda I and II Agreements remained intact for around 30 years. In certain areas of the world, these agreements are still used as a model for ASAs. The first serious cracks were observed in the wake of US air transport deregulation initiatives in the mid-70's, when the Airline Deregulation Act of 1978[444] took effect.[445]

The US deregulation process set the course for major structural changes in the operation of air services and a wave of deregulation and liberalization initiatives would soon spread to other parts of the world, most notably the EU.[446] Although liberalization in the EU followed a more gradual approach than the US, among others, due to its composition of independent States with sovereign rights over their airspace, liberalization found its way to Europe ten years later.[447]

Increasingly so, traffic rights and market access conditions in a general sense were laid down in liberalized, regional, and plurilateral ASAs, which reduce many of the regulatory barriers of the more restrictive ASAs. Hence, traffic rights may also be obtained outside the bilateral regime as explained above.[448] The principal instrument to give substance to the liberalization of international air transport services was the conclusion of liberal and plurilateral agreements, more commonly known as 'Open Skies' agreements. This type of agreement is much less restrictive on, *inter alia*, the number of flights and the routes served, and typically allows carriers to operate between any point in the signatory States to the agreement.[449]

A key feature of 'Open Skies' agreements is that States allow the free exercise of the agreed traffic rights,[450] while leaving the exercise of the commercial modalities thereof – such as pricing and capacity setting – largely to the management of the designated air carriers. As such, government intervention is much more limited in comparison with ASAs modeled on the Bermuda I Agreement, as discussed in section 3.2.1. Under the most liberalized agreements, for instance UK-Singapore,[451] the operation of international air services may be turned into a market within which the regulation of competition forms the core element. In the well-founded

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[443] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraph 38.
[444] United States Airline Deregulation Act (24 Oct. 1978), P.L. 95-204, 92 Stat. 1705.
[445] The US Airline Deregulation Act of 1978, *see id.*, was adopted by the US Congress, followed by the United States International Air Transportation Competition Act 1979, 94 Stat. 35, P.L. 96-192, which sought to open up the international market to US carriers by promoting liberalized ASAs. *See* Milligan, *supra* note 14, at 2.5.1.
[446] *See* Truxal, *supra* note 10, at 159; Wassenbergh, supra note 372, at 68; European Commission and United States Department of Transportation, supra note 430, at 2; Von den Steinen, *supra* note 12, at 28; Lykotrafiti, *supra* note 10, at 86. The concepts of deregulation and liberalization, as well as the differences between them, are briefly explained in Chapter 1, n.10.
[447] *See* Milligan, *supra* note 14, at 2.5.1.
[448] *See* UK Competition and Markets Authority, *Aviation 2050: Response from the Competition and Markets Authority* (2019), at 6.
[449] *Id.*, at 7.
[450] Liberal and plurilateral, or 'Open Skies' agreements primarily cover the first five freedoms listed in n.463 below. The other freedoms are not always exchanged – the exchange of 8th and 9th freedom rights (cabotage) is especially rare.
[451] Air Services Agreement between the United Kingdom and the Republic of Singapore (21 Nov. 2007), Treaty Series No. 4 (2008), Cm 7362.

words of Haanappel (1995), 'Open Skies' agreements do not hamper the notion of 'complete and exclusive' sovereignty. Instead, they liberalize its exercise.[452]

Liberal and plurilateral agreements are not exclusive to the EU and the US.[453] Most developed nations, including all 35 Organisation for Economic Co-operation and Development [hereinafter: OECD] States, have liberalized their domestic market based on the conduct of domestic Open Skies policies.[454] Examples of liberalization efforts include the 2007 US-EU Agreement on Air Transport,[455] as amended in 2010, the Multilateral Agreement on Commercial Rights of Non-scheduled Air Services among the Association of Southeast Asian Nations, the 1999 Yamoussoukro Declaration on a New African Air Transport Policy[456] in Africa, the Fortaleza Agreement[457] in Latin America, the Single Aviation Market arrangements between Australia and New Zealand and the liberalization of air services between members of the Arab Civil Aviation Commission.[458]

Moreover, at the 2008 Conference on the Economics of Airports and Air Navigation Services [hereinafter: CEANS], 53 African States highlighted the difficulties their carriers were facing in securing slots at several airports outside Africa. According to the African States, such difficulties have negatively impacted the operation of international air services of African carriers. They seem to hold an opinion similar to the US, expressing that the States in which the capacity-constrained airports in question were located should apply the principle of reciprocity and equity as embodied in the ASA signed between them to the slot issues experienced. At CEANS, African States urged ICAO to take further action to address the issue of slot coordination.

Some opening-up efforts of the Chinese air transport market were observed in 2007 as the bilateral ASA between China and the US allowed for more frequencies between destinations in the signatory States.[459] Moreover, a liberal and plurilateral agreement took effect between the Republic of Korea and the Shandong province in China in 2006, followed by an agreement between the Republic of Korea and Japan in 2007.[460] In 2002, as a corollary of the '*Open Skies*-judgments' of the Court of Justice of the EU [hereinafter: CJEU],[461] the EU Member States, in close cooperation with the European Commission [hereinafter: the Commission], have drawn

[452] *See* Haanappel, *supra* note 10, at 314.
[453] *See* Truxal, *supra* note 10, at 9.
[454] *See* Lumbroso, *supra* note 328, at 24.
[455] Air Transport Agreement between the European Union and the United States of America (30 Apr. 2007), 46 I.L.M. 470, *entered into force* 30 Mar. 2008. Pursuant to this Agreement, any airline registered in an EU Member State or in the US may now fly to any airport within the other States' borders, subject to the availability of airport slots at both ends of the route, as to which *see infra* section 3.3.2.
[456] United Nations Economic and Social Council, Decision adopted at the Conference of African Ministers Responsible for Civil Aviation, held in Yamoussoukro, Côte d'Ivoire, 13-14 Nov. 1999.
[457] Decision No 07/96 (XI CMC – Fortaleza, 17/96). The Fortaleza Agreement liberalized intra-regional air services among the four MERCOSUR States in 1996, that is to say Argentina, Brazil, Paraguay and Uruguay.
[458] *See* ICAO, *supra* note 212, Chapter 3.2.
[459] *See* Fu and Oum, *supra* note 398, at 5.
[460] *Id.*, at 4. Japanese airports that suffer from capacity constraints were exempted in the 2007 ASA concluded between Korea and Japan. An agreement to liberalize the services between Tokyo Narita International Airport and Incheon International Airport was subsequently reached in 2010, after the airport capacity was expanded in Tokyo. *See infra* section 3.3 for a discussion of growing airport capacity constraints in relation to the exercise of traffic rights under ASAs.
[461] Joined Cases C-466/98, C-467/98, C-468/98, C-469/98, C-471/98, C-472/98, C-475/98 and C-476/98, *Commission v. United Kingdom, Denmark, Sweden, Finland, Belgium, Luxembourg, Austria, Germany* [2002], *inter alia,* ECLI:EU:C:2002:624.

up an external aviation policy pursuant to which the EU may also conclude so-called 'vertical' and 'horizontal' agreements on air transport with third States.[462]

All these agreements *liberalize* air transport and turn at least the first five 'Non-Freedoms of the Air' into 'Freedoms of the Air'[463] so to say. Significant economic regulation remains in place in these liberal agreements, including antitrust and competition law, restrictions on foreign ownership of airlines and the related cross-border consolidation of airlines, restrictions on foreign airlines providing domestic services and the tax-free status of aviation fuel.[464] At present, a fragmented network of over 7,000 bilateral ASAs regulating the operation of international air services under the umbrella of the Convention still exists in 2021.[465] Clearly, WTO multilateralism, as discussed in section 3.1.6 below, has not been extended to air transport to replace the fragmented network of bilateral and plurilateral ASAs by open competition at a global level.[466]

Mendes de Leon (1992) rightfully concluded that the transition from bilateralism to multilateralism requires States to "cease regarding international air traffic as national property, regarding it instead as international property".[467] Since States continue to have an interest in the promotion of national policy objectives related to air transport, it is the author's expectation that the economic side of air transport, including slot coordination, will continue to be regulated by ASAs for the time being.

3.2.3 ICAO's model clause on slots from the perspective of equality of opportunity

Traffic rights may lose their value when carved out by airport capacity constraints in terms of a lack of slots, especially if the applicable limitations are not mentioned in the ASA. Particularly the lack of available slots at super-congested airports affects the ability of airlines to exercise market access traffic rights granted under ASAs in a fundamental way.[468]

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[462] *See* NERA Economic Consulting, *supra* note 5, at 14; European Commission and United States Department of Transportation, supra note 430, at 11.

[463] The 'Freedoms of the Air' are a combined set of 9 traffic rights, granting the designated airlines of a State under an ASA the privilege to access another State's airspace and/or airports. The 9 'Freedoms' are as follows:

- 1st Freedom: to overfly one country *en route* to another
- 2nd Freedom: to make a technical stop in another country
- 3rd Freedom: the carriage of traffic, that is, passengers and cargo, from the home country of the airline to another country
- 4th Freedom: the carriage of traffic to the home country of the airline from another country
- 5th Freedom: the carriage of traffic between two foreign countries by an airline of a third country, which carriage is linked with third and fourth Freedom traffic rights of the airline
- 6th Freedom: the carriage of fifth Freedom traffic between two foreign countries via the home country of the airline
- 7th Freedom: the carriage of traffic between two foreign countries by an airline of a third country, which carriage is not linked with third and fourth Freedom traffic rights of the airline
- 8th Freedom: the carriage of passengers and cargo between two points in a foreign country on a route with origin and/or destination in the home country of the airline
- 9th Freedom: the carriage of passengers and cargo between two points in a foreign country on a route, which is unrelated to the home country of the airline.

[464] *See* Grant, *supra* note 325.

[465] *See* Lumbroso, *supra* note 328, at 23; Severin Borenstein and Nancy L. Rose, 'How Airline Markets Work… or Do They? Regulatory Reform in the Airline Industry' in Nancy Rose (ed), *Economic Regulation and Its Reform: What Have We Learned?* (2014), at 31; Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraph 38.

[466] Unlike the economic regulation for air transport, international trade regulation increasingly tends to develop multilaterally, for example through institutions such as the WTO, a global intergovernmental organization which deals with the global rules of trade between nations. *See* WTO, *supra* note 399.

[467] *See* Mendes de Leon, *supra* note 371, at 101.

[468] *See* ICAO, *supra* note 78, paragraph 2.4.

On the one hand, the granting of traffic rights between States may provide relief in the form of flexibility to use alternative airports with spare capacity available in the same country or region, depending on the terms agreed upon in the ASA.[469] On the other hand, however, airport congestion paired with the inadequate coordination of slots at an airport, in particular at airports where no substitute airports serving the same market are available, may render it practically impossible for an airline to access that airport.

If the slots are refused because there are not any available, several cases have shown that the affected State may take recourse to the bilateral – or plurilateral, for that matter – relationship between the two States governing international air services, as materialized through the ASA. These cases, including their legal validity, are analyzed in section 3.3.4. In particular, the affected State may invoke the equality of opportunity, or the 'fair and equal opportunity to compete' clause, which is included in most ASAs, arguing that its designated carriers do not have a fair and equal opportunity to compete with the designated carriers of the other State in the matter of access to airports.[470]

To avoid conflicts in inter-State relations, ICAO recommended to only negotiate new or expanded traffic rights when they can also be accommodated at the airports in the grantor States.[471] Furthermore, to prevent divergence in textual interpretations included in national regulations and/or ASAs on the link between traffic rights and slots, which is subject to extensive discussion in section 3.3 below, the ICAO Secretariat developed three options of bilateral model clauses that include a reference to the availability of slots, in consultation with ICAO's Air Transport Regulation Panel. This has resulted in a model clause that has been included in the ICAO Template ASA for optional use by States upon the conclusion of an agreement.[472] The article reads as follows:

> "Each Party shall ensure that its procedures, guidelines and regulations to manage slots applicable to airports in its territory are applied in a fair, transparent, effective and non-discriminatory manner."[473]

It seems that ICAO seeks to prevent discussions on the relationship between slot coordination and traffic rights *a priori* by introducing a model clause that subjects traffic rights to the availability of slots. The next section dives into slot provisions incorporated in specific ASAs, followed by an analysis of the various regulatory approaches taken by States on the relationship between traffic rights and slots in section 3.3.

3.2.4 Slot provisions in specific ASAs

Before the model clause discussed in the above section was adopted by ICAO, ASAs already held similar provisions, although slots were never mentioned explicitly. For example, the 2000 ASA between the US and Germany held the following provision in Article 8:

> "(1) Each contracting party shall allow a *fair and equal opportunity* for the designated airlines of both parties to compete in the international air transportation covered by the Agreement; (2) Each contracting party shall allow each designated airline to determine the frequency and capacity of the international air transportation it offers, based upon commercial considerations in the marketplace. Consistent with this right, neither contracting party shall unilaterally limit

[469] *See* ICAO, *supra* note 256.
[470] *See* NERA Economic Consulting, *supra* note 5, at 229; Mendes de Leon, *supra* note 48, at 566; García-Arboleda, supra note 381, at 581-582.
[471] *See* ICAO, *supra* note 256, at 15.
[472] *See* ICAO, *supra* note 78, paragraph 3.4.
[473] *Id.,* Appendix A.

> the volume of traffic, frequency or regularity of service, or the aircraft type or types operated by the designated airlines of the other contracting party, except as may be required for customs, technical, *operational,* or environmental reasons under uniform conditions consistent with Article 15 of the Convention." [italics added][474]

Consequently, the US and Germany had to allow the carriers designated by them a "fair and equal opportunity" to compete. US carriers were free to access German airspace and airports and *vice versa* under the condition that applicable operational restrictions allowed for it. In the 'Open Skies-judgments' of 2002,[475] the Commission argued that the term "operational restrictions" also includes slot coordination. Therefore, by subjecting the 'fair and equal opportunity' clause to slot coordination, a State party to the agreement could not use this provision to argue that its designated carriers did not have a fair and equal opportunity to compete for air services with carriers of the other State should slots be refused. However, Advocate General Tizzano of the 'Open Skies-judgments' was of the opinion that the Commission had not supplied sufficient evidence for its claim that "operational restrictions" also includes the coordination of slots, particularly as Member States, for their part, also argued that such clauses do not refer to the coordination of slots.[476] The CJEU remained silent on the argument brought forward by the Commission.[477]

The US-EU Air Transport Agreement of 2007 and its amended version of 2010 do not contain provisions on slots, nor do they subject international air transport to the "operational restrictions" mentioned above. However, both the availability and the coordination of slots is governed by the applicable international, regional and rules on slots.[478] It follows that although US airlines, for instance, in theory have unlimited rights to operate air services from London Heathrow, they will only be able to do so in practice if they can acquire slots through the regular allocation process or via secondary slot trading.[479] In the EU, this dichotomous relationship between traffic rights and slots is known as the 'operational link', subject to discussion in section 3.3.2 below.

The availability of slots at super-congested Japanese airports, such as Tokyo Narita International Airport, is also an issue that needs to be dealt with separately from the negotiation of traffic rights. When airlines want to service Tokyo Narita, the airline may acquire the necessary traffic rights via the ASA between the two States, but the airline may be referred to the Narita airport authorities in order to obtain slots, which is a virtually impossible task. In those situations, traffic rights cannot be exercised and become obsolete.[480] To alleviate US concerns, which had concluded a liberal and plurilateral agreement with Japan in 2010, in the

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[474] The 2002 EU-US 'Open Skies' agreement includes similar language: "Each Party shall allow each airline to determine the frequency and capacity of the international air transportation it offers based upon commercial considerations in the marketplace. Consistent with this right, neither party shall unilaterally limit the volume of traffic, frequency or regularity of service, or the aircraft type or types operated by the airlines of the other Party, nor shall it require the filing of schedules, programs for charter flights, or operational plans by airlines of the other Party, except as may be required for customs, technical, *operational*, or environmental reasons under uniform conditions consistent with Article 15 of the Convention." [italics added] *See* US-EU Air Transport Agreement, *supra* note 455, Article 3(4).

[475] Joined Cases C-466/98, C-467/98, C-468/98, C-469/98, C-471/98, C-472/98, C-475/98 and C-476/98, *Commission v. United Kingdom, Denmark, Sweden, Finland, Belgium, Luxembourg, Austria, Germany* [2002], *supra* note 461.

[476] Case C-466/98, Joined opinion of Mr Advocate General Tizzano delivered on 31 January 2002 in *Commission v. United Kingdom* [2002] ECLI:EU:C:2002:63, paragraph 105-107.

[477] *See* NERA Economic Consulting, *supra* note 5, at 233.

[478] *See* section 3.1 above for globally binding rules applicable to the coordination of slots. *See infra* Chapter 4 (discussing regional and national rules on slots).

[479] *See* Mendes de Leon, *supra* note 371, at 101.

[480] *See* NERA Economic Consulting, *supra* note 5, at 229; Mendes de Leon, *supra* note 48, at 559.

matter of access to Tokyo Narita, the 2010 liberal and plurilateral ASA between the US and Japan saw the Japanese government agreeing to increase the number of slots available at Tokyo Narita International Airport.[481]

The exact wording of the ICAO model clause discussed above is used in, *inter alia,* Article 11 of the 2009 EU-Canada Air Transport Agreement[482], the draft EU-Brazil Air Transport Agreement[483] initialed in 2011, and Article 8(11) of the 2013 Euro-Mediterranean Aviation Agreement between the EU and Israel.[484] A 2020 example of application of ICAO's model clause is provided by Article AIRTRN.13(4) of the post-Brexit EU-UK Trade and Cooperation Agreement:

> "As regards the allocation of slots at airports, each Party shall ensure that its regulations, guidelines and procedures for allocation of slots at the airports in its territory are applied in a transparent, effective, non-discriminatory and timely manner."[485]

3.2.5 Concluding remarks

The previous sections have shown that 20th century international air transport saw air services forbidden by default unless arrangements were made in the bilateral sphere, which contributed to the proliferation of a 'labyrinth' of ASAs signed between contracting States.[486]

Bilateral – and increasingly so, also plurilateral – 'Open Skies' agreements in particular indicate a shift from the traditional exchange of traffic rights under bilateral ASAs towards a more liberalized air transport system. States are, however, still free to conclude ASAs between them to varying degrees of protectionism or liberalism. Moreover, and especially relevant for this dissertation, the impact of liberalization is increasingly moderated by continuing airport capacity constraints that limit or preclude entry at the airport level, as discussed in Chapter 2 of this dissertation.[487]

As the overarching UN specialized agency tasked with fostering the planning and development of international air transport pursuant to Article 44 of the Convention, ICAO appears to be the most appropriate body to issue a more distinct interpretation that the exercise of traffic rights is indeed subject to the availability of slots to provide clarity for all parties involved. Yet, the question is whether ICAO's model clause will bring more clarity into the debate. After all, the clause only requires States to ensure that its procedures, guidelines and regulations to manage slots are applied in a "fair, transparent, effective and non-discriminatory manner", qualifications that are already in place in a large number of States around the world through the WASG guidelines or national or regional rules.[488]

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[481] *See* Intervistas, *supra* note 14, at 42.
[482] Agreement on Air Transport between Canada and the European Community and its Member States (Brussels, 17 Dec. 2009 and Ottawa, 18 Dec. 2009), OJ L 207.
[483] *See* European Commission, *Proposal for a Council Decision on the signature of the Agreement on Air Transport between the European Union and its Member States, of the one part, and the Federative Republic of Brazil, of the other part*, COM(2011) 253 final, at 1.
[484] Euro-Mediterranean Aviation Agreement between the European Union and its Member States, of the one part and the government of the State of Israel, of the other part (Luxembourg, 10 Jun. 2013), OJ L 208.
[485] Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part (Brussels and London, 30 Dec. 2020), OJ L 444, at 235.
[486] *See* Lumbroso, *supra* note 328, at 23.
[487] *See* Borenstein and Rose, *supra* note 465, at 30.
[488] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 5.5.1(a).

Furthermore, in the EU, where the largest number of Level 3 airports of the world are located and where difficulties to access to congested airports are among the most prevalent around the world,[489] the legally binding Slot Regulation already prescribes that slots are managed in a fair, transparent, effective and non-discriminatory manner at congested airports by the appointment of an independent slot coordinator, as mentioned briefly in Chapter 2 and extensively elaborated upon in Chapter 5, section 5.4.

Hence, ICAO's model clause seems to fall short of providing a solution to the problem at hand, since it does not actually address the relationship between traffic rights and slots, nor does it bring forward any amendments to prevent future inter-State disputes centered around the relationship between slot coordination and traffic rights, some of which are illustrated in section 3.3.4 below.

3.3 Slots and traffic rights: an intertwined concept?

3.3.1 The formulation and practice of Article 15 of the Convention

International access to airports is governed by Article 15 of the Convention which requires that "[e]very airport in a contracting State which is open to public use by its national aircraft shall likewise . . . be open *under uniform conditions* to the aircraft of all the other contracting States" [italics added].[490] Thus, based on the combined effect of the phrasing "likewise" and "under uniform conditions", this provision seems to require national treatment, indicating that States are required to apply the same conditions on access to airports to both national carriers and foreign carriers as discussed in sections 3.1.4.3 and 3.1.5.

However, before an airline can make use of an airport for the operation of international scheduled air services, it must first ensure that it acquired two constituents: traffic rights and airport slots. Traffic rights are generally traded under bilateral or plurilateral ASAs as discussed in section 3.2.1, of which they form the central piece.[491] In practice, flights can only be operated when the airline operating on the basis of these traffic rights also has access to the airport located in the territory of the grantor State it wants to fly into in the form of airport slots if it concerns a slot coordinated airport, as evidenced by slot provisions in specific ASAs discussed in section 3.2.4 above.[492]

In relation to traffic rights, slots are a technical modality to be allocated by the coordinator following the exchange of traffic rights in ASAs. An airline holding traffic rights is not guaranteed the necessary airport slots, because slots are allocated separately, that is, under a different legal regime and at a later stage.[493] This holds especially true for super-congested airports with excess demand in particular, as will become clear throughout this chapter. Airlines operating non-scheduled air services may also gain access to airports via Article 5 of the Convention or on the basis of unilateral concessions as mentioned in section 3.2.1.

Although the policy issues related to the concepts of slots and traffic rights are global in nature, and not limited to the EU or the US alone, the next sections specifically address the EU and the US approach to slots in relation to traffic rights in sections 3.3.2 and 3.3.3 respectively.

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[489] *See* Odoni, *supra* note 61, at 8. *See* also Chapter 2 sections on increasing airport congestion.
[490] Convention on International Civil Aviation, *supra* note 4, Article 15.
[491] *See* Katja Brecke, *Airport Slot Allocation: Quo Vadis, EU?,* 36 Air and Space Law 3 (2011), at 199.
[492] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.7.2(j).
[493] *See* Haanappel, *supra* note 151, at 203.

3.3.2 The operational link between traffic rights and slots in the EU

The relation between airport slots and traffic rights shows that there is an operational link between traffic rights and airport slots, meaning that the grant of traffic rights does not necessarily imply free access to slot coordinated airports.[494] The operational link between traffic rights and slots yields that an airline must have acquired the necessary slots at a coordinated airport before it can materialize the traffic rights negotiated under the ASA between the two States involved.

In the EU, the operational link between traffic rights and slots is confirmed in Article 19(1) of EU Regulation 1008/2008[495], which states the following: "The exercise of traffic rights shall be subject to published Community, national regional and local operational rules relating to . . . *the allocation of slots*" [italics added]. Therefore, the process of slot coordination in the EU can be considered to be separate from acquired traffic rights, as reflected by it being governed by a different regulation.[496]

In *VIVA Air*, the Commission confirmed that it considered slot coordination "legally distinct from the question of granting traffic rights".[497] It follows that an airline's application for traffic rights may not be refused for the reason that the airline does not have the necessary slots to be able to provide the service. Similarly, the Commission argues that an airline that is able to obtain the slots the airline needs to operate a given service may not assume that this authorizes the airline to exercise traffic rights in respect of the service.[498]

Nevertheless, if a State did not subject access to its airports to slot restrictions evidenced by national regulations, and the ASA provides an unrestricted operation of international air services by the designated carriers under the agreement, States may opine that traffic rights ought to be exercised without being hampered by slot restrictions, as to which *see* section 3.3.4.[499]

3.3.3 The US approach to slots in relation to traffic rights

The US has adopted an approach on the enactment of traffic rights in national law which is different from the EU. Pursuant to the International Air Transportation Fair Competitive Practices Act of 1974,[500] the US may hold foreign States responsible in situations where slots are not distributed properly at airports located in their territories, invoking the 'equality of opportunity' clause. This view was also expressed by the US Court of Appeals in the *Laker*-case of 1999.[501] The provision, codified in the US Code of Federal Regulations, Title 49 Transportation, § 41310, under (a) on discriminatory practices, states that "an air carrier or foreign air carrier may not subject a person, place, port, or type of traffic in foreign air transportation to unreasonable discrimination."[502] Hence, not only have the US not recognized

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[494] *See* NERA Economic Consulting, *supra* note 5, at 228-29; Mendes de Leon, *supra* note 48, at 559.
[495] EU Regulation 1008/2008, *supra* note 39. *See infra* Chapter 4, section 4.4 (analyzing the application of EU Regulation 1008/2008 and its key components).
[496] European Commission, Commission Decision of 28 May 1993 on a procedure relating to the application of Regulation (EEC) No 2408/92 (Case VII/AMA/I/93 – *Viva Air*), OJ L 140, paragraphs 51 and 55.
[497] *Id.,* under VI.
[498] *Id.,* under VI.
[499] *See* Mendes de Leon, *supra* note 48, at 561.
[500] United States Code of Federal Regulations, Title 49 Transportation, § 41310 ('International Air Transportation Fair Competitive Practices Act of 1974').
[501] Court of Appeals, *Laker Airways Inc. v. British Airways PLC*, 182 F.3d 843 (11th Circuit 1999).
[502] The provision was formerly codified in § 2(b) of the US Code of Federal Regulations, Title 49 Transportation, § 41310, as amended before the Department of Transportation Office of the Secretary in Washington D.C. on January 29, 2019.

the operational link between traffic rights and slots in legislation, the US even has a complaints procedure in place for what the US refers to as "discriminatory practices".[503]

Should the US Secretary of Transportation decide that a situation is discriminatory, the US Secretaries of State and Transportation shall commence negotiations with the State in question to end the alleged discriminatory practice. An example of such a practice could be the unavailability of slots as evidenced by the *Kalitta*-case discussed in section 3.3.4, which may be considered by the US to be "an unjustifiable or unreasonable restriction on access of an air carrier to a foreign market."[504] The US Secretary of Transportation may also take actions against the alleged discriminatory practice so as to eliminate an activity of a foreign State or another foreign entity, including a foreign air carrier, if the Secretary considers this to be in the public interest. Such actions may include the suspension of traffic rights as negotiated under the ASA between involved States.[505]

Neither the principle of national treatment nor the principle of non-discrimination hampers contracting States to the Convention from engaging into 'positive discrimination', *id est* granting foreign carriers a more favorable treatment than national carriers, as discussed in section 3.1.5.[506] An example can be found in the preferential treatment foreign carriers enjoyed in the US, where a separate slot pool guaranteeing slots for international air services has been applied in the past to ensure compliance with the obligations of the US government under the ASAs it concluded with other States. This arrangement held that these slots were excluded from the slot trading system under the so-called 'High-Density Rule' in the US, together with slots for 'essential' air services and slots for new entrants.[507] The US regime for slot coordination is subject to further discussion in Chapter 4, section 4.5.

3.3.4 Inter-State disagreements on the matter of slots and traffic rights

3.3.4.1 On access to the airports of London Heathrow and Amsterdam

To date, London Heathrow and Amsterdam Airport Schiphol are still prime examples of super-congested airports where issues over slot scarcity may arise in the bilateral sphere. Amsterdam Airport Schiphol reached its annual capacity limit of 500,000 aircraft movements in 2017. As of then, slot scarcity at Amsterdam Airport Schiphol has been resemblant of the situation at London Heathrow. All available slots are taken up by historic rights, leaving no slots left for allocation and market access hampered.

This section discusses disagreements between States, and their designated airlines, on the relationship between traffic rights and the coordination of slots. The first of these disagreements occurred in 1997, when the interplay between slots and traffic rights came to light between the US and the UK, and between the US and The Netherlands.

3.3.4.2 Between the US and the UK in the context of the Bermuda II Agreement

At that time (1997), the Bermuda II Agreement, the successor of the Bermuda I Agreement discussed in section 3.2.1, governed passenger flights between the US and the UK. Per the terms of the Bermuda II agreement, non-stop services to London were permitted from 26 gateway cities in the US. Access to London Heathrow was restricted to two US carriers, to wit American Airlines and United Airlines. The demand for slots at the super-congested airport of London

[503] The complaints procedure is set out in the US Code of Federal Regulations, Title 49 Transportation, § 41310, under (d)(1) and (d)(2).
[504] US Code of Federal Regulations, Title 49 Transportation, § 41310, under (c)(1).
[505] *Id.*
[506] *See* Mendes de Leon, *supra* note 48, at 562.
[507] *See* NERA Economic Consulting, *supra* note 5, at 234 and 271.

Heathrow by US carriers wishing to expand or enter service, however, by far exceeded supply.[508]

The US held that the Bermuda II Agreement placed substantial limits on competition which disproportionately impacted US airlines, most of whom are not allowed to serve London Heathrow.[509] Conversely, British Airways had obtained extensive access to the US market. According to a testimony of the US General Accounting Office before the US Senate Subcommittee on Aviation, the US Department of Transportation [hereinafter: US DoT] has not been successful in securing increased access for US airlines to London Heathrow. The testimony also included the opinion that the slot scarcity at Heathrow prevents US airlines from having adequate access to that airport, and action should be taken to address these barriers if a liberal and plurilateral, or 'Open Skies' agreement between the US and the UK were to result in increased competition.[510] Such barriers to entry did not exist in other States the US had previously signed 'Open Skies' agreements with.[511]

London Heathrow airport officials noted that US airlines wishing to enter services at London Heathrow under an 'Open Skies' agreement would be allocated priority slots if new slots became available. Because the airport was operating at its maximum capacity, it would likely take several years before additional capacity was created and slots would become available for additional US airlines. The airlines would likely need to have slots transferred to them from other airlines.[512] Because a forthcoming alliance between American Airlines and British Airways – the two largest carriers in the US-UK market, together accounting for 60% of the scheduled passenger traffic at the time – raised competition concerns, the two airlines indicated they were willing to release a portion of the slots they held to other US airlines, provided they were paid fair market value for those slots.[513]

3.3.4.3 The US – Netherlands Memorandum of Understanding of 1992

Also in 1997, slot scarcity placed restrictions on the exercise of traffic rights between the US and The Netherlands.[514] A Memorandum of Understanding of 1992 created an open market between the US and The Netherlands and allowed each States' designated carriers access to point(s) in the other State and beyond, without limitations.[515] Although the Dutch delegation had indicated to the US delegation that it did not expect slot scarcity issues at Amsterdam Airport Schiphol, the airport became subject to slot coordination in 1997, and US carriers were suddenly confronted with a coordination mechanism through which they had to acquire slots.[516] According to Mendes de Leon (2002), however, KLM and the operator of Amsterdam Airport Schiphol "handled this problem in a pragmatic manner".[517]

3.3.4.4 Involving AirBridgeCargo and Kalitta Air over slot scarcity at Amsterdam Airport Schiphol

Following the increased slot shortage, Russian-registered all-cargo carrier AirBridgeCargo was not allocated all of the slots it held before the 500,000 aircraft movement limit was reached.

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[508] District Court for the Southern District of New York, US Airways Group Inc. v. British Airways PLC, 989 F. Supp. 482 (S.D.N.Y. 1997).
[509] *See* United States General Accounting Office, *International Aviation: Competition Issues in the U.S.-U.K. Market. Statement of John H. Anderson, Jr.* (1997), at 1.
[510] An 'Open Skies' agreement between the US and the UK would eventually take effect in 2008.
[511] *See* US General Accounting Office, *supra* note 509, at 13.
[512] *Id.,* at 13.
[513] *Id.,* at 14.
[514] *See* Mendes de Leon, *supra* note 442, at 287.
[515] *Id.*, at 289.
[516] NorthWest Airlines had commercially partnered up with KLM Royal Dutch Airlines, which already had an established presence at Amsterdam Airport Schiphol. *See* also Mendes de Leon, *supra* note 442, at 292.
[517] *Id.*, at 292.

As part of the commitments in the air services agreement between The Netherlands and Russia, Russia invoked the principle of a fair and equal opportunity to compete as provided for in the agreement. It threatened to close Russian airspace to Dutch aircraft, including those for Dutch home carrier KLM, if AirBridgeCargo was refused more slots at Amsterdam Airport Schiphol.[518]

After several rounds of negotiations, AirBridgeCargo and KLM came to an agreement, which allowed AirBridgeCargo to fully re-establish its operations at Schiphol instead of moving to Liège airport in Belgium. The agreement was described as a codeshare agreement, through which KLM could lease slots to AirBridgeCargo.[519] The then Managing Director of Airport Coordination Netherlands [hereinafter: ACNL], the independent entity responsible for slot allocation at Dutch coordinated airports, stated in Dutch newspaper NRC that the government of The Netherlands "could set a dangerous precedent by giving in to the threats over Russia's airspace, as other carriers may try to gain space at European airports in the same way".[520]

A similar dispute to that of AirBridgeCargo occurred in 2018, when US cargo carrier Kalitta Air filed a complaint with the US Secretary of Transportation under the US Code of Federal Regulations, Title 49 Transportation, § 41310, arguing that its slots at the super-congested Amsterdam Airport Schiphol were "wrongfully withheld" by the Netherlands, ACNL and the airport managing body of Amsterdam Airport Schiphol. Because the carrier's on-time performance is largely dictated by its customer – the US Department of Defense books Kalitta Air for military charters to the Middle East via Amsterdam – Kalitta has "no control over when its flights will be allowed to land or depart". Consequently, it failed to comply with the use-it-or-lose-it rule and therefore it was not allocated all of the slots it previously held.[521]

Consequently, Kalitta Air claimed "unjustifiably and unreasonably discriminatory" actions to restrict the carrier's access to its Amsterdam-New York route guaranteed under the US-EU 'Open Skies' Agreement. The all-cargo carrier urged the US DoT to restrict or suspend the cargo operations of Dutch home carrier KLM to and from the US. In response, The Netherlands held that there is no correlation between traffic rights and the right to slots at Amsterdam Airport Schiphol, given the existence of an operational link between traffic rights and slots in the EU as explained in section 3.3.2. In May 2019, the US DoT dismissed Kalitta's complaint and referred to a recently agreed local rule governing slot allocation procedures for all-cargo carriers at Amsterdam Airport Schiphol, stating this local rule could function as a potential remedy to resolving Kalitta's problems.[522] Interestingly, the US DoT didn't touch upon the link between traffic rights and airport slots in its dismissal of the complaint at hand.

3.3.4.5 The solution of disagreements under ASAs and the Chicago Convention

The above cases illustrate that the 'equality of opportunity' principle, which is a standard provision in many ASAs, has been and is increasingly applied to the process of slot

[518] *See* NRC Handelsblad, Boodschap is dat chantage loont *(in Dutch)* (November 2, 2017), *available at* https://www.nrc.nl/nieuws/2017/11/02/boodschap-is-dat-chantage-loont-13815483-a1579681 (last visited November 10, 2021)

[519] EU Regulation 95/93, as amended, *supra* note 47, Article 10(8) enables slot swaps between carriers that entered into shared operations with one another: ". . . Slots allocated to one carrier may be used by (an)other air carrier(s) participating in a joint operation, provided that the designator code of the air carrier to whom the slots are allocated remains on the shared flight for allocation and monitoring purposes. Upon discontinuation of such operations, the slots so used will remain with the air carrier to whom they were initially allocated . . .".

[520] *See* NRC Handelsblad, *supra* note 518.

[521] Complaint of Kalitta Air, LLC against the Kingdom of the Netherlands, Amsterdam Airport Schiphol and *Stichting* Airport Coordination Netherlands of 29 January 2019 under 49 U.S. Code § 41310. *See* also Chapter 2 of this dissertation for a detailed explanation of the current slot rules, including the application and practice of the use-it-or-lose-it rule.

[522] *Id.*

coordination.[523] Where the grantor State imposes conditions on the coordination of slots to airlines flying under ASAs containing the 'equality of opportunity' clause, the airlines or the States designating them could – regardless of the legal validity, which is subject to discussion below – thus claim that the slot restrictions and/or conditions affect the balance of benefits as agreed upon in the agreement and raise the claim that the ASA fails to proceed from free and unrestricted trade of international air services because no airport access is granted.[524] For instance, States party to a liberal and plurilateral agreement may use the provision to demand access to airports in the opposite State for the benefit of its designated carriers.[525] In case the States fail to find a solution between them, the affected State may adopt retaliatory measures.[526]

Article 15 of the Convention does not prevent retaliatory action if problems with regard to the use of airports arise in the bilateral sphere between ICAO Member States and their respective designated carriers.[527] So far, however, it has not been made entirely clear whether the 'equality of opportunity' clause is also liable to impose any obligation on the States party to a particular agreement to ensure that the slots needed to operate the agreed air services are made available, as the clause has never been made subject to court proceedings. This uncertainty exists in spite of the fact that there is a clear separation between the concepts of traffic rights and slots and the steps that need to be taken to acquire both concepts, and also bearing in mind that States are free to introduce rules and procedures on slot coordination under Article 1 of the Convention.[528]

3.3.5 Concluding remarks

In terms of airport access, the assignment of traffic rights is 'only' the first step for an airline to be able to operate air services to and from a foreign airport. The second step involves acquiring increasingly scarce airport slots. Despite the separation between slots and traffic rights, however, experience has shown that the 'equality of opportunity' clause in ASAs has been applied to the process of slot allocation in an attempt to gain access to super-congested airports where no slots are available through the regular slot allocation process.

States tend to hold diverging views when it comes to the exercise of traffic rights and slot availability. States home to airports with limited to no slot availability may be accused of failure to abide by the terms of the ASA concluded, or to the adoption of retaliatory measures by the opposite State for non-compliance, more specifically in light of the 'equality of opportunity' clause. García-Arboleda (2013) describes the ellipsis as "evidence of a short-circuit that exists . . . between airport slots and international air traffic rights".[529] With capacity constraints increasing, the relationship between traffic rights and slots becomes increasingly prominent in the policy sphere between States and may thus result in interpretative differences between States all the more often.[530]

The situation pursuant to which the acquisition of traffic rights under ASAs would guarantee airlines any slots at coordinated airports would be undesirable from an international aviation law and policy perspective. It would complicate the conclusion of liberal and

[523] *See* NERA Economic Consulting, *supra* note 5, at 233.
[524] *See* Mendes de Leon, *supra* note 48, at 566; Balfour, *supra* note 92; García-Arboleda, supra note 381, at 580.
[525] *See* Mendes de Leon, *supra* note 48, at 566.
[526] *See* García-Arboleda, supra note 381, at 591.
[527] *See* NERA Economic Consulting, *supra* note 5, at 204.
[528] *See* Steer Davies Gleave, *supra* note 69, at 143.
[529] *See* García-Arboleda, supra note 381, at 591.
[530] *See* Mendes de Leon, *supra* note 48, at 566; Organisation for Economic Cooperation and Development (OECD), *Latin American Competition Forum, Session IV: Competition Issues in the Air Transport Sector*, paragraph 18.

plurilateral agreements with States home to one or multiple super-congested airports, since these agreements proceed from unrestricted market access within the territories of the States party to the agreement. Having to guarantee slot availability in order to exercise unlimited traffic rights is also deemed unrealistic given the market developments mentioned in Chapter 2.

The separation between slots and traffic rights could potentially be solved via the structural adoption of slot provisions in ASAs, prescribing that traffic rights may only be exercised if the airlines involved can get their hands on the airport slots needed to operate an air service.[531]

3.4 WASG as *de facto* and *de iure* reference document for slot coordination

3.4.1 The legal status and global influence of the Worldwide Airport Slot Guidelines

Having established that slots are not allocated to airlines under the Convention, nor are they allocated on the basis of ASAs, this section seeks to clarify the allocation of slots under the WASG, which prescribes that slots are allocated to airlines by an independent coordinator.[532] Moreover, the WASG reads that "[t]he allocation of slots is independent from the assignment of traffic rights under bilateral air services agreements".[533] Chapter 2 of this dissertation analyzed the concept, functions and basic notions of the slot coordination process. This section does not intend to repeat or analyze what has already been discussed.

Although not legally binding *per se*, the WASG is published in order to provide the global air transport community with a single set of standards as a best practice guide for the management of airport slots at coordinated airports.[534] It follows that the current slot coordination process is largely based on the guiding principles set out in the WASG. The WASG guidelines attempt to mitigate concerns over national treatment and non-discrimination by requiring the coordinator to allocate slots to airlines in a "neutral, transparent and non-discriminatory way".[535]

States that have adopted domestic regulations on slots often draw on the guidelines enshrined in the WASG, making the global air transport industry largely subject to the same regulations.[536] In some instances, WASG principles have been incorporated into national or regional (EU) law,[537] making the provisions directly enforceable by the State concerned.

Given that air transport is global in nature, harmonized slot coordination standards at both the origin and destination airports is needed to maximize an airport's efficient use of resources.[538] However, since air transport may also be subject to local regulations depending on local circumstances that are different from and/or additional to the principles incorporated in the WASG, slot coordination may work differently to varying extents in different parts of the world.[539]

The changes in the governance structure of the WASG are addressed in section 3.4.2, followed by the roles and functions of IATA, Airports Council International [hereinafter: ACI] and the

[531] *See* Mendes de Leon, *supra* note 48, at 560.
[532] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.7.2(i).
[533] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.1.1(j).
[534] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface.
[535] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 5.5.1(a).
[536] *See* ICAO, *supra* note 78, paragraph 4.1.
[537] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface.
[538] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 2.1.6.
[539] *See* European Commission, *supra* note 26, at 2.

World Wide Airport Coordinators Group [hereinafter: WWACG] as the three non-governmental organizations jointly responsible for administering any amendments to the WASG in section 3.4.3.

3.4.2 The governance structure of the WASG pre- and post-2020

Various non-governmental organizations have established guidelines on slot coordination. Before 2020, the guiding principles of the – now – WASG were published by IATA alone, as a result of consultations between an equal number of IATA member airlines and airport coordinators and facilitators in the IATA Joint Slot Advisory Group.[540] IATA first issued its guidelines under the title Scheduling Procedures Guide, followed by Worldwide Scheduling Guidelines from 2000 until 2010 respectively Worldwide Slot Guidelines from 2010 until 2020.[541]

For the first time ever and starting in 2016, airport representatives participated in the consultation process that led to the 1st joint edition of the WASG in 2020.[542] This development was preceded by a meeting of the Economic Commission of ICAO as part of ICAO's 39th Assembly in Fall 2016, during which "the need to optimize the use of scarce capacity, particularly at capacity-constrained airports" was noted.[543] In response, IATA, ACI and the WWACG joined forces and agreed to collectively review the – then – Worldwide Slot Guidelines.[544] The so-called 'Worldwide Slot Guidelines Strategic Review' has been concluded in 2019, leading up to the first edition of the renamed Worldwide *Airport* Slot Guidelines in June 2020. The results of the Strategic Review have been presented at ICAO's 40th Assembly in Fall 2019.[545]

The wording of the document was changed to include 'Airport', hence the change in abbreviation from WSG to WASG. In order to remain up to date with industry and regulatory changes, the WASG are reviewed and revised on a regular basis by IATA, ACI and WWACG.[546] The revision process of the WASG takes place in the Worldwide Airport Slot Board [hereinafter: WASB], a forum where an equal number of appointed airline, airport and coordinator representatives can meet to discuss issues and future trends of common interest. The WASB is furthermore responsible for addressing the development of amendments to the WASG and to provide guidance on slot-related matters.[547] All changes to the WASG are agreed by the WASB, ensuring that any amendments cannot be adopted unilaterally by any industry group.[548]

3.4.3 The roles and functions of IATA, ACI and WWACG

Unlike ICAO, IATA, ACI and the WWACG are not intergovernmental bodies, but private organizations with a representative function of airlines, airports and coordinators and facilitators. With their wide range of members from numerous States around the world, they

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[540] IATA, *Worldwide Slot Guidelines (WSG) Edition 10* (2019), at 2.1.3.
[541] The 1st edition of the 2011 Worldwide *Slot* Guidelines supersedes the 21st edition of the Worldwide *Scheduling* Guidelines, *see* International Air Transport Association (IATA), *Worldwide Slot Guidelines (WSG) Edition 10* (2019), *supra* note 8.
[542] *See* Odoni, *supra* note 61, at 19.
[543] *See* ICAO, *supra* note 204, paragraph 39.30.
[544] *See* Ribeiro et al., *supra* note 133, at 33.
[545] *See* ICAO, A40-WP/275, *Agenda item 32: Progress report on airport slot allocation* (2019).
[546] *See* ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface.
[547] *See* Worldwide Airport Slot Board (WASB), Terms of Reference I.1 (March 2020), *available at* https://www.iata.org/contentassets/c1d7626d7175462ab0fc527c9e2937ce/wasb-tor-2020.pdf (last visited November 10, 2021).
[548] *See* International Air Transport Association (IATA), Annex 12.1 – Overview of Amendments to WSG Edition 10, *available at* https://www.iata.org/contentassets/4ede2aabfcc14a55919e468054d714fe/wasg-annex-12.1.pdf (last visited November 11, 2021).

occupy an important place in the world of international air transport. IATA currently represents 290 airlines from 120 States,[549] ACI serves 701 members operating 1,933 airports in 183 States,[550] and the WWACG represents 103 coordinators responsible for a total of 385 airports.[551] Like ICAO, IATA, ACI and the WWACG are all non-governmental and non-profit organizations headquartered in Montreal with a number of regional offices throughout the world.[552]

IATA is by far the oldest organization of the three. It was established in April 1945 to provide technical support to ICAO and to adopt industry standards in the field of commercial and economic regulation where the Convention had failed to do so.[553] Given that the Convention did and still does not regulate slot coordination directly, as to which *see* section 3.1.4.3, IATA seems to have bridged the gap at the time by formulating the key provisions for slot coordination in the – then – Scheduling Procedures Guide, as to which *see* section 3.4.2. Through IATA's Scheduling Procedures Guide, the industry agreed that airlines should be required to have a slot for each flight to or from a congested airport and developed worldwide guidelines.[554]

From 1945 to the late 1980s, IATA's centerpiece of activities concerned the organization of the IATA Traffic Conferences.[555] At these conferences, IATA recommended international air fares and rates for scheduled international air services to governments and regulators. It follows that IATA dealt directly with one important commercial aspect of international air services in which the Convention had failed, to wit airline pricing.[556] At the time, IATA has been perceived as quasi-governmental due to many of its members being fully or partially State-owned, and because its Traffic Conference functions were largely performed pursuant to delegation by States through their bilateral ASAs. It follows that IATA maintained close ties with the government authorities of Member States.[557]

The significance of the Traffic Conferences started to decline when air transport deregulation and liberalization came around in the late 1970s and 1980s. Moreover, with the privatization of airlines, fewer members were State-owned, and IATA had become more private and more commercial in nature. IATA commenced to develop commercial products and services in addition to its traditional trade association activities. Nonetheless, IATA's recommendations to governments, ICAO and other international organizations are always received with due respect and consideration.[558] Moreover, the IATA Slot Policy Working Group is established to provide guidance to IATA in the implementation of WASB proposals to amend the WASG, and

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[549] *See* International Air Transport Association (IATA), Fact Sheet (October 2021), *available at* https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet---iata/ (last visited November 10, 2021).
[550] *See* Airports Council International (ACI) World, About ACI, *available at* https://aci.aero/about-aci/ (last visited November 10, 2021).
[551] *See* World Wide Airport Coordinators Group (WWACG), WWACG Members & Associate Members across the world, *available at* http://www.wwacg.org/FMapSearch.aspx (last visited November 11, 2021).
[552] *See* Haanappel, *supra* note 356, at 30.
[553] *See* Milligan, *supra* note 14, at 2.2.1.
[554] *See* Mott MacDonald, *supra* note 63, at 2-1.
[555] At IATA's first Annual General Meeting of airlines held in Montreal in October 1945, the organization adopted Provisions for the Regulation and Conduct of the IATA Traffic Conferences, currently known as the Provisions for the Conduct of the IATA Traffic Conferences. *See* Haanappel, *supra* note 356, at 33.
[556] *Id.,* at 31.
[557] *Id.,* at 34.
[558] In Council of State, *KLM v. Airport Coordination Netherlands* [2019] ECLI:NL:RVS:2019:1368, KLM used a clarification of the IATA Slot Policy Working Group [hereinafter: SPWG] dated 30 January 2018 in its appeal to the Dutch Council of State. In part because of the clarification issued by the SPWG, the Council ruled KLM's appeal to be successful. *See infra* Chapter 5, section 5.3.2 (providing more information on the specific case between KLM and Airport Coordination Netherlands).

to provide guidance on industry scheduling and slot matters to the office of the IATA Director General.[559]

Although ACI and WWACG do not have a history in supporting commercial and economic regulation equal to that of IATA,[560] both organizations have established themselves as strong, reliable and cooperative representative platforms to their members, intergovernmental organizations such as ICAO and the EU, as well as to governments and regulators. This is illustrated by their participation in the publication of the WASG as of 2020,[561] in which IATA, ACI and the WWACG all have an equal role and equal voice.[562]

Like IATA, ACI regularly provides policy briefs and best practices in various areas linked to their objectives,[563] including but not limited to policy changes on airport slots, charges and regulation and safety, security and the environment to its members and intergovernmental organizations, such as ICAO and the EU.[564] The ACI World Expert Group on Slots consist of representatives from all world regions, including representatives who are also on the WASB, and provides strategic and technical guidance to ACI World on the development of policies on slot coordination.[565] The WWACG acts along the same lines and publishes best practices and other relevant information to coordinators around the world, including their regional offices.[566]

3.4.4 Concluding remarks

Although the joint oversight of the WASG by ACI, IATA and WWACG marks a step in the right direction to reflect the global and intertwined nature of international air transport with various actors involved, the fundamental WASG cornerstones and guidelines currently in use date back to well before 2000 when the guidelines were still administered by IATA alone, and when coordinators were still closely affiliated with airlines and governments. Although a Strategic Review of the guidelines contained in the WASG has taken place in parallel to a revision of the governance structure between 2016 and 2019, it only brought marginal, *id est* merely textual, changes, as well as a change in objectives.[567]

The key target of widespread criticism from leading academics, competition authorities and industry professionals on the slot regime to date, to wit the principle of historic precedence, which is said to function as a significant barrier to airport access,[568] is still upheld. Maintaining the *status quo* appears to fit IATA's position going into the Strategic Review, describing it as

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[559] *See* International Air Transport Association (IATA), Slot Policy Working Group (SPWG) Terms of Reference, *available at* https://www.iata.org/contentassets/c1d7626d7175462ab0fc527c9e2937ce/spwg-tor-2019.pdf (last visited January 6, 2021).

[560] ACI was created in 1991 in the wake of air transport deregulation and liberalization as the first worldwide association to represent the common interests of airports and to foster cooperation with partners throughout the air transport industry, followed by the WWACG in 2004. *See* Airports Council International (ACI), Overview, *available at* https://aci.aero/about-aci/overview/ (last visited November 11, 2021).

[561] Until 2019, the WASG was published by IATA alone, *see* section 3.4.2.

[562] *See* WASB, *supra* note 547.

[563] A main objective of ACI is to maximize the contributions of airports to maintaining and developing a safe, secure, environmentally compatible and efficient air transport system, *see* ACI World, *supra* note 550.

[564] *See* ACI World, *supra* note 560.

[565] *See* Airports Council International (ACI) World, Terms of Reference of the Expert Group on Slots, *available at* https://aci.aero/wp-content/uploads/2021/09/EGS-ToR.pdf (last visited November 11, 2021).

[566] *See* World Wide Airport Coordinators Group (WWACG), The officially registered purpose of WWACG, *available at* http://www.wwacg.org/FPage.aspx?id=22 (last visited November 11, 2021) and World Wide Airport Coordinators Group (WWACG), How is the WWACG organized?, *available at* http://www.wwacg.org/FPage.aspx?id=6 (last visited November 11, 2021).

[567] For a list of changes to the WSG, *see* IATA, supra note 548. For an analysis of the change in objectives, *see* Chapter 2, section 2.1.3.

[568] *See* Chapter 2, section 2.1.4 for an overview of authors expressing criticism.

> ". . . the ongoing process of enhancing the existing WSG, not rewriting from scratch, to ensure it remains the global, single slot standard for years to come – a major undertaking for 2017/18."[569]

IATA does not specify why the document would not be able to function as global, single slot standard if a review from scratch would have been undertaken. Despite widespread criticism, however, the WASG does describe quite clearly the details and rules of how the slot coordination process should work, allowing for a more or less universal approach by slot coordinators around the world. The existence of grandfather rights also acknowledges the investments made by airlines in the development of their fleet and networks and ensures the stability and continuity of international air transport services.

Given the changing market realities air transport has had to cope with since the key principles in the current WASG were first introduced, it may in fact be more logical to identify time-conscious objectives and conduct a wholesale review feeding into the newly identified objectives of the WASG. At the time, international air traffic was still heavily regulated and dominated by the so-called 'flag carriers', often owned by their respective States. As illustrated in Chapter 2 of this dissertation, this structure has undergone drastic changes, which renders it questionable whether the key principles of the WASG are fit for the newly identified objectives they are designed to serve, including the facilitation of consumer choice, improving connectivity, the protection of the environment, and balancing airport access for existing and new airlines.[570]

3.5 Concluding remarks

At the time the Convention was drafted, the problem of airport congestion did not exist, and the drafters were primarily concerned with questions related to safety and technical aspects of air transport.[571] As such, the Convention and its 19 Annexes fail to provide a binding global framework for the economic regulation of air transport, including airport access and henceforth slot coordination.[572] Although ICAO has produced guidance documents on slot coordination, often with reference to the WASG, these do not equate to binding and uniform rules or procedures on slot coordination for States and industry stakeholders to use.

Provisions of the Convention, however, affect slot coordination via Article 1 in conjunction with Articles 2, 5, 6, 11, 15 and 68 of the Convention,[573] all of which are attributed legal force because of their status as treaty law. Slot coordination is part of a broader capacity allocation process and is inextricably linked to other parts of the process, including airport charges pursuant to Article 15 of the Convention and the exchange of traffic rights on the basis of Article 6 of the Convention.[574] Also, the *equality of opportunity, national treatment* and *non-discrimination* principles vested in the Preamble and Article 11 respectively Article 15 of the Convention are relevant for slot coordination.

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[569] *See* Ribeiro et al., *supra* note 133, at 33. The IATA paper in which this statement was made is no longer available online.
[570] *See* Chapter 2, section 2.1.3 of this dissertation for a discussion on the general and specific objectives of slot coordination, some of which have only recently been added into the first edition of the WASG without an accompanying wholesale reform of the documents' key principles.
[571] *See* NERA Economic Consulting, *supra* note 5, at 225.
[572] *See* Hobe, *supra* note 328, at 38.
[573] *See* García-Arboleda, supra note 381, at 573.
[574] *See* Forsyth and Niemeier, *supra* note 273, at 128.

There appears to be a complex and delicate relationship between a State's jurisdictional powers resulting from the principle of complete and exclusive sovereignty on the one hand, and the national treatment and non-discrimination principle on the other hand. The Convention upholds all three principles in Articles 1, 11 and 15, yet States may still invoke their sovereign rights when granting traffic rights to State A on less favorable conditions compared to the conditions it has granted to State B, thus differentiation is allowed under Article 11. Therefore, a State or a regional authority may not treat the national airline in the same way as it treats foreign airlines across the range of all ASAs a State has concluded.[575]

In slot coordination, a similar relationship can be observed. Since Article 15 of the Convention may be applied to the process of slot coordination, States that have ratified the Convention are obliged to ensure that coordination decisions are made in a non-discriminatory manner and irrespective of nationality. Consequently, States must adhere to the principles of national treatment and non-discrimination in their rules and procedures on slot coordination.

In the absence of ICAO rules on the matter, the WASG provides the global air transport community with a single set of standards as a best practice guide for the management of airport slots at coordinated airports,[576] although again not legally binding *per se*. States or regional authorities that have adopted their own regulations on slots, such as the EU Slot Regulation, often draw on the principles of the WASG, making the global air transport industry largely subject to the same regulations.[577] ICAO emphasizes that its contracting States should adhere to the legal framework for slot coordination, comprising of the Convention, obligations under ASAs as well as regional and national rules for the coordination of slots.[578]

Much water has flown under the bridge since the Convention was drafted in 1944 and since the inception of the key principles governing slot coordination.[579] As capacity falls short of demand at more and more airports, the principles of the Convention and the WASG have more impact than they did at the time they were conceived. The lack of slots experienced to date is increasingly pressurizing inter-State relations.[580]

After all, the way in which slots are coordinated relates to the reciprocal concession of rights by States to allow their designated carriers to operate international scheduled air services under Article 6 of the Convention, or based on other arrangements. The impossibility for an airline to be allocated slots, even though it possesses the required traffic rights, may frustrate bilateral relations under ASAs as to which *see* section 3.3.4 above.[581] ASAs generally do not contain explicit references to slots. ICAO has drafted a model clause, but it appears to fall short of providing a constructive solution to the problem at hand for the reasons mentioned in section 3.2.5.

Although the slot regime set forth by the WASG very much welcomes competitive entry in spirit,[582] in practice competitors are regularly not able to enter a market due to the inability

[575] *See* Garcia-Arboleda, *supra* note 328, at 259-261.
[576] Paired with the changed governance structure in 2020, the WASG came under joint supervision of airports, airlines and coordinators with an equal voice for all industry groups. As addressed in section 3.4.2, the WASG were administered by IATA alone until 2020.
[577] *See* ICAO, *supra* note 78, paragraph 4.1. Notable exceptions are the US and China, as to which *see infra* Chapter 4, sections 4.5 and 4.6.3.
[578] *Id.,* paragraph 3.2.
[579] *See* Abeyratne, *supra* note 309, at 481; Garcia-Arboleda, *supra* note 328, at 260.
[580] *See* García-Arboleda, supra note 381, at 573.
[581] *Id.,* at 574.
[582] The specific objectives of the WASG list, for example, the enhancement of competition at congested airports and the balancing of airport access opportunities for existing and new airlines, *see* also Chapter 2, section 2.1.3.

to acquire airport slots.[583] The shift to liberalized 'Open Skies' agreements imply that in many markets, it is now the slot availability and not the traffic rights that have the greatest potential for causing inefficiencies.[584] Von den Steinen (2006) stressed that we need to understand that "[O]pen [S]kies will not remain open if the ground is closed".[585]

Chapter 4 turns attention to the process of slot coordination in selected jurisdictions, and how the binding principles set forth by the Convention, including the principles of equality of opportunity, national treatment and non-discrimination, are reflected in these specific legal regimes for slot coordination. The EU rules on slot coordination will be the primary object of analysis, along with several other jurisdictions such as the US, Australia, China and jurisdictions in Latin America, albeit these will be considered to a lesser extent. Chapter 4 also considers if and to what extent these specific legal regimes alleviate the issues identified in Chapter 2.

[583] *See* García-Arboleda, supra note 381, at 577.
[584] *See* NERA Economic Consulting, *supra* note 5, at 52.
[585] *See* Von den Steinen*, supra* note 12, at 172.

4 CHAPTER FOUR

Slot coordination in selected jurisdictions

4.1 Objectives and application of EU Regulation 95/93, as variously amended

4.1.1 The specific background and raison d'être of the EU regime on slot coordination

The reason for including dedicated sections on European Union [hereinafter: EU] regulation for slot coordination is primarily because of the impact of EU law on European and international aviation since the 1980's, with the fall of the "iron curtain".[586] The EU began to be particularly active in air transport as of 1987,[587] when the EU demonstrated how States can establish a fully integrated cross-border air transport market "with regulatory convergence without foregoing their sovereignty", an occurrence which has not been seen anywhere in the world before.[588] In other words, creating the internal air transport market is the result of the sovereign decision of individual Member States to attribute powers to the EU as the regional regulator and accept a common regulatory framework replacing national regulations.[589]

EU Regulation 95/93, as amended,[590] [hereinafter: the Slot Regulation] constitutes an essential element of the European legislation underpinning the completion of the internal air transport

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[586] *See* Haanappel, *supra* note 356, at 36.
[587] *Id.,* at 37.
[588] *See* Dettling-Ott, *supra* note 362, at 232. *See* also Chapter 3, section 3.1.4.2 on the principle of complete and exclusive aerial sovereignty.
[589] The EU is a customs union and free trade area, *id est* the free movement of goods, people, companies and capital across State borders, comprised of – now – 27 Member States. Through the Treaty on European Union (Maastricht, 7 Feb. 1992), 92/C 191/01 [hereinafter: TEU] signed in 1992, the European Economic Community [hereinafter: EEC] – which was established by the Treaty establishing the European Economic Community (Rome, 25 Mar. 1957) in 1957 – was renamed the European Community [hereinafter: EC]. From 1 December 2009 on, the Treaty on the Functioning of the European Union, OJ C 326 [hereinafter: TFEU] replaced the TEU and the 'common market' became the 'internal market'. Article 119 TFEU provides the following: "The activities of the Member States and the Union shall include, as provided in the Treaties, the adoption of an economic policy which is based on the close coordination of Member States' economic policies, on the internal market and on the definition of common objectives and conducted in accordance with the principles of an open market economy with free competition." The EEC initially comprised of 6 Member States and has expanded to include a total of 27 EU Member States as of 1 January 2021. Members include Belgium, France, Germany, Italy, Luxembourg, Netherlands, Denmark, Ireland, Greece, Spain, Portugal, Austria, Finland, Sweden, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Bulgaria, Romania and Croatia. *See*, among others, Milligan, *supra* note 14, at 3-7 and Dettling-Ott, *supra* note 362, at 224.
[590] EU Regulation 95/93, as amended, *supra* note 47. Since its inception in 1993, the Slot Regulation was amended by EU Regulation 894/2002 with the aim of temporarily suspending the use-it-or-lose-it rule following the terrorist attacks of 11 September 2001 in the US, EU Regulation 1554/2003 with the aim of temporarily suspending the use-it-or-lose-it rule following the Iraq war and the outbreak of the SARS epidemic, EU Regulation 793/2004, EU Regulation 545/2009 with the aim of temporarily suspending the use-it-or-lose-it rule following the financial recession, EU Regulation 2020/459 with the aim of suspending the use-it-or-lose-it rule following the outbreak of

market in 1997. Since the establishment of the internal air transport market, the Slot Regulation has provided the EU with a legally binding system for slot coordination to give substance to the freedom to provide intra-European air services.[591]

The subject of slot coordination is not dealt with directly by any other provisions in EU law,[592] although EU Regulation 1008/2008 makes references to the coordination of slots.[593] The only other EU legislation referenced by the Slot Regulation's Preamble is competition legislation, in particular Articles 101 and 102 of the Treaty on the Functioning of the EU[594] [hereinafter: TFEU] and EU Regulation 139/2004 of 20 January 2004 on the control of concentrations between undertakings[595] [hereinafter: the Merger Regulation].[596] Prominent authors have commented on the Slot Regulation and its application in practice, including Odoni (2020), Finger et al (2019), Guiomard (2018), Haylen and Butcher (2017), European Parliamentary Research Service (2016), Gillen and Starkie (2015), Kociubínski (2014), Mendes de Leon (2013), García-Arboleda (2013), Naumann (2012), Brecke (2011), Steer Davies Gleave (2011), NERA (2004), and Haanappel (1994). The below sections discuss the legal basis, application and objectives of the Slot Regulation.

4.1.2 The legal basis and application of EU Regulation 95/93

Air transport retains a unique position within the legal framework of the EU. Article 100(2) TFEU[597] mentions that measures on air transport policy are to be taken as and when the EU Council so decides:

> "The European Parliament and the Council, acting in accordance with the ordinary legislative procedure, may lay down appropriate provisions for sea and air transport. They shall act after consulting the Economic and Social Committee and the Committee of the Regions."[598]

Hence, the Council has discretionary powers when it comes to air transport, which should be exercised in accordance with the general rules of the TFEU.[599] All air transport legislation in

COVID-19 and EU Regulation 2020/1477 and EU Regulation 2021/250 to further address the consequences caused by the COVID-19 pandemic, the latter of which also empowers the European Commission to adopt delegated acts to extend the period of application of the slot relief rules until 21 February 2022. EU Regulation 793/2004 was the only amendment to introduce structural changes to the Slot Regulation not comprising of a temporarily amended use-it-or-lose-it rule.

[591] *See* European Commission, *supra* note 26, at 2.

[592] *Id.,* at 4.

[593] *See infra* Chapter 4, section 4.4 (discussing EU Regulation 1008/2008 and its components relevant to slot coordination).

[594] TFEU, *supra* note 589.

[595] EU Regulation 139/2004, *supra* note 28.

[596] EU Regulation 95/93, as amended, *supra* note 47, recital 17 still refers to Articles 81 and 82 of the Treaty establishing the European Economic Community of 1957 and EU Regulation 4064/89, both predecessors to Articles 101 and 102 TFEU and EU Regulation 139/2004 respectively. *See infra* Chapter 5, section 5.7 (providing concise analysis on the relationship between slot allocation and Articles 101 and 102 TFEU and the Merger Regulation).

[597] Previously Article 80(2) of the Treaty establishing the European Economic Community of 1957, and Article 84(2) TEU.

[598] TFEU, *supra* note 589, Article 100(2).

[599] The Council is to be distinguished from the European Council, which does not negotiate or adopt EU laws, but sets the EU's policy agenda and priorities. The EU has its own legal system and institutions for law-making, law enforcement and judicial protection. Regarding the division of powers between other EU bodies, the Commission is the EU's politically independent executive arm, whose role is to propose legislation for adoption by the Parliament and the Council, for example in the field of competition law. The Commission is also tasked with ensuring that EU law is properly applied in all the EU's Member States. As such, the Commission also legislates, however only on the basis of a mandate from the European Council and the European Parliament. In areas of trade policy and the

the EU, including legislation on slots, is based on Article 100(2) TFEU and this legal basis has neither been changed nor challenged. Correspondingly, the European Parliament [hereinafter: the Parliament] and the Council confirmed this provision to be the legal basis for EU Regulation 793/2004, amending EU Regulation 95/93, in the Regulation's preamble.[600]

At the time of the adoption of the Slot Regulation, Member States were anxious to preserve the continuity and practical efficiency of the current Worldwide Airport Slot Guidelines [hereinafter: WASG] and were unwilling to dilute 'grandfather rights', in particular because of the advantages offered to national carriers.[601] Hence, the guidelines and procedures laid down in the WASG served as the basis for the original version of the Slot Regulation, which entered into force on 18 January 1993. It follows that the Slot Regulation draws on the key principles enshrined in the WASG, which have been addressed in multiple sections of Chapter 2.[602] Also, because of diverging views of Member States, the Slot Regulation was "drafted in a deliberately ambiguous fashion, so that the rules meant different things to different people", as mentioned by a former partner of PwC, a consultancy firm which performed a study for the European Commission [hereinafter: the Commission] in 2000 on certain aspects of the Slot Regulation.[603]

Also, to mitigate concerns on the side of the Commission that the framework of grandfather rights could be deemed anti-competitive, the Internatioanl Air Transport Association [hereinafter: IATA] modified its then Scheduling Procedures Guide to introduce the requirement that a portion of available slots should go to new entrant airlines, widely known as the new entrant rule today.[604] The current WASG guidelines have since then required a proportion of available slots to be set aside for use by new entrant carriers.[605]

The Slot Regulation is directly applicable to slot-controlled airports in the European Economic Area, which comprises the now 27 EU Member States and Iceland, Norway and Liechtenstein. It is also, for the greater part, applicable in Switzerland pursuant to the provisions of the EU-Switzerland Agreement of 1999, as variously amended.[606] In the 2002 '*Open Skies*-judgments', the Court of Justice of the EU [hereinafter: CJEU] confirmed that it is undisputed that the Slot Regulation also applies, subject to reciprocity, to non-EU carriers accessing EU airports. Thus, the Slot Regulation also has an external dimension and is liable to affect the bilateral relationship between EU Member States and non-EU States.[607]

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negotiation of international agreements such as ASAs with third countries on behalf of the EU, the Commission represents the EU internationally. *See* Milligan, *supra* note 14, at 8.

[600] EU Regulation 95/93, as amended, *supra* note 47, Preamble.

[601] *See* Boyfield et al., *supra* note 13, at 33. The principle of 'grandfather rights', also referred to as 'historic precedence', is introduced in Chapter 2, section 2.2.3.

[602] *See* European Commission, *supra* note 26, at 2; Odoni, *supra* note 61, at 20; Balfour, *supra* note 92, at 1030; Boyfield et al., *supra* note 13, at 33; Jörg Bauer, 'Do Airlines Use Slots Efficiently?', in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (2008); Tom Bass, 'The role of market forces in the allocation of airport slots' in Keith Boyfield, David Starkie, Tom Bass et al. (eds), *A market in airport slots* (2003), at 81.

[603] *See* Boyfield et al., *supra* note 13, at 34; PricewaterhouseCoopers, *supra* note 93.

[604] At the time, the WASG guidelines were collected in the so-called 'IATA Scheduling Procedures Guide', as to which *see* Chapter 3, section 3.4.2. *See infra* Chapter 5, section 5.5 (providing further analysis as to whether the new entrant rule is still fit for purpose).

[605] *See* Gillen and Starkie, *supra* note 59, at 153.

[606] Agreement between the European Community and the Swiss Confederation on Air Transport (Luxembourg, 21 Jun. 1999), OJ L 114, *entered into force* 1 Jun. 2002.

[607] The external dimension of the Slot Regulation has been acknowledged by the CJEU in its 2002 '*Open Skies* judgments', *supra* note 461, where the court held the following in paragraph 120: ". . . Regulation No. 95/93 on common rules for the allocation of slots at Community airports applies, subject to reciprocity, to air carriers of non-member countries, with the result that, since the entry into force of that regulation, the Community has had exclusive

The CJEU furthermore held that the conclusion of air services agreements [hereinafter: ASAs] with third States related to the allocation of slots is a matter of exclusive external competence and that Member States are no longer free to negotiate this matter with third States.[608] Practical experience shows that this exclusive external competency has not been used by the EU in its external air transport relations.[609]

4.1.3 Aims and objectives of EU Regulation 95/93

Although the Slot Regulation does not explicitly include a list with objectives, the Explanatory Memorandum to the 2011 proposal for an amendment of the Slot Regulation mentions a "strengthened and effectively implemented slot allocation and use" at airports for which demand exceeds supply of capacity as a clear objective that the Slot Regulation strives to fulfill.[610] The Commission deems said objective essential to give substance to the freedom for European airlines to provide intra-EU air services.[611]

In the context of the imbalance between the supply and demand of airport capacity as extensively elaborated in Chapter 2, sections 2.3. and 2.4, the Slot Regulation defines the rules for the allocation of scarce slots at EU airports. It ensures that scarce airport capacity is used in the "fullest and most efficient way" and that slots are distributed in an "equitable, non-discriminatory and transparent" way.[612]

Depending on the local situation, the Slot Regulation may require further specification in national laws of the EU Member States through the adoption of local operational rules pursuant to Article 19(1) of EU Regulation 1008/2008, local guidelines and/or local procedures, although it is imperative that the non-discrimination, or national treatment, principle as embodied in the Convention are complied with by national authorities.[613] The leeway given to Member States and coordinators to adopt local operational rules, local guidelines and/or local procedures illustrates that the allocation of slots is only a matter of exclusive external competence of the EU in the conclusion of ASAs, and not so much a matter of exclusive internal competence, as to which *see* section 4.3.5 below. Local guidelines and local procedures are subject to extensive analysis in section 4.3.

An overview of the legislative history of the Slot Regulation and perspectives for reform is given in section 4.1.4, below. Furthermore, examples of local guidelines and local procedures adopted under the Slot Regulation are provided in section 4.3.3, as well as an analysis of the Regulation's principles and contents and how these compare to the guidelines and contents of the WASG in section 4.2.

4.1.4 The legislative history of EU Regulation 95/93 and perspectives for reform

The Slot Regulation has been amended several times. Over a decade since its entry into force, the Slot Regulation was amended in several important respects by EU Regulation 793/2004.[614]

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competence to conclude agreements in that area with non-member countries". *See*, inter alia, Case C-467/98 *Commission v. Kingdom of Denmark,* ECLI:EU:C:2002:625 [2002] at paragraph 106. *See* also Mendes de Leon, *supra* note 48, at 560.

[608] *See*, *inter alia*, Case C-471/98, Commission of the European Communities v. Kingdom of Belgium, ECLI:EU:C:2002:628, at paragraph 120.

[609] *See* Mendes de Leon, *supra* note 48, at 561.

[610] *See* European Commission, *supra* note 26, paragraph 13.

[611] *Id.*, paragraph 38.

[612] *See* European Parliamentary Research Service, *supra* note 115, at 13.

[613] *See* Mendes de Leon, *supra* note 48, at 560.

[614] *Id.*, at 554.

The amendments were aimed at improving the efficient use of scarce capacity at congested airports in the EU, while at the same time not fundamentally changing the principles built around grandfathered slots on which the existing system for slot allocation was based.[615] Other amendments, primarily relating to a temporary suspension of the use-it-or-lose-it rule explained in Chapter 2, section 2.2.3, are set out in footnote 161.

The Preamble to EU Regulation 793/2004, amending EU Regulation 95/93, reads that "[e]xperience has shown that Council Regulation (EEC) No 95/93 should be strengthened to ensure the fullest and most flexible use of limited capacity at congested airports". Eventually, the 2004 amendment only brought minor corrections with regard to definitions and did not introduce groundbreaking novelties. The introduction of sanctions for slot misuse constituted one of the most notable changes observed in 2004.[616] Moreover, the term "capacity available" was changed to "coordination parameters" in Article 6(1) and should take note of all "technical, operational and environmental constraints". Hence, the term "available capacity" is not restricted to physical capacity only.[617] The 2004 amendment has been described as being "largely housekeeping in nature, with some tightening on language, roles and requirements".[618]

Nevertheless, Commission proposals for additional amendments did exist, but were not endorsed. One proposed amendment that did not make it into the 2004 version of the Slot Regulation was to explicitly allow Member States to impose restrictions on the minimum size of aircraft that is used for a slot in order to allow for a more efficient use of capacity.[619] Moreover, in line with European policy on revitalizing railways, it was proposed to introduce additional criteria whereby applications for intra-EU routes would receive lower priority where other satisfactory modes of transport exist. The striking of a balance between short and long-haul operations were also part of the proposed additional criteria that were not adopted.[620]

The Commission asserted that more fundamental reforms with regard to the coordination process itself, including the introduction of secondary slot trading, were being reserved for a 'second stage' of modifications.[621] After several rounds of consultations between 2007 and 2009, however, a consolidated text, not comprising any changes to the provisions of the Slot Regulation, was the only thing that was published.[622] In 2011, a more in-depth proposal to revise the Slot Regulation was tabled as part of the Commission's "Better Airports" Package[623] based on research done by consultancy firm Steer Davies Gleave (2011), leading up to a formal proposal to amend the Slot Regulation by the Parliament on 12 December 2012 and repealing the regulations referred to above.[624] A few main changes included, *inter alia,* the introduction

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[615] *See* European Commission, *supra* note 208, at 2.
[616] *See* Brecke, *supra* note 491, at 200.
[617] EU Regulation 95/93, as amended, *supra* note 47, Article 6(1).
[618] *See* C. Smith, *Killing the Golden Goose: Assessing the Benefits and Pitfalls of Airport Slot Auctions, and the Consequences for Hub Development in Europe.* Presentation for the 11th Global Airport Development conference (2004).
[619] *See* European Commission, *supra* note 54, paragraph 13.
[620] *Id.,* paragraph 16.
[621] *See* European Commission, *supra* note 54, paragraph 12; Mott MacDonald, *supra* note 63, at 2-2.
[622] *See* Haylan and Butcher, *supra* note 116, at 22.
[623] The "Better Airports" Package refers to a comprehensive set of measures to help increase the capacity of EU airports so as to reduce delays and help improve the quality of service offered. *See* European Commission, "Better Airports" Package Launched, *available at* https://ec.europa.eu/commission/presscorner/detail/en/IP_11_1484 (last visited November 11, 2021).
[624] In its first reading of the 2011 proposal to revise the Slot Regulation, the Parliament concluded that "[t]he slot allocation system established in 1993 does not ensure the optimum allocation and use of slots and thus of airport capacity". The Parliament also concluded that "[i]t is therefore necessary to modify the slot allocation system at the Union's airports", *see* European Parliament, Legislative Resolution of 12 December 2012 on the Proposal for a Regulation on Common Rules for the Allocation of Slots at EU Airports (Recast), 2011/0391(COD), Preamble.

of secondary slot trading at EU airports to encourage slot mobility, a broadened definition of the new entrant rule to allow more airlines to fall into its scope and amendments to the 80/20 rule by increasing the usage threshold.[625]

Despite its potential in remedying to some extent the mismatch between demand and supply of airport capacity at EU airports, the 2011 proposal remained deadlocked in the Council since 2013 until 2020 pending resolution of the disputed question over Gibraltar's status[626] and has yet to be adopted.[627] Alternatively, the Commission may consider drafting a new proposal in light of the fact that a decade has passed since the 2011 proposal first saw the light of day.

Regardless of whether the Commission decides to move forward with the existing proposal or to start anew, the need for a revision is widely supported by EU institutions. For instance, in its 2015 Aviation Strategy for Europe, the Commission urged the Council and the Parliament to swiftly adopt the 2011 proposal to the Slot Regulation to enable the optimal use of airport capacity and provide clear benefits to the EU economy.[628]

In turn, the Parliament reiterated the need to the Council and the Member States to make swift progress on, among others, the revision of the Slot Regulation in its resolution of 16 February 2017, designed to ensure an efficient use of capacity at congested airports, as well as to enhance fair competition and the competitiveness of operators.[629] Therefore, the Council is urged to take steps to move forward with existing revision plans. This urgency has been reinstated by the Commission in 2020 following the drafting of a second report by Steer Davies Gleave,[630] indicating that the debate on airport slots is still moving.

The need to keep pushing for amendments is emphasized by three major studies towards the effects of the EU slot rules and proposed amendments, which have all been conducted for the Commission over the years. All three studies – NERA (2004), Mott MacDonald (2006) and Steer Davies Gleave (2011) – had a different scope of analysis and their estimated impacts vary considerably. The common denominator is that they all identify shortcomings in the current administrative slot regime, under which slots are allocated by a slot coordinator rather than being market-determined by transactions between airlines, and pinpoint market-based mechanisms as the preferred method for slot coordination going forward.[631]

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[625] Other proposed changes include an increased focus on the transparency and independence of the slot coordination process in order to make the market work better, linking slot coordination to Single European Sky trajectory for smoother airspace and airport capacity management, increasing the minimum series length from 5 to 15 for the winter season and a removal of so-called 'local guidelines' allowing for tailored regimes for slot coordination taking into account local circumstances at the airport in question. *See* Steer Davies Gleave, *supra* note 69, at 223-277.

[626] A dispute between the UK and Spain over the sovereignty of Gibraltar, including the airport located in Gibraltar, continued to block all EU air transport legislation, including slot reform, until the issue was solved when the UK left the EU as a Member State.

[627] *See* European Parliament, *supra* note 74.

[628] *See* Communication from the Commission on an Aviation Strategy for Europe, COM(2015) 598 final, at 7.

[629] *See* European Parliament, *supra* note 74.

[630] The 2020 Steer Davies Gleave report is an updated version of their previous study in 2011 on how the current EU Slot Regulation is working and how the coordination system could be improved. Both studies were carried out under the supervision of the Commission. A broad range of stakeholders have been consulted in the process. At the time of writing, the updated Steer Davies Gleave report has not been released yet. It was set to be published in 2020 but was delayed due to the impacts of COVID-19 on the air transport industry.

[631] *See* Guiomard, *supra* note 70, at 130; Erwin von den Steinen, 'Formal Ownership and Leasing Rules for Slots' in Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al. (eds), *Airport Slots: International Experiences and Options for Reform* (2008), at 311. *See infra* Chapter 5, section 5.6 (concisely analyzing secondary slot trading as an instrument to flex the slot regime).

In keeping with current market realities, the European Parliamentary Research Service also stated in 2016 that the slot rules are deemed to be inadequate in view of current and future traffic, in particular because it is unlikely to see any major capacity upgrades at the majority of EU airports.[632] In the context of growing airport congestion and limited scope for airport capacity expansions, slots are a rare resource. The Parliament already acknowledged that access to such resources is of crucial importance for the provision of air services and to preserve competition within the internal air transport market.[633] The need for revision is reinforced through growing environmental concerns and the Green Deal as Europe's flagship initiative with the overarching aim of climate neutrality by the year of 2050, as to which *see* also Chapter 2, section 2.3.3.

4.1.5 The use and application of the non-discrimination principle 'in general' under EU Regulation 95/93

An important principle underpinning the Slot Regulation is that of non-discrimination on grounds of nationality or identity of air carriers. As the Commission has indicated in relation to national measures adopted under Article 19(2) of EU Regulation 1008/2008,[634] any restrictions adopted under that provision must comply with the general principles governing the freedom to provide air services as spelled out in CJEU case law, *see* also sections 4.4.2 and 4.4.3 on Traffic Distribution Rules [hereinafter: TDR's].[635] Those general principles go beyond the mere prohibition of any discrimination on grounds of nationality of the air carrier or as between destinations inside the EU.

When the Air Transport Package was completed in 1992, the Council considered that the absence of discrimination on grounds of nationality of the air carrier was not sufficient in view of the structure of the air transport sector in the Community to ensure the satisfactory working of the internal market in civil air transport and to ensure compliance with the principle of free market access. Consequently, the Council added the principle of non-discrimination on the basis of the identity of the air carrier, which was expressly referred to in the *Air Inter*-case.[636]

Thus, the principle of non-discrimination not only prohibits any form of discrimination based on the air carrier's nationality, but also any form of discrimination based on the identity of the air carrier. These two prohibitions are expressions of the general principle of equal treatment. According to consistent jurisprudence of the CJEU, this principle requires that comparable situations not be treated differently and different situations not be treated alike unless such treatment is objectively justified.[637]

Although this is not said with so many words in the Slot Regulation, the principle of non-discrimination also applies to the nationality or identity of the air carriers requesting slots. The prohibition of 'non-discrimination' should thus be understood as obliging the slot

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[632] *See* European Parliament, *supra* note 74. The growing 'Capacity Crunch' at EU airports has been addressed in Chapter 2, sections 2.3 and 2.4 of this dissertation.
[633] *See* European Parliament, *supra* note 624, recital 4.
[634] *See* European Commission, Commission Decision of 14 March 1995 on a procedure relating to the application of Council Regulation (EEC) No 2408/92 (Case VII/AMA/9/94 – *French traffic distribution rules for the airport system of Paris*), OJ L 162, paragraph 25.
[635] Case C-288/89, *Mediawet* [1991] ECLI:EU:C:1991:323; Case C-76/90, *Säger v. Dennemeyer* [1991] ECLI:EU:C:1991:331.
[636] Case T-260/94, *Air Inter v. Commission* [1997] ECLI:EU:T:1997:89, paragraph 112.
[637] Case C-133/09, *József Uzonyi v. Mezőgazdasági és Vidékfejlesztési Hivatal Központi Szerve* [2010] ECLI:EU:C:2010:563, paragraph 31; European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 87.

coordinator to apply national treatment.[638] Where a third country does not abide by the principles of non-discrimination and national treatment, "appropriate action may be taken to remedy the situation in respect of the airport or airports concerned", as to which see also Article 12 of the Slot Regulation.

The principle of non-discrimination holds that no discrimination between 'like' products from different trading partners may take place. In the words of the Commission: "Discrimination means differentiation of any kind without objective justification".[639] Thus, non-discrimination applies to like or competing products, as well as to non-like products to the extent that they are mutually substitutable. Applied to slot allocation, the principle of non-discrimination holds that the slot coordinator, who holds the exclusive and independent responsibility to allocate slots at EU airports, cannot discriminate between similar air services offered by different airlines.

Non-discrimination may also be secured by means of the harmonization of laws and by the principle of reciprocity, which holds that the same level of market access is specifically conceded between States.[640] The Slot Regulation is an example of where the EU has provided harmonized conditions for access to airports in terms of slots in the EU, although slot coordination is not regulated exclusively by the EU, as to which see section 4.3.5 below. Article 4(b), under 2, of the Slot Regulation requires that slots are coordinated in a "neutral, non-discriminatory and transparent way".[641] Moreover, the principle of reciprocity is vested in Article 12 of the Slot Regulation, which reads that a Member State may take measures against third States if that State does not grant EU air carriers treatment comparable to the treatment granted by the Slot Regulation in order to remedy the discriminatory situation.[642]

When slot coordination measures differentiate between air services, for instance as to traffic segments, it needs to be demonstrated that the measure is suitable and feasible, and that less intrusive alternatives are not reasonably available pursuant to the proportionality principle, as demonstrated in sections 4.4.2 and 4.4.3 below on the application and use of TDR's in the EU. In other words: there needs to be a proper relationship between ends and means.[643] The principle of non-discrimination is also opposed to any measure which produces, even indirectly, discriminatory effects in practice, even if they do not explicitly distinguish between nationality or identity.[644]

Moreover, even if national measures restricting the freedom to provide air services apply without distinction as to nationality or identity, they still need to be warranted by mandatory requirements in the public interest.[645] The Commission considered that the same reasoning

[638] *See* Mendes de Leon, *supra* note 48, at 555.
[639] Trade and Cooperation Agreement between the EU and the European Atomic Energy Community, *supra* note 485, at 222.
[640] *See* Matthias Oesch, *Commercial Treaties* (2014), paragraph 8.
[641] EU Regulation 95/93, as amended, *supra* note 47, Article 4(2)(a).
[642] EU Regulation 95/93, as amended, *supra* note 47, Article 12.
[643] *See*, for further information on the topic, Thomas Cottier and Matthias Oesch, *Direct and Indirect Discrimination in WTO Law and EU Law*, Working Paper (April 2011); Case C-292/97, *Karlsson and Others* [2000] ECLI:EU:C:2000:202, paragraph 45.
[644] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VI; European Commission, Commission Decision of 27 April 1994 on a procedure relating to the application of Council Regulation (EEC) No 2408/92, (Case VII/AMA/II/93 – *TAT – Paris (Orly) – London*), OJ L 12, paragraph 28; European Commission, Commission Decision of 27 April 1994 on a procedure relating to the application of Council Regulation (EEC) No 2408/92, (Case VII/AMA/IV/93 – *TAT – Paris (Orly) – Marseille and Paris (Orly) – Toulouse*), OJ L 127, paragraph 35.
[645] *See* European Commission, *supra* note 224, recital 24; European Commission, Commission Decision of 16 September 1998 on a procedure relating to the application of Council Regulation (EEC) No 2408/92 (Case

must be applied, *mutatis mutandis*, to any local operational rules applied by Member States under Article 19(1) of Regulation 1008/2008.[646]

4.1.6 Case law referring to EU Regulation 95/93, as amended

The author is aware of only one case brought to the CJEU under EU Regulation 95/93, *id est* a 2016 case between the Commission and the Portuguese Republic over the independence of the coordinator. In this case, the CJEU held that the coordinator must be both functionally and financially independent.[647] The functional and financial independence of the coordinator is subject to further discussion in Chapter 5, section 5.4.

Several cases relating to EU Regulation 95/93 have been brought before national courts. For instance, to secure the independence of the coordinator, the Italian Constitutional Court had in 2009 already prevented the regional government of Lombardy from upholding a law which allowed the regional government to participate in slot allocation decisions at airports in Lombardy.[648]

In the United Kingdom [hereinafter: UK], a judgment related to the provisional suspension of Monarch Airlines' AOC and the subsequent decision of UK-based coordinator Airport Coordination Limited [hereinafter: ACL] to deny Monarch Airlines slots for the Summer 2018 season was passed by the UK Court of Appeal in 2017,[649] as to which *see* Chapter 5, section 5.3.3. A related judgment was issued by the Dutch Council of State in 2019 in a case brought by KLM Royal Dutch Airlines against Airport Coordination Netherlands [hereinafter: ACNL] following the ceasing of operations by Malaysia Airlines at Amsterdam Airport Schiphol and the requirement ACNL imposed upon Malaysia Airlines to return the slots it held back to the slot pool.[650] This case is addressed further in Chapter 5, section 5.3.2.

In relation to secondary slot trading, which is subject to further discussion in Chapter 5, section 5.6 as a means to increase slot mobility, two cases are relevant: the 1999 *Guernsey*-case[651] by the UK High Court and a 2001 case issued by a Dutch court in summary proceedings between Dutch Bird and Transavia.[652] Whereas the judge in the former case ruled that slots may be traded as between carriers and accompanied by financial considerations, the Dutch court adopted a less liberal view on the meaning of Article 8(4) of the Slot Regulation, stating that private exchanges of slots would undermine the objectives of the slot coordination process and the position of new entrant carriers.[653] Deliberations on the legality of secondary slot trading are provided in Chapter 5, section 5.6.3.

In a judgment delivered by the Reyjkavík District Court in 2014 between Wow air and the Icelandic Competition Authority, Isavia and Icelandair, the Court clarified that complaints based on competition law considerations, in this specific situation relating to the transfer of slots between carriers, may be submitted directly to national competition authorities pursuant to Article 11 of the Slot Regulation. However, intervention from national competition

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VII/AMA/11/98 – *Italian traffic distribution rules for the airport system of Milan*), OJ L 337, under VII; Case C-288/89 (Mediawet), *supra* note 635, paragraphs 10-15.

[646] *See* European Commission, *supra* note 224, recital 24.

[647] Case C-205/14, *European Commission v. Portuguese Republic* [2016] ECLI:EU:C:2016:393, paragraph 62.

[648] Corte Costituzionale, Sentenza n. 18/2009, in tema di trasporto aereo nella Regione Lombardia *(in Italian)*.

[649] *Monarch Airlines v. Airport Coordination Limited*, *supra* note 45.

[650] *KLM v. Airport Coordination Netherlands* [2019], *supra* note 558.

[651] High Court of Justice, Queen's Bench Division, *Regina v. Airport Coordination Ltd ex parte The States of Guernsey Transport Board* [1999] All ER (D) 347.

[652] District Court of North Holland, 75565/KG ZA 01-349, *Dutch Bird v. Transavia Airlines* [2001] ECLI:NL:RBHAA:2001:AB2727.

[653] *Id.*

authorities, for instance through the imposition of remedies as addressed in Chapter 5, section 5.7, must be supported by "specific competition concerns based on restrictive practices, abuse of a dominant position or merger rules".[654]

Cases relating to the imposition of remedial commitments by the European Commission in, *inter alia,* merger, alliance and State aid cases are analyzed in Chapter 5, section 5.7.

4.1.7 Concluding remarks

The Slot Regulation follows closely the slot regime described in the WASG, the latter being more detailed and of a more practical nature compared to the Slot Regulation.[655] The WASG are not legally binding and also acknowledge in their Preface the right of each national regulator to derogate or regulate differently from the guidelines set in the WASG.[656] In the EU, since the establishment of the internal air transport market in 1997, the Slot Regulation has provided the EU with a legally binding system for slot coordination to give substance to the freedom to provide intra-European air services based on the principles of neutrality, non-discrimination and transparency.[657]

Mounting pressure of increased capacity shortfalls experienced at EU airports[658] has driven the Commission on several occasions to arrange amendments of the slot regime. The last substantial amendment dates back to 2004 when EU Regulation 793/2004 amended EU Regulation 95/93 in several respects.[659] An in-depth and formal proposal to revise the Slot Regulation on multiple structural levels was tabled in 2012 by the Parliament.[660] The proposal was eventually stalled in the Council pending resolution of the dispute between the UK and Spain over the sovereignty of Gibraltar.[661] The urgency to move forward with existing or new revision plans, including a revision of the Slot Regulation, has been reinstated by the Commission in 2020 and 2021 by labelling the revision of the Slot Regulation as a 'priority pending proposal' in the Commission's 2020 and 2021 Work Programme, illustrating that the debate on airport slots is still moving.[662]

4.2 A comparative analysis of similarities and differences between the formulation and practice of WASG principles vis-à-vis EU Regulation 95/93

4.2.1 Preliminary remarks

As previously mentioned in section 4.1.2, the administrative system for slot coordination provided by the Slot Regulation largely reflects the guidelines laid down in the WASG. The incorporation of the WASG into the Slot Regulation also came with certain adjustments, especially with regard to the way coordinated airports should be designated and, subsequently, the appointment of the coordinator. Moreover, there are differences in how both the supply-side and demand-side of slot coordination are approached.[663] The contents of the WASG have

[654] Judgment in Case E-18/14 *Wow air ehf. V. The Icelandic Competition Authority, Isavia ohf. And Icelandair ehf.* (Press release 18/2014).
[655] *See* European Commission, *supra* note 26, at 2; Odoni, *supra* note 61, at 20; Bauer, *supra* note 602.
[656] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface.
[657] *See* European Commission, *supra* note 26, at 2.
[658] *See* Chapter 2, sections 2.3 and 2.4.
[659] *See* section 4.1.4 for a brief overview of amendments.
[660] *See* European Parliament, *supra* note 624.
[661] *See* European Parliament, *supra* note 74.
[662] *Id.*
[663] The rules prescribing the capacity declaration (supply-side) and allocation (demand-side) process have been generally examined in Chapter 2, sections 2.2.2 and 2.2.3.

been introduced in multiple sections of Chapter 2, followed by a discussion of the legal status and governance structure of the WASG in Chapter 3, section 3.4.

The following sections provide an overview of differences in legal status of the WASG and the Slot Regulation as well as the level of detail contained in them, followed by an overview of similarities and differences of a few highlighted guidelines and principles set forth by respectively the WASG and the Slot Regulation.

4.2.2 Exemplification of legal status

As discussed in section 4.1.2, the provisions of the Slot Regulation are obviously directly applicable and therefore binding for all Member States, as opposed to the mere guidelines set forth in the WASG. The Slot Regulation was designed to give legal force to existing custom and practices provided by the WASG.[664] Therefore, the WASG serves *de facto* and *de iure* as a reference document for the slot coordination process at EU airports, with the exception of provisions that are in conflict with the EU Regulation.

Article 8(5) of the Slot Regulation provides the basis for this practice by stating that "the coordinator shall also take into account additional rules and guidelines established by the air transport industry worldwide or Community-wide". This provision can be understood as a reference to the WASG.[665] Application of the WASG is not possible when there is a conflict with the EU Regulation, which takes legal precedence.

4.2.3 Level of detail of substantive provisions

Another main difference between the provisions of the WASG and the Slot Regulation concerns the level of detail of the substantive provisions of the WASG, which is far greater than that of the Slot Regulation. The WASG includes relatively 'easy-to-follow' slot coordination rules and is, in some instances, resemblant of a handbook.[666] Where the Slot Regulation reflects the spirit in which the Slot Regulation was written in its Preamble as well as includes provisions on key aspects of slot coordination, the WASG take it a step further. For instance, the WASG explain what is understood by airport coordination in paragraph 1.1 and set forth general and specific objectives in paragraph 1.2. The WASG also provide an overview of relevant stakeholders in paragraph 1.3 and describe the presumed circumstances at the three categories of airports in paragraph 1.4.

As opposed to the Slot Regulation, the WASG include a calendar of coordination activities for two upcoming seasons,[667] which is to be followed by coordinators, airports and airlines worldwide. After all, slots at both ends – that is, airports – of a route are linked to one another, hence the coordination timelines at airports around the world are best set in parallel. The Slot Regulation only briefly refers to some of the coordination milestones in Article 10(3), but does not clarify them any further nor does it provide an overview of all activities on the calendar, such as the season start and end dates, when the Slot Conferences are taking place and when unused slots need to be returned for the purposes of calculating grandfather rights.

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[664] *See* Konstantinos Zografos, Yiannis Salouras and Michael A. Madas, *Dealing with the efficient allocation of scarce resources at congested airports*, 21 Transportation Research Part C: Emerging Technologies 1 (2012), at 247.
[665] *See* NERA Economic Consulting, *supra* note 5, at 6; Odoni, *supra* note 61, at 20.
[666] Though the WASG provides an extensive overview of the capacity declaration and slot allocation processes, it does not address all slot-related matters, for instance slot trading and procedures for reducing historic slots in case an airport's declared capacity were to fall short of the number of allocated (historic) slots. *See* Odoni, *supra* note 61, at 20.
[667] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 2.

The same approach is taken through the remainder of the documents. Where the WASG explain in detail how airports are designated, by whom and on the basis on which considerations,[668] the Slot Regulation only states that airports should be designated by the Member State in Article 3 after a capacity analysis has been carried out based on "commonly recognized methods", without specifying how the coordination parameters should be set.[669]

The WASG also address slot management at Level 1 and Level 2 airports, whereas the Slot Regulation is specifically tailored to slot coordinated Level 3 airports.[670] Indeed, the intention of the drafters is to organize the WASG in a way to allow "easy access to the policies principles and processes that support the allocation and management of airport slots at congested airports worldwide".[671]

The next sections discuss the similarities and differences between the WASG and the Slot Regulation with special reference to three highlighted concepts: primary allocation criteria, secondary allocation criteria, and the use of slots by airlines.

4.2.3.1 Primary criteria for slot allocation

The principle of historic precedence is upheld as backbone of the allocation system in both the WASG and the Slot Regulation, as to which see Articles 8(2) and 10(2) of the Slot Regulation and paragraphs 1.7.2(f) and 8.6 of the WASG.[672] The demand-side of slot allocation, including all primary criteria for slot allocation, have been introduced in Chapter 2, section 2.2.3.

The WASG provide that historic slots are the first priority of slot allocation, followed by an equal allocation of changes to historic slots, for example a change in timing, new entrant requests and non-new entrant requests.[673] Previous versions of the WASG, then known as the Worldwide Slot Guidelines [hereinafter: WSG], as to which see Chapter 3, section 3.4.2, placed requests for changes to historic slots ahead of new entrant requests.[674] Up to 50% of the slots contained in the pool must be allocated to new entrant requests, unless demand is less than 50%, while the remaining 50% must be allocated to non-new entrant requests.[675] The WASG also provide that, where this 50/50 balance is not achievable in one and the same season, the coordinator should strive to correct this imbalance over the next equivalent season or seasons to ensure an equitable slot allocation.[676] Following the WSG Strategic Review leading to the adoption of the WASG, all airlines operating into airports that have adopted the WASG now have equal access to slots which remain available following the allocation of historic slots.

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[668] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.5 and 6.1.

[669] Whereas paragraph 6.1.2 of the WASG provides that the capacity analysis used to declare the capacity of an airport (potentially preceded by the designation of said airport as Level 3 coordinated) should take into account queue times, levels of congestion, delay, airspace limitations and all relevant capacity limits of the runways, apron, terminals and other airport facilities, Article 6(1) of the Slot Regulation only provides that "all relevant technical, operational and environmental constraints" should be taken into account in the determination of the coordination parameters.

[670] Chapter 3 of the WASG addresses the definition of and relevant stakeholders at Level 1 airports, Chapter 4 of the WASG addresses the definition of and relevant stakeholders, including the facilitator, at Level 2 airports and Chapter 5 of the WASG addresses the definition of and relevant stakeholders, including the coordinator and the coordination committee, at Level 3 airports.

[671] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.

[672] The principle of historic precedence has been discussed in Chapter 2, section 2.2.3.

[673] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.3.2.1 and 8.3.3.2.

[674] IATA, *Worldwide Slot Guidelines (WSG) Edition 10* (2019), *supra* note 8, at 8.3.2.1.

[675] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.3.3.3 and 8.3.4.

[676] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.3.3.4.

Within each category of slot requests, *id est* changes to historic slots, new entrant requests and non-new entrant requests, extensions of year-round operations, *id est* requests to extend an existing operation into the subsequent, equivalent season should have priority over new slot requests. [677]

The primary criteria for slot allocation listed in the Slot Regulation largely resemble the process incorporated in the WASG. Equal to the WASG, the Slot Regulation recognize the holders of historic rights as receiving first priority in the slot allocation process.[678] Changes to historic slots, also commonly known as 'retimings', shall only be accepted for operational reasons and/or if it would improve slot timings of the applicant carrier, and may then take precedence before the allocation of slots to new entrants,[679] the latter of which will be distributed among new entrant requests up to a maximum of 50%.[680] The position of changes to historic slots ahead of new entrant slots differs from the WASG, where changes to historic slots and new entrants are placed on equal footing. Again, equal to the WASG, preference to year-round services shall be given in a situation where not all slot requests can be accommodated.[681]

With the coming into existence of the WASG, the definition of a 'new entrant' airline has changed to mean "an airline requesting a series of slots at an airport on any day where, if the airline's request were accepted, it would hold fewer than *7* slots at that airport on that day . . ." [italics added].[682] Before 2020, the 'new entrant' provision in the document required airlines to hold fewer than five slots at an airport on a given day in order to get accorded new entrant priority.[683] The Slot Regulation of today still proceeds from the definition that, in order to obtain new entrant priority, an airline should hold fewer than 5 slots at an airport on a given day if the carrier's request were accepted.[684]

4.2.3.2 Secondary criteria for slot allocation

As concisely elaborated upon in section 2.2.3 of Chapter 2, the WASG provide that coordinators may make use of additional criteria for slot allocation when slots cannot be allocated using the primary criteria alone. In order to assist the coordinator in his or her decision-making process, paragraph 8.4.1 of the WASG provide several factors that coordinators should give consideration to, including but not limited to, *exempli gratia,* curfews, the balance of the different types of services and markets, connectivity and competitive factors. Whatever the approach taken, "coordinators should not simply allocate any remaining slots pro-rata among all requesting airlines".[685] Accordingly, paragraph 8.4.1 of the WASG effectively encourages coordinators to have additional criteria in place at airports where demand is greatest, since they are not expected to 'simply' allocate slots on a *pro rata* basis between requesting airlines.

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[677] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.3.5.1.
[678] EU Regulation 95/93, as amended, *supra* note 47, Articles 8(2) and 10(2).
[679] EU Regulation 95/93, as amended, *supra* note 47, Article 8(4).
[680] EU Regulation 95/93, as amended, *supra* note 47, Article 10(6).
[681] EU Regulation 95/93, as amended, *supra* note 47, Article 8(3).
[682] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Terms and Abbreviations.
[683] IATA, *Worldwide Slot Guidelines (WSG) Edition 10* (2019), *supra* note 8, Amendments to WSG Edition 9.
[684] EU Regulation 95/93, as amended, *supra* note 47, Article 2(b)(i). In EU Regulation 2021/250, which incorporates temporary relief measures into the Slot Regulation in response to the COVID-19 crisis, a broadened new entrant definition is included. This revised definition sets the maximum number of daily slots held by a new entrant at an airport at seven, or nine for a non-stop intra-EU service which is operated by at most two other carriers.
[685] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.4.1.

Additional criteria are typically used for 'tie-breaking' purposes between competing slot requests. As an increasing number of airports are declared to be congested, among which are the world's most congested airports, more and more coordinators are faced with excess demand. Thus, they will have to make decisions what slot requests to accommodate and decline. Examples of local procedures introduced by Airport Coordination Germany [hereinafter: FLUKO], ACL and ACNL based on paragraph 8.4.1 of the WASG are provided in section 4.3.3.2 below.

The Slot Regulation does not explicitly identify any such allocation criteria for competing requests, which is especially interesting given that the capacity crunch is mainly prevalent in Europe as discussed in Chapter 2, sections 2.3 and 2.4. Should the requirement that any local guidelines must aim at improving the efficient use of airport capacity discussed in section 4.3.1 be read in purely operational terms, coupled with the absence of a list of secondary criteria resembling the one in the WASG, the Commission appears to have, perhaps unintentionally, adopted a two-track policy of excluding legitimate policy aims to be reflected in local procedures and local guidelines affecting coordination decisions.[686]

As evidenced by current coordinator practice, an increasing number of EU coordinators do apply additional allocation criteria by reference to paragraph 8.4.1 of the WASG. However, in section 4.3.4, it is concluded that the extent to which these additional criteria are an effective tool to influence coordination decisions appears to be fringe for two main reasons:

1) allocation criteria are only applied to new slot requests, if any;
2) slots are not route-specific or aircraft type-specific, hence their use may be flexibly changed by airlines depending on market developments and/or commercial considerations.

Chapter 6 provides recommendations on 'slot earmarking' to effectively influence coordination decisions in the longer run should new slots become available.

4.2.3.3 Provisions on the use of slots by airlines

This section highlights provisions relating to the use of slots by airlines after these slots have been allocated to them by the coordinator. Building on what has been provided in section 4.2.3 on the WASG more or less resembling a handbook, the WASG are abundant in their provisions on the use of slots.

For instance, the WASG provide that "[a]irlines may only hold slots that they intend to operate, transfer, swap, or use in a shared operation" in paragraph 8.5.1. However, as indicated above, "[a]irport slots are not route, aircraft, or flight number specific and may be changed by an airline from one route or type of service to another" pursuant to paragraph 8.10.1. With regard to instances where slots are operated in a way contrary to their proper use, the WASG provide that "[a]irlines and other aircraft operators must not intentionally operate services at a significantly different time or intentionally use slots in a significantly different way than allocated by the coordinator".[687] Yet, ". . . [c]onfiscation of slots for any reason other than proven intentional slot misuse is not permitted". [688]

Where slot misuse can be proven to be intentional, coordinators may seek recourse to Chapter 9 of the WASG. Chapter 9 saw the light of day in 2020, when the WASG first came

[686] *See infra* Chapter 6 (describing the appropriateness of this rather narrow approach in light of today's market realities).
[687] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.1.1(d).
[688] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.1.1(g).

into existence. It provides comprehensive principles and guidance on slot monitoring including roles, responsibilities and suggested enforcement actions.[689] Conversely, the Slot Regulation merely requires Member States to "ensure that effective, proportionate and dissuasive sanctions or equivalent measures are available" to remediate instances of slot misuse in Article 14(3), and provides no detailed rules or restrictions on how slots may be used and by whom apart from listing primary criteria for slot allocation. A variance of provisions to combat slot misuse have been incorporated into national laws.[690]

The WASG explicitly encourage slot swapping between airlines on a one-for-one basis.[691] Slot swaps or transfers for compensation or consideration may only take place where they are not prohibited by the laws of the relevant country.[692] The Slot Regulation does not use the terminology "slot swaps" or "slot swapping", but does acknowledge that slots may be "exchanged" on a one-for-one basis between carriers.[693] Slots may also be transferred within the portfolio of the same carrier, between parent and subsidiary companies or between subsidiaries of the same parent company, as part of the acquisition of control over the capital of an air carrier, and/or in the case of a total or partial take-over when the slots are directly related to the air carrier taken over.[694] Slots allocated to one carrier may also be used by another carrier if the two carriers are participating in a joint operation.[695] The Slot Regulation is silent on whether slot exchanges and slot transfers may or may not take place for compensation or consideration.

Last, and in anticipation of a discussion in Chapter 5, section 5.3 on the role and valuation of slots in financial proceedings and/or in cases where airlines cease operations, it is notable that EU provisions on this matter are conspicuous by their absence. This seems ill-considered, in particular with COVID-19 as a contributory factor to developments regarding airline insolvency and bankruptcies. The WASG does not provide comprehensive guidance for the role of slots in financial proceedings either, although paragraphs 8.14 and 8.15 of the WASG are designed to inform the coordinator and industry stakeholders on what could be done when an airline loses its operating license and/or when it ceases to operate at an airport. For instance, paragraphs 8.14 and 8.15 provide for the 'freezing' of slots until the financial difficulties have been overcome, an assumption that is not covered by the Slot Regulation.[696] Further analysis on the matter can be found in Chapter 5, section 5.3.

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[689] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Chapter 9.
[690] For instance, Spanish Law 21/2003 of 7 July 2003, Aviation Safety, supplementing Royal Decree 15/2001, Article 49, defines offences in relation to slot coordination. Corresponding fines are listed in Article 55. The failure to return unused allocated slots by the deadlines established by the Slot Regulation may be fined with €6000-€90,000 for each series of slots. The operation without a slot may be sanctioned with a fine of €3000-€12,000 per flight. Airlines that operate intentionally and regularly at times different to those allocated may be fined with €3000-€30,000 per flight operated off-slot. Airlines which undertake slot transfers not permitted by the Slot Regulation may be sanctioned with a fine ranging from €18,000 to €60,000 for each series of slots. Furthermore, the German Decree to Regulate Airport Slot Coordination (FHKV) of 2005 implements the provisions of the Slot Regulation in German law. Regarding late slot handbacks, it prescribes that slots that are held without the intention to use them have to be returned immediately. Violations are regarded as administrative offences punishable with fines of up to €50,000.
[691] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.11.1.
[692] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.11.5 and 8.12.1.
[693] EU Regulation 95/93, as amended, *supra* note 47, Article 8a(1)(c).
[694] EU Regulation 95/93, as amended, *supra* note 47, Article 8a(1), under a and b.
[695] EU Regulation 95/93, as amended, *supra* note 47, Article 10(8).
[696] *See infra* Chapter 5, section 5.3 (specifying that administrators can request the coordinator to 'freeze' slots until the financial difficulties of the slot holding airline have been overcome or pending formal acquisition of the company's activities by third parties per paragraph 8.15.3 of the WASG. Slots may be frozen even if the slots are not used in practice). As such, the 'freezing' of slots is a different concept than the revocation or the reallocation of slots due to the non-use or non-compliant use thereof in accordance with the 80% threshold, as discussed in Chapter 2, section 2.2.3.

4.2.4 Concluding remarks

The primary criteria for slot allocation listed in the Slot Regulation by and large resemble the guidelines laid down in the WASG. This comes as no surprise, given that the WASG guidelines served as the basis for the original version of the Slot Regulation, which entered into force in 1993 as mentioned above in section 4.1.2.

Considering that the WASG comprise a living document that is reviewed and revised continuously by the Worldwide Airport Slot Board to remain up to date with industry and regulatory changes,[697] structural amendments to the Slot Regulation are significantly harder to come by as discussed in section 4.1.4. This may be reflective of the legally binding status of the Slot Regulation, meaning that 27 Member States have a duty to comply with any revised provisions of the Slot Regulation, subjecting any amendments to potentially fierce political discussions, whereas the WASG are intended as best practice from which States may deviate in national laws and regulations.[698] Examples of such national regulations in Mexico, China and Australia are explored in section 4.6 below, whereas the next sections explore the adoption of local guidelines by Member States and local procedures by coordinators under the Slot Regulation.

4.3 The adoption of local guidelines and local procedures under EU Regulation 95/93

4.3.1 Preliminary remarks

Pursuant to Article 8(5) of the Slot Regulation, the coordinator shall take into account local guidelines proposed by the coordination committee and approved by the Member State, provided that such guidelines "do not affect the independent status of the coordinator, comply with Community law and aim at improving the efficient use of airport capacity".[699] Hence, it is a task of the coordination committee "to make proposals concerning or advise the coordinator and/or the Member State on . . . local guidelines for the allocation of slots or the monitoring of the use of allocated slots, taking into account, inter alia, possible environmental concerns, as provided for in Article 8(5). . .".[700]

The adoption of local procedures relating to the allocation and use of slots is not specifically foreseen under the Slot Regulation. However, coordinator practices as analyzed in section 4.3.3.2 below show that local procedures are used by coordinators at EU airports, for example in keeping with paragraph 8.4.1 of the WASG. An explanation of the distinction between local guidelines and local procedures is provided in section 4.3.2. An analysis of national measures on slot coordination in the context of the general principles of supremacy, pre-emption and subsidiarity is found in section 4.3.5. The adoption of local operational rules by Member States is foreseen under Article 19(1) of EU Regulation 1008/2008 and is thus concisely addressed in section 4.4.

4.3.2 The distinction between local guidelines and local procedures

It is important to distinguish between local guidelines and local working procedures, henceforth also referred to as 'local procedures'. Both instruments have the potential to add more flexibility to the slot allocation process at the local level, as they can be adapted to local circumstances.

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[697] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface. *See* Chapter 3, section 3.4.2 for an overview of the governance structure of the WASG.
[698] *Id.* at Preface.
[699] EU Regulation 95/93, as amended, *supra* note 47, Article 8(5).
[700] EU Regulation 95/93, as amended, *supra* note 47, Article 5(1)(a).

Local guidelines may be initiated by any member of the coordination committee,[701] whereas local working procedures are introduced by coordinators on their own as part of their discretionary powers underpinning the independence of the coordinator.[702] As such, they do not require involvement of the coordination committee and/or the Member State. Conversely, local guidelines adopted under the Slot Regulation have to be approved by the Member State, which in turn notifies the Commission.[703] The Member State is not in the position to propose local guidelines but is dependent on the coordination committee for proposals, since they are not a member of the coordination committee but hold observer status.[704]

Both instruments are limited to using local specifications for situations not regulated by the Slot Regulation, which is legally binding for all Member States and takes precedence over local solutions as evidenced by section 4.1.2 above. Moreover, Article 8(5) explicitly requires local guidelines to ". . . comply with Community law".[705] When the so-called 'Local Rule 2A' was introduced by London Gatwick's coordination committee to extend the minimum series length from 5 to 15 weeks in the summer season, it was withdrawn because it lacked consistency with the definition of a slot series in the WASG and the Slot Regulation.[706] Yet, the local guideline was deemed to be appropriate given the specific situation at the airport, where short series in the peak summer periods prevent other airlines from launching year-round services.[707]

Hence, local guidelines and local procedures in the EU may only fill in the gaps left by the Slot Regulation. Examples of the application of local guidelines and local procedures are studied below.

4.3.3 The application of local guidelines and local procedures

4.3.3.1 Local guidelines

Despite failure of 'Local Rule 2A', as discussed above, London Gatwick has five other local guidelines in place which were still adopted under the EU Slot Regulation after discussion in the coordination committee, since the UK was still considered an EU Member State at the time. The local guidelines are administered by ACL, which provides allocation services across several jurisdictions, including the UK. The local guidelines relate to:

1) the allocation and distribution of night movements and night noise quota;
2) procedures with respect to time-critical operations that are exempted from acquiring slots at coordinated airports such as State flights, emergency landings, humanitarian flights and recovery flights;
3) the consequences of the late handback of slots;
4) the allocation of ad-hoc slots;

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[701] *Id,* Article 5(3).
[702] *See infra* Chapter 5, section 5.4 (analyzing the functional and financial independence of the coordinator).
[703] EU Regulation 95/93, as amended, *supra* note 47, Article 8(5).
[704] *See* International Transport Forum, *supra* note 162, at 59; EU Regulation 95/93, as amended, *supra* note 47, recital 7.
[705] EU Regulation 95/93, as amended, *supra* note 47, Article 8(5).
[706] *See* London Gatwick, Making the best use of existing capacity in the short and medium term (16 May 2013), *available at* https://www.gatwickairport.com/globalassets/publicationfiles/business_and_community/all_public_publications/transforming_gatwick/gatwick_airport-short_and_medium_term_options_paper-16_may_13.pdf (last visited August 25, 2020). At the time, the UK was still an EU Member State.
[707] *See* Steer Davies Gleave, *supra* note 69, at 250.

5) the use of secondary criteria for initial allocation.[708]

London Heathrow's five local guidelines provide for:

1) the allocation and distribution of night movements and night noise quota;
2) *ad hoc* operations;
3) the administration of London Heathrow's movement cap of 480,000 movements;
4) procedures for temporarily reduced capacity;
5) the management of a temporary reduction in available capacity as a result of COVID-19 related sanitary measures.[709]

Equal to London Gatwick and with the exception of the fifth local guideline, these local guidelines were all still adopted under the EU Slot Regulation.[710]

With regard to London Heathrow's third local guideline, London Heathrow's movement cap is scheduled in excess of 494,000 movements – the limit being 480,000 movements – to compensate for any slot cancellations throughout the season. This scheduling flexibility, more commonly known as 'overbooking', allows the airport to achieve maximum utilization. Combined with a slot compliance scheme, the government and residential communities may be given comfort that a significant breach of the limit will not occur.[711] The mentioned local guideline also includes an 'overrun provision', which holds that, in case of an exceedance, the number of air traffic movements permitted in the following year shall be reduced by twice the amount of the overrun.[712]

Local guidelines have also been adopted at, including but not limited to, Amsterdam Airport Schiphol,[713] Dublin Airport[714] and Warsaw Airport.[715]

4.3.3.2 Local procedures

Despite the apparent possibility to take into account the specific functions of an airport and the objectives it pursues in allocation decisions through paragraph 8.4.1 of the WASG, coordinators have indicated that many of the additional criteria incorporated in paragraph 8.4.1 lack specificity and complicate the allocation process significantly. It is difficult to apply them

[708] The local guidelines in place at London Gatwick can be accessed via Airport Coordination Limited (ACL), London Gatwick Airport (LGW), *available at* https://www.acl-uk.org/airport-info-details/?aid=9 (last visited July 27, 2021).
[709] *See* Guillaume Burghouwt and Wouter de Wit, *On the mechanisms that can potentially influence connectivity outcomes in the UK* (2015), at 2.
[710] The local guidelines in place at London Heathrow can be accessed via Airport Coordination Limited (ACL), London Heathrow Airport (LHR), *available at* https://www.acl-uk.org/airport-info-details/?aid=1 (last visited July 27, 2021).
[711] *See* Airport Coordination Limited (ACL) International, *Airport Coordination Ltd Submission to the Sydney Airport Demand Management Discussion Paper* (2020).
[712] *See* Airport Coordination Limited (ACL), Local Rule 3 – Administration of the Heathrow Air Transport Movement Cap, *available at* https://www.acl-uk.org/wp-content/uploads/2016/09/Airportinfolink_LHR_localrule3.pdf (last visited July 27, 2021).
[713] Amsterdam Airport Schiphol's two local guidelines on slot allocation for general aviation and the determination of historic rights and the ad-hoc allocation of slots can be accessed via Airport Coordination Netherlands (ACNL), Local Rules, *available at* https://slotcoordination.nl/slot-allocation/local-rules (last visited July 27, 2021).
[714] Dublin Airport's two local guidelines on time critical operations and the management of temporary reductions in capacity following COVID-19 sanitary measures can be accessed via Airport Coordination Limited (ACL), Dublin Airport (DUB), *available at* https://www.acl-uk.org/airport-info-details/?aid=7 (last visited July 27, 2021).
[715] Warsaw Chopin Airport's two local guidelines on procedures for obtaining slots in the night period and the management of temporary reductions in capacity following COVID-19 sanitary measures can be accessed via Airport Coordination Limited (ACL), Warsaw Chopin Airport (WAW), *available at* https://www.acl-uk.org/airport-info-details/?aid=7 (last visited July 27, 2021).

consistently because of the lack of clarity in hierarchy and the meaning of and behind the criteria. They also frequently give rise to questions with regard to the transparency of slot allocation decisions[716] and an increasing risk of legal scrutiny because the legally binding Slot Regulation does not contain a list of secondary criteria. Despite the concerns, multiple coordinators have reflected the additional criteria in more specific local procedures as illustrated below. Moreover, the European Airport Coordinators Association [hereinafter: EUACA] have also issued procedures which may be used as a source of reference.[717]

Germany-based FLUKO applies its own set of additional criteria proceeding from its discretionary power in the 'Guideline for the allocation of scarce slots at coordinated German Airports'[718] in order to ensure allocation decisions are consistent with policy towards the promotion of Fraport as an international hub.[719] The safeguarding of public transport interests, including the significance of the service for the national and European location, the competitive situation in individual markets and the consolidation of the airlines operating in the market are also taken into account.[720] If available, alternative offers are made to non-hub airlines in case of competing requests, usually within an hour from the requested slot time.[721]

Although the name of the document may mislead one to think it concerns a local guideline, the FLUKO document is in fact a product of coordinator discretion alone and should therefore be regarded as a local procedure. The elements taken into account partially mirror the additional allocation criteria provided for by the WASG in paragraph 8.4.1, which include factors such as the development of the airport route network and domestic, short-haul and long-haul markets, competition, curfews and the environment.

Moreover, the guidelines specifically target the preservation and/or improvement of "the hub function".[722] From the perspective of national treatment, though the document does not specify the term "hub function", it is clear that Fraport functions as the primary hub to national carrier Lufthansa. It follows that the national carrier may be in the best position to benefit more from the reference to "hub function" as part of the airport's secondary criteria in comparison with foreign carriers. However, nothing precludes a foreign carrier from providing services that may be equally beneficial for the airport's hub function or that are eligible to get accorded priority on the basis of another feature.

FLUKO indicates that there is no order of precedence for the individual allocation criteria:

> "Depending on slot supply and demand, and current number of transport connections at this moment in time, as well as of the airlines operating them, the criteria shall be weighed up in an individual case."[723]

According to an analysis of the International Transport Forum, the Frankfurt-case is an example of a certain flexing of the slot regime through locally specified guidelines that build on existing WASG guidelines and the Slot Regulation.[724] ACL has also deployed a wide range of allocation

[716] *See* Odoni, *supra* note 61, at 35.
[717] *See* European Airport Coordinators Association (EUACA), EU Slot Guidelines, *available at* https://www.euaca.org/FPage.aspx?id=79 (last visited: July 27, 2021).
[718] *See* Airport Coordination Germany (FLUKO), *Guideline for the allocation of scarce slots at coordinated German airports* (2011).
[719] *See* International Transport Forum, *supra* note 162, at 57.
[720] *See* FLUKO, *supra* note 718, paragraph 4.11.
[721] *See* International Transport Forum, *supra* note 162, at 58.
[722] *See* FLUKO, *supra* note 718, paragraph 4.11
[723] *Id.,* paragraph 4.12.
[724] *See* International Transport Forum, *supra* note 162, at 58.

criteria for which they are receiving competing requests, including market type and size, the frequency, as well as local guidelines agreed by the sector parties and approved by the UK government, some of which have been discussed previously in this section.[725]

Similar local procedures targeting competing slot requests have been adopted by Netherlands-based ACNL in the Summer of 2021. ACNL mentions it used to allocate new slots from the slot pool on a *pro rata* basis, a practice which is explicitly discouraged in the per 2020 revised paragraph 8.4.1 of the WASG. As part of the 'Policy Rule Additional Allocation Criteria', ACNL focuses on strengthening the intercontinental and European connections network for Amsterdam Airport Schiphol, and the provision of connections to the benefit of the regional economy for Rotterdam The Hague Airport and Eindhoven Airport. To assist ACNL in applying the additional criteria, ACNL requests the airport managing bodies to provide a list of destinations, provided this list is transparent, neutral and non-discriminatory. Should competing requests still exist after application of the list of destinations, ACNL takes into account the frequency of operations, the effective period of operation and aircraft noise emissions.[726] ACNL has also adopted local procedures in the area of slot transfers following total or partial take-overs and the calculation of *force majeure* related to the use-it-or-lose-it rule.[727]

In October 2021, IATA launched legal action in The Netherlands against ACNL's 'Policy Rule' targeting competing slot requests, stating that the procedure would have "significant negative effects on the globally functioning system of slot allocation" and would result in commercial damage for IATA members globally. The procedure would also contravene EU Regulation 1008/2008 and the Slot Regulation by allowing the respective airport managing bodies to "directly influence all future new slot allocation for their airports", and harm the independent and impartial role of slot coordinators in the EU "by requiring priority to be given in their decision-making to a list of destinations".[728] In preliminary relief proceedings on 29 October 2021, IATA was joined by KLM Royal Dutch Airlines, Transavia Airlines, TUIfly and the Air Transport Association of America.[729]

With the Slot Conference for the Summer 2022 season in view, the District Court of North Holland was asked to deliver a preliminary injunction within five days of the court hearing. However understandable from the viewpoint of adherence to the international calendar of coordination activities discussed in section 4.2.3, a challenging time limit for a case with this level of technical complexity and potential international precedent setting. On 3 November 2021, the District Court of North Holland issued an abbreviated judgment in which it prohibited ACNL from applying its 'Policy Rule', including the use of any destination list, with immediate effect in slot allocation decisions for the Summer 2022 season. At the time of writing of this dissertation, a detailed judgment motivating the court's decision had not been issued yet.[730]

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[725] *See* UK Competition and Markets Authority, *supra* note 117, at 7.
[726] *See* Airport Coordination Netherlands (ACNL), Policy Rule Additional Allocation Criteria (5 July 2021), *available at* https://slotcoordination.nl/wp-content/uploads/2021/07/210705-ACNL-Policy-Rule-Additional-Allocation-Criteria-v1.0.pdf (last visited August 14, 2021). Furthermore, paragraph 5.4.3 of the WASG provides the following: "The airport managing body or other competent body should provide relevant information to the coordinator in order to assist in applying the additional criteria for slot allocation given in 8.4.1 (…)".
[727] *See* Airport Coordination Netherlands (ACNL), Allocation Process, *available at* https://slotcoordination.nl/slot-allocation/allocation-process (last visited July 27, 2021).
[728] *See* International Air Transport Association (IATA), IATA Legal Challenge to Urgently Halt Dutch Slot Rule (15 October 2021), *available at* https://www.iata.org/en/pressroom/2021-releases/2021-10-15-01 (last visited November 11, 2021).
[729] District Court of North Holland, C/15/321219/KG ZA 21-540 IATA, TUI Airlines Nederland, KLM and Transavia Airlines v. Airport Coordination Netherlands [2021], ECLI:NL:RBNHO:2021:9830.
[730] *Id.*

4.3.4 Conclusions as to the effective influence of local guidelines and local procedures on allocation decisions

The local procedures discussed above appear to indicate that the use of the coordinator's discretionary powers offers more scope for legitimate policy aims to be included in allocation decisions as compared to proposals for local guidelines. Existing local guidelines, some of which are set out above, appear to be mostly of an operational nature, and not so much policy-oriented. This may be a result of the requirement that local guidelines aim at improving the "efficient use of airport capacity".[731]

It could be argued, however, that policy solutions supported by legitimate policy aims may also lead to increased efficiency in terms of optimal capacity use and should thus be able to affect allocation decisions. It is nowhere stated in the Slot Regulation that the "efficient use of airport capacity", as to which see section 4.3.1 above, should be understood as purely operational efficiency, nor is it prescribed that efficiency can only be achieved by introducing operational solutions with which airport throughput is maximized.

Nonetheless, although procedures for competing slot requests at initial allocation are certainly helpful for coordinators in their allocation decisions, they are no game changer in a system where slots can be freely exchanged within airlines' slot portfolios after they have been allocated. Because the principle of historic precedence is at the core of the slot system provided by the WASG and the Slot Regulation, the procedures used by FLUKO, ACL and ACNL only apply to newly allocated slots, and not to existing slots. Even where newly allocated slots are involved, airlines may apply for a slot with a certain intended use but can and often do change this intention or exchange the slot with another airline once the slot has been awarded to them. Provided the limits given by the capacity declaration allow for it, such changes are determined unilaterally by the airline as the slot holder, without involvement of the coordinator, airport or government.[732]

The fact that slots cannot be earmarked or reserved for a certain use, apart from services covered by Public Service Obligations [hereinafter: PSO's][733] and two-year usage restrictions for new entrant slots, may constitute a potential barrier to local guidelines and local procedures as potential instruments to effectively influence allocation decisions. This is reinforced by the government's position as a party that cannot initiate local guidelines or local procedures, but instead depends on the coordination committee to launch initiatives.[734] Moreover, IATA's successful legal action against ACNL's 'Policy Rule' for competing slot requests for the Summer 2022 season shows that local solutions may fall prey to legal action in national jurisdictions.

4.3.5 An analysis of national measures in the context of the principles of supremacy, pre-emption and subsidiarity

4.3.5.1 Preliminary remarks

In the EU, the principles of supremacy, pre-emption and subsidiarity are relevant when exploring the scope that Member States realistically have to include local public interest considerations in the slot rules. The next sub-sections analyze each of these principles in light of their influence on national measures on slot coordination. Moreover, any rules need to comply with the non-discrimination principle, one of the cornerstones of the internal air transport market, as discussed in section 4.1.5.

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[731] EU Regulation 95/93, as amended, *supra* note 47, Article 8(5).
[732] *See* International Transport Forum, *supra* note 162, at 58.
[733] *See infra* section 4.4.4 for an analysis of PSO's.
[734] *See* Burghouwt and De Wit, *supra* note 709, at 5.

4.3.5.2 The principles of supremacy and pre-emption applied to slot coordination

The EU is supranational rather than intergovernmental in nature. It has unique supranational powers in the field of legislation, jurisdiction, enforcement and competition, and acts through regulations, directives and decisions that are directly applicable in all 27 Member States. The judgments and opinions of the CJEU are equally directly enforceable.[735] The supremacy of EU law found its way through decisions made by the CJEU but has not been confirmed in the EU treaties.[736]

In 1962, the CJEU set out the concept of *direct effect* of EU law, which means that individuals – either undertakings or national persons – are entitled to invoke EU law in their national courts.[737] To the extent that they are compatible with EU law, Member States are permitted to adopt national measures they see fit given the local circumstances.[738] The principle of supremacy holds that, in case of a normative conflict between EU law and national law, EU law prevails.[739]

National law may also be set aside by EU law for two other reasons:

1) because the extension of the national rules affects a matter with which the EU has dealt exhaustively, and national measures are thus 'pre-empted',[740] or
2) because the national rules interfere with the proper functioning of the common organization of the market.[741]

Drawing on the *pre-emption* criterion, national measures in situations where there may not exist a specific EU provision, all national measures in an 'occupied' or exhaustively regulated field will automatically be considered invalid, even when such measures are not contrary to or do not obstruct the objectives of Community legislation in any way.[742] The economic rationale

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[735] *See* Haanappel, *supra* note 356, at 37.

[736] Cases in which the CJEU affirmed the supremacy of EU law include Case C-6/64, *Costa v. ENEL* [1964] ECLI:EU:C:1964:66 and Case-106/77, *Simmenthal II* [1978] ECLI:EU:C:1978:49.

[737] Case-C26/62, *Van Gend en Loos* [1963] ECLI:EU:C:1963:1.

[738] *See* Aurelien Portuese, *The principle of subsidiarity as a principle of economic efficiency*, 17 Columbia Journal of European Law 2 (2012), at 252.

[739] In areas which do not fall within the exclusive competence of the EU, the principle of *subsidiarity* only allows the EU to act "only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States . . .", *see* Article 5(3) TFEU. *See* also Case-106/77, *Simmenthal II* [1978] ECLI:EU:C:1978:49.

[740] Article 2 TFEU clarifies the notion of pre-emption: "(1) When the Treaties confer on the Union exclusive competence in a specific area, only the Union may legislate and adopt legally binding acts, the Member States being able to do so themselves only if so empowered by the Union or for the implementation of Union acts; (2) When the Treaties confer on the Union a competence shared with the Member States in a specific area, the Union and the Member States may legislate and adopt legally binding acts in that area. The Member States shall exercise their competence to the extent that the Union has not exercised its competence. The Member States shall again exercise their competence to the extent that the Union has decided to cease exercising its competence." *See* also Case 255/86 (Simmenthal II), *supra* note 736.

[741] Case 218/85, *Association comité économique agricole regional fruits et legumes de Bretagne (CERAFEL) v. Albert Le Campion* [1986] ECLI:EU:C:1986:440, at 13; Eugene Daniel Cross, *Pre-emption of Member State law in the European Economic Community: a framework for analysis*, 29 Common Market Law Review 3 (1992), at 450.

[742] In the *Amsterdam Bulb*-case, CJEU interpreted the absence of an express mention of pre-emption as equivalent to an authorization for Member States to act. *See* Case 50/76, *Amsterdam Bulb BV v. Produktschap voor Siergewassen (Ornamental Plant Authority)* [1977], ECLI:EU:C:1977:13. This reasoning was, however, not followed by the CJEU in the *Officier van Justitie*-case, in which the CJEU ruled that, even in absence of the EU legislator mentioning the ability of Member States to act after the EU has intervened in a particular field, Member States were pre-empted from acting because the contested directive was already in force, *see* Case 111/76, *Officier van Justitie v. Beert van den Hazel* [1977], ECLI:EU:C:1977:83, as well as Cross, *supra* note 741, at 459.

behind centralization at EU level lies in the efficiency of harmonizing legal norms and standards.[743]

When EU law is found to be exhaustive or to constitute "a complete system",[744] all national legislation in that field is superseded, except in cases where EU law expressly provides to the contrary. In the *Prantl*-case, the Court cited the following:

> "[O]nce rules on the common organization of the market may be regarded as forming a complete system, the Member States no longer have competence in that field unless Community law expressly provides otherwise."[745]

According to the Commission, the harmonization of conditions for access to airports in the EU remains preferable to prevent barriers due to conflicting national practices. Nonetheless, although the EU has the exclusive external competence to negotiate the matter of slot coordination in ASAs with third States as stipulated in section 4.1.2, the EU has logically not been attributed such exclusive powers within the internal market given the existence of the internal air transport market pursuant to the provisions of EU Regulation 1008/2008.[746]

The lack of exclusive powers is furthermore evidenced by, *inter alia,* the fact that the Slot Regulation awards national competence to Member States in the field of airport designation (Article 3), the setting up of a coordination committee (Article 5), ensuring that an airport's coordination parameters are determined (Article 6), the imposition of Public Service Obligations (Article 9), the protection of coordinators with regard to claims for damages (Article 11) and ensuring that effective, proportionate and dissuasive sanctions or equivalent measures are available to deal with slot non-compliance (Article 14). Hence, Member States are to a large extent responsible for the organization of slot coordination at airports within their territories.[747]

Applying the principle of pre-emption to slot coordination furthermore conflicts with existing practice of Member States adopting their own national laws on slot coordination, often as a way of implementing the Slot Regulation and not limited to provisions which explicitly attribute Member States the power to act, to the extent that they are compatible with the Slot Regulation.[748] For instance, the Netherlands have adopted the so-called *Besluit slotallocatie* (Dutch Decree on Slot Allocation), as amended, in 1997.[749]

The authorization by Member States of local guidelines and their subsequent application by coordinators, as well as the adoption of local procedures by coordinators under the Slot Regulation, would also conflict with the line of reasoning that the EU slot rules are exhaustive and should be regarded as forming a 'complete system'. The leeway offered by Article 19(1) of EU Regulation 1008/2008 for Member States to introduce local operational rules on slot allocation as well as TDR's and PSO's relating to the allocation of slots as discussed in sections 4.4.2, 4.4.3 and 4.4.4 provides further evidence that slot coordination is not

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[743] *See* Michele G. Giuranno, *Pooling sovereignty under the subsidiarity principle*, 26 European Journal of Political Economy 1 (2010), at 125; Portuese, supra note 738, at 239 and 261.
[744] Case 16/83, *Karl Prantl* [1984] ECLI:EU:C:1984:101, at 13.
[745] *Id.*
[746] It is the EU as a regional organization having its own legal personality, which in turn entrusts one of its institutions – in this case, the Commission – to exercise the competence to negotiate the matter of slot coordination in ASAs with third States. However, the EU cannot enforce such competence without the Member States, thus opening the way for local or national rules.
[747] *See* NERA Economic Consulting, *supra* note 5, at 259.
[748] *See* Portuese, supra note 738, at 252.
[749] Dutch Decree on Slot Allocation of 1997 (*Besluit slotallocatie*), as amended.

regulated exclusively at EU level. In other words: the EU rules cannot be regarded as forming a complete system per the *Prantl*-reasoning.

Hence, observing the above two grounds for invalidation from the perspective of the Slot Regulation yields that Member States are free to adopt national measures on slot coordination, including national laws, local guidelines and local procedures, provided they do not "interfere with the proper functioning of the common organization of the market".

4.3.5.3 The EU principles of supremacy and pre-emption vis-à-vis the principle of complete and exclusive sovereignty

By extension from the principle of complete and exclusive sovereignty vested in Article 1 of the Convention, the Convention expressly recognizes the jurisdiction of each contracting State, including the 27 EU Member States, to apply on a non-discriminatory basis its own air laws and regulations to the aircraft of all contracting States pursuant to Article 15 of the Convention.[750]

Since Article 15 of the Convention on access to airports also applies to the coordination of slots,[751] and in absence of an obligation resting upon Member States to neglect the Convention in favor of EU law on slot coordination, it cannot reasonably be concluded that the EU's powers in the field of slots are truly exhaustive. Since the EU Member States were all party to the Convention before they became EU Member States, they have all retained their State features. Pre-existing rights and obligations arising from the Convention, including the jurisdiction of States to adopt laws and regulations for the users of its airspace as discussed in Chapter 3, section 3.1.4.2, were also acknowledged in the *ATAA*-case.[752] It is deemed unlikely that the principle of complete and exclusive sovereignty, of which jurisdiction forms an essential element, will be passed on to the EU, as this principle is also regarded as a principle of customary international law.[753]

4.3.5.4 The principle of subsidiarity applied to slot coordination

The subsidiarity principle holds that, if it can be shown that the objectives of EU law can be better achieved by national measures, the Court should presume in favor of the validity of such national measures. The subsidiarity principle forms the basis of a key argument by parties who seek to preserve national measures in the face of competing EU law. The subsidiarity principle thanks its existence to the widespread assumption that Member States are better equipped to take into consideration the heterogeneity of local preferences existing within their relevant jurisdictions.[754]

Applying the above reasoning regarding the principle of subsidiarity to slot coordination, it is typically conceded that Member States, via the independent coordinator appointed by the Member State, are better placed to optimize the allocation of available slots from the perspective of the subsidiarity principle. Allocative efficiency increases because local regulators choose the regulation that best suits their needs and preferences.[755]

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[750] Case C-366/10, *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change* [2011] ECLI:EU:C:2011:864, at 9.
[751] *See* Chapter 3, section 3.3.1 of this dissertation for an analysis of Article 15 of the Convention.
[752] Case C-366/10 (Air Transport Association of America), *supra* note 750, at 55.
[753] Judgment of 27 June 1986, *Nicaragua v. United States of America*, ICJ Reports 1986; Case C-366/10 (Air Transport Association of America), *supra* note 750, at 103-104.
[754] House of Lords, *R v. London Boroughs Transport Committee ex parte Freight Transport Association Ltd and Others* [1991] 3 All ER 916. *See* also Portuese, supra note 738, at 236; Cross, *supra* note 741, at 470-471; Giuranno, *supra* note 743, at 125.
[755] *See* Havel and Sanchez, *supra* note 233, at 233-236.

In line with the considerations underpinning the principle of subsidiarity, Chapter 6 of this dissertation provides recommendations aimed at providing States with increased discretionary powers in the field of slot coordination, whilst particularly taking note of the specific challenges faced by super-congested airports.

4.3.6 Concluding remarks

Myriad local guidelines and local procedures have been introduced under the Slot Regulation in Germany, The Netherlands and also in the UK in the pre-Brexit period. Yet, although local guidelines and/or local procedures may be able to influence allocation decisions at the margin, section 4.3.4 has illustrated that they are no game changer. Chapter 6 argues that a new approach is needed to reflect the growing need for tailor-made rules at coordinated airports given their highly diverse functions to society and variances with respect to size, the nature of the capacity constraints and prevailing competitive conditions, as discussed in Chapter 2, sections 2.3 and 2.4, and provides recommendations.

The effectuation of such a tailor-made approach is supported by analysis in section 4.3.5, which has shown that slot coordination is not regulated exclusively at EU level and that Member States are thus free to adopt national measures on slot coordination insofar as these do not conflict with EU provisions. Until the next formal revision of the Slot Regulation, regulators, coordinators and industry stakeholders rely on local guidelines and local procedures to fill in the gaps left by the Slot Regulation.

4.4 EU Regulation 1008/2008, governing the operation of intra-EU air services

4.4.1 Legal basis and key principles of EU Regulation 1008/2008 relevant for slot coordination

EU Regulation 1008/2008 on common rules for the operation of air services in the Community,[756] repealing EEC Council Regulations 2407/92, 2408/92 and 2409/92 sets forth the fundamental EU principle of the freedom to provide air services within the EU while ensuring a level playing field for all EU air carriers operating in the internal market for air transport.[757] It aims to prevent discrimination between European airlines and competitive distortions between air carriers, therewith meeting EU goals of contributing to market efficiency and consumer interest.[758] In principle, it is up to the air carriers to decide "the optimum allocation of their resources, according in particular to the needs and wishes of their customers".[759] Equal to the Slot Regulation, the legal basis of EU Regulation 1008/2008 is Article 100(2) of the TFEU. It is also applicable in Iceland, Norway and Liechtenstein and, for the greater part, in Switzerland pursuant to the provisions of the EU-Switzerland Agreement signed in 1999,[760] as variously amended.

EU Regulation 1008/2008 is relevant for slot coordination in the EU since it refers to the allocation of slots as a prerequisite for getting access to an airport in Article 19(1) – the so-called 'operational link' as addressed in Chapter 3, section 3.3.2. Accordingly, the entitlement to operate intra-EU air services is subject to the availability of slots. Besides slots, EU Regulation 1008/2008 also subjects traffic rights to EU-wide, national, regional and local operational rules

[756] EU Regulation 1008/2008, *supra* note 39.
[757] *Id.,* Article 15(1).
[758] *See* European Commission, Commission Staff Working Document – Evaluation of the Regulation (EC) No 1008/2008 on common rules for the operation of air services in the Community, SWD(2019) 295 final, at 5.
[759] *See* European Commission (TAT – Paris (Orly) – London), *supra* note 644, under X.
[760] Agreement between the European Community and the Swiss Confederation on Air Transport, *supra* note 606.

relating to safety, security and the protection of the environment.[761] EU Regulation 1008/2008 furthermore lays down rules on substantial ownership and effective control, which becomes relevant when we speak of the concept of designated carriers under ASAs as discussed in Chapter 3, section 3.2.1.

Besides the acquisition of traffic rights and compliance with any local operational rules, EU Regulation 1008/2008 hosts two exceptions to the free operation of air services to and from EU airports relevant to slot allocation. Member States are handed a role in the process leading up to the allocation of slots where TDR's and PSO's are concerned. Both concepts are analyzed, among other things by means of specific examples of their practical application, in sections 4.4.2, 4.4.3 and 4.4.4 below.

4.4.2 The rationale for and the application of Traffic Distribution Rules

The freedom of market access generally includes the right of airlines to choose between the different airports serving the same conurbation. In most cases, these airports are not equally attractive to carriers in economic terms.[762] Notwithstanding, EU Member States may restrict the freedom of market access and impose TDR's to regulate the distribution of air traffic between airports located close to one another in their territories based on Article 19(2) of EU Regulation 1008/2008, provided that no discrimination among destinations inside the Community or on grounds of nationality or identity of air carriers takes place.[763]

Thus, EU Regulation 1008/2008 upholds the non-discrimination and national treatment principles as discussed in Chapter 3, section 3.1.4.3. An analysis of the application and use of the non-discrimination principle in the EU is provided in section 4.1.5 above. Due to the 'operational link' mentioned above, even when a TDR imposed under EU Regulation 1008/2008 forces an airline to use a specific airport, the airline still needs to acquire a slot through the regular slot allocation procedure at that airport.

The Slot Regulation does not make a general reference to the use and application of TDR's by coordinators, save for Article 10(6) in which it states the following:

> "Without prejudice to . . . Article 8(1) of Regulation (EEC) No 2408/92, slots placed in the pool shall be distributed among applicant air carriers."

Article 10(6) of the Slot Regulation thus indicates that the allocation priorities mentioned in the Slot Regulation and discussed in Chapter 2, section 2.2.3 should be observed, unless TDR's provide otherwise.

Whereas the increasing airport capacity shortfalls in the EU tends towards an increased relevance of TDR's, Member States have not yet made widespread use of TDR's. However, where they have been applied, they have sparked great controversy among regulators and industry stakeholders due to their perceived discriminatory effects, for instance because they may *de facto* force air carriers to give up slots at sought-after airports in favor of competitors.[764] TDR's are criticized at super-congested airports in particular, given the considerable slot scarcity and thus slot value at these airports.[765]

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[761] EU Regulation 1008/2008, *supra* note 39, Article 19(1).
[762] *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under V and VII.
[763] EU Regulation 1008/2008, *supra* note 39, Article 19; European Commission (Viva Air), *supra* note 496, at 51.
[764] *See* European Commission, *supra* note 758, at 99.
[765] *Id.,* at 99. The UK raised objections against the Paris TDR, as to which *see* section 4.4.3.1. The Milan TDR discussed in section 4.4.3.2 was criticized by airlines.

Under the old EU Regulation 2408/92, TDR's were approved for the Paris, Rome, Lyon and Milan airport systems.[766] EU Regulation 1008/2008, as amended, has only seen one approved TDR so far, *id est* for the Amsterdam-Lelystad airport system.

TDR's in London were introduced in 1977, before EU Regulation 1008/2008 came into force, with the aim of limiting international operations at London Gatwick and London Heathrow. These restrictions were later amended to exclude full freighter flights and general aviation from using London Gatwick and London Heathrow at peak hours.[767]

4.4.3 Requirements related to the public interest, proportionality and transparency applied to Traffic Distribution Rules

In its assessment of the Paris TDR upon objections raised by the UK, as to which see section 4.4.3.1 below, the Commission emphasized that, even if national measures such as TDR's are compliant with the non-discrimination and national treatment principle, "they are still unacceptable if they are not warranted by mandatory requirements in the public interest, or if the same result can be obtained by less restrictive rules (the proportionality principle)".[768] Hence, the adaptation of a TDR needs to be confined to what is strictly necessary to achieve the objective of the TDR in question.[769] Any TDR must furthermore be carefully and objectively framed and observe the condition of transparency.[770] When it comes to the precise rules intended to further legitimate objectives in the public interest, the principles of non-discrimination and national treatment, transparency and proportionality need to be complied with.[771]

The objective of most TDR's is to stimulate certain types of traffic to use an alternative airport serving the same conurbation for environmental concerns, *inter alia* noise nuisance at airports located in densely populated areas, or for reasons of network development.[772] The requirements set out in Article 19(2) of EU Regulation 1008/2008 imply that the traffic can only be distributed among airports on the basis of legitimate objectives, without however limiting the Member States' choice to any more specific objective.[773] In this context, Commission decisions in the Paris, Milan and Amsterdam-Lelystad airport systems clarified that Article 19(1) of EU Regulation 1008/2008 acknowledges the legitimacy of an active domestic airport planning policy, as long as it complies with the general principles of EU law.[774]

Member States have a wide range of discretion in identifying the factors considered to have priority with respect to the distribution of traffic. These factors may also differ from one

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[766] *See* International Transport Forum, *supra* note 162, at 62.
[767] *See* International Transport Forum, *supra* note 162, at 63; Renato Redondi, *Traffic Distribution Rules in the Milan Airport System: Effects and Policy Implications*, 47 Journal of Transport Economics and Policy 3 (2013), at 499.
[768] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under V; European Commission (TAT – Paris (Orly) – London), *supra* note 644, under X.
[769] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraphs 75 and 98.
[770] *See* European Commission (TAT – Paris (Orly) – London), *supra* note 644, under IX; European Commission, *supra* note 758, at 7-8.
[771] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 77.
[772] *See* International Transport Forum, *supra* note 162, at 63.
[773] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 75.
[774] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 77; European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VI; *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under VIII; European Commission, *Communication from the Commission on the EU's External Aviation Policy – Addressing Future Challenges*, COM(2012) 556 final.

airport to another. For instance, a Member State may legitimately wish to promote the development of one airport at the expense of another airport located within its territory. In such cases, any implementing measures may constitute reasonable means of restricting to some extent access to individual airports within the system.[775] In this regard, the Commission has recognized the importance of the operation of hub-and-spoke networks.[776]

We can thus deduce five requirements that need to be observed for the successful implementation of a TDR:

1) non-discrimination and national treatment;
2) transparency;
3) warranted by mandatory public interest requirements;
4) proportionality;
5) measures need to be objective and constant over a certain period.

The next sections dive into decisions by the Commission in relation to TDR's for the Paris, Milan and Amsterdam-Lelystad airport systems and aim to provide insight into the specific considerations underlying decision-making regarding TDR's by Member States and the Commission. The five requirements mentioned above form part of the analysis.

4.4.3.1 The Paris airport system

After a first attempt towards the introduction of a TDR failed to receive Commission approval in 1993 after a challenge by TAT European Airlines,[777] the French authorities introduced a modified TDR within the Paris airport system via a decree of 15 November 1994. The aim of the TDR was to limit traffic to Paris Orly for congestion and environmental reasons, and to promote the use of Paris Charles de Gaulle as international gateway in order to guarantee the optimal utilization of Parisian airport infrastructure.[778] As opposed to Paris Orly, where the number of slots is restricted for reasons of environmental protection, Paris Charles de Gaulle has the potential for a sizeable expansion of slot capacity.[779] The TDR has been fully applicable since 1 January 1995.[780]

Among others, the TDR introduced a maximum on the number of frequencies between Paris Orly Airport and any other airport (system) in Article 4. The frequency limitation does not apply to air services operating at peak hours as long as the requirement to employ a minimum size of aircraft is observed pursuant to Article 5 between the Paris airport system and other airport systems.[781]

The TDR has soonest been disputed by the UK by letter of 5 December 1994, arguing, *inter alia,* that the decree does not "bring about a genuine distribution of traffic between the various Paris airports, but simply to limit the exercise of traffic rights into Orly airport" by requiring a maximum of four daily frequencies per day between Paris Orly and any other airport (system). The UK furthermore held that "the decree discriminates against carriers operating

[775] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 77; European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VI.
[776] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraph 88.
[777] *See* European Commission (TAT – Paris (Orly) – London), *supra* note 644; *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under VIII.
[778] *See* International Transport Forum, *supra* note 162, at 63; European Commission (French TDR's for the airport system of Paris), *supra* note 634, under I and III; Redondi, *supra* note 767, at 499.
[779] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under III.
[780] *Id.,* under I.
[781] *Id.,* under I and VI.

out of airport systems" by requiring the employment of a minimum aircraft size for air services between Paris Orly and an airport belonging to an airport system, "even if the traffic between those two airports does not in itself justify the use of aircraft of such size".[782]

At the time, the UK put forward that airport systems existed in only four Member States other than France,[783] which – according to the UK – made the presence of discrimination all the more apparent, particularly for air carriers operating small and medium-sized aircraft. Hence, the UK authorities consider that the TDR restricts competition "by favoring large carriers over smaller ones and potential newcomers". In particular, competition between air carriers on the Paris-London routes is affected by the aircraft size requirement, since the London airports Heathrow, Gatwick and Stansted also already formed part of an airport system at the time.[784]

In its assessment of the Paris TDR, the Commission explicated that by allowing Member States to distribute traffic between airports, European legislation essentially acknowledges the legitimacy of a domestic airport planning policy. Thus, a Member State may legitimately wish to promote the development of one airport at the expense of another airport serving the same conurbation. Member States may, at their discretion, have regard to a large range of factors they consider to have priority.[785] Evidence of the saturation of facilities may also be regarded as "general overriding requirements such as may warrant traffic allocation measures".[786]

As to the principles of non-discrimination and national treatment, the Commission takes the view that, although the decree treats services operating out of an airport system less favorably compared to services operated out of any other airport, "this difference in treatment results from the fact that the size of the aircraft to be used during peak hours, should the carrier wish to fly more than four frequencies, is determined by reference to the annual traffic between Paris and the entire airport system". Since airport systems exist in seven Member States of the European Economic Area, the Commission is not convinced that the TDR discriminates on the grounds of nationality or identity in favor of French carriers.[787]

The Commission, however, did find one exception to the TDR's compatibility with EU Regulation 1008/2008. It asserted that the minimum aircraft size requirement obstructs the freedom of market access established by EU Regulation 1008/2008 to an appreciable extent, because the requirement affects the "ability of air carriers to operate an unlimited number of services to and from Orly in accordance with their own commercial preferences".[788] Neither is the Commission convinced that the measure, in so far that it restricts frequencies to airports part of an airport system, is proportionate to the objectives sought. The Commission finds all the other elements, however, to be objective and proportionate means of pursuing an active airport planning policy, which is a legitimate objective justifying the Paris TDR.[789] France agreed to introduce a revised TDR in March 1996.[790]

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[782] *Id.,* under I and II.
[783] According to the Commission, airport systems existed in seven EEA Member States as opposed to four, *see* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VI.
[784] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under II.
[785] *Id.,* under VI.
[786] *See* European Commission (TAT – Paris (Orly) – London), *supra* note 644, under X.
[787] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VI.
[788] *Id.*
[789] *Id.*
[790] *See* European Commission, Commission resolves question of traffic distribution at Orly Airport (Press release, 14 March 1995), *available at* https://ec.europa.eu/commission/presscorner/detail/en/IP_95_237 (last visited November 11, 2021).

Hence, save for one exception, all five requirements identified in section 4.2.2 have been complied with by the French authorities. Provided that the minimum aircraft size shall, on future occasions, be determined by reference to individual airports and not by reference to airport systems, the Commission considered the Paris TDR compatible with EU Regulation 1008/2008.[791]

4.4.3.2 The Milan airport system

A first attempt to a TDR for the Milan airport system was challenged before the Commission in 1998 by British Airways, Iberia, Lufthansa, Olympic Airways, Sabena, Scandinavian Airlines System and TAP Air Portugal.[792] The complaints lodged were multi-faceted: first, the carriers point out that the TDR gives Alitalia competitive advantage over non-Italian Community air carriers, because the application of the TDR results in Alitalia still being able to rely on its Rome Fiumicino hub and its medium-haul and long-haul destinations which it will still be able to serve from Milan Linate, whereas other Community air carriers will have to operate those services from Milan Malpensa. Second, Malpensa's geographical location is far less convenient compared to Milan Linate, especially given the absence of adequate transport links to Malpensa.[793] In this context, the air carriers argued that the primary objective of Decree No 46-T[794] was not to distribute traffic, but to grant a competitive advantage to Alitalia instead. They furthermore pointed out that the TDR is not proportionate to the objective sought.[795]

In its legal assessment of the first proposed TDR, the Commission indeed considered that the TDR was not compatible with Article 8(1) of EU Regulation 1008/2008 "in so far as their application is contrary to both the principle of non-discrimination and the principle of proportionality".[796]

The so-called 'Bersani Decree' introduced a revised TDR for Milan's airports in 2000, with the objective of steering "a sufficient amount of traffic" away from the "overutilized" Milan Linate airport to the "underutilized" Milan Malpensa airport to ensure the viability of the hub function of Milan Linate airport and turn it into a second hub for Alitalia.[797] Since market forces alone would not guarantee the transferring of traffic to Milan Malpensa because of Linate's location close to the city center, a TDR was deemed necessary by the Italian authorities to ensure a substantial transfer of traffic.[798]

The TDR limited frequencies from Milan Linate airport to each airport (system) according to the size of the destination in terms of passenger traffic in 1999. The TDR did not limit the total number of slots available at Milan Linate.[799] Frequencies were limited to one daily return service to destinations with traffic between 350,000 and 700,000 passengers, two daily return services to destinations with traffic between 700,000 and 1.4 million passengers, three daily return services to destinations with traffic between 1.4 million and 2.8 million passengers and no limit for services to destinations with traffic exceeding 2.8 million

[791] *See* European Commission (French TDR's for the airport system of Paris), *supra* note 634, under VIII.
[792] *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under I.
[793] *Id.*, under III.
[794] Italian Decree No 46-T of 5 July 1996 lays down the TDR for the airport system of Milan. On 13 October 1997, the authorities adopted Italian Decree No 70-T of 13 October 1997, which provides that the TDR as referred to in Italian Decree No 46-T are to enter into service on 25 October 1998.
[795] *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under III.
[796] *Id.*, under VIII.
[797] *Id.,* under II; International Transport Forum, *supra* note 162, at 63.
[798] *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645, under II.
[799] *See* Redondi, *supra* note 767, at 494-495.

passengers. Carriers operating from Linate to EU airports with annual traffic numbers exceeding 40 million passengers in 1999 were allowed two daily return services.[800]

Although the Commission considered the amended TDR to be compatible with EU Regulation 1008/2008,[801] the Milan TDR turned out not to be effective in practice, since the most important objective of the TDR, *id est* steering traffic away from Milan Linate airport in favor of turning Malpensa into a hub, was not met.[802] Remarkably, passenger numbers at Linate have been steadily increasing since 2011 against a corresponding decrease at Malpensa.

By using multiple carrier prefixes, similar to the loopholes in the new entrant rule subject to discussion in Chapter 5, section 5.5.2, airlines were able to circumvent the TDR and still increase their frequencies from Milan Linate airport. Alitalia was able to increase its frequencies to London Heathrow and Paris Charles de Gaulle by using carrier prefixes given to subsidiaries and carriers it had previously acquired, including Air One, Volare Airlines and Alitalia Express. In a similar fashion, Lufthansa increased its frequency to Frankfurt above the limit of two daily frequencies by using its subsidiary Air Dolomiti.[803] The carriers' perseverance to return to Milan Linate airport evidences that market forces will use all available means to sidestep any limitations provided by TDR's, for instance through the exploitation of loopholes or lax interpretations.[804]

4.4.3.3 The Amsterdam-Lelystad airport system

In order to preserve Amsterdam Airport Schiphol's hub function and allow for a balanced development between the growth of the aviation sector in an environmentally viable and safe way, The Netherlands have proposed a TDR in 2019 against the background of Article 19(2) of EU Regulation 1008/2008 so as to alleviate the severe capacity constraints at Schiphol.[805] The objective of the TDR is to privilege transfer flights at Schiphol Airport and distribute point-to-point traffic coming from Schiphol Airport to Lelystad Airport, since Schiphol's extensive network of intercontinental destinations, which the Dutch authorities consider to be a vital public interest, could not be served without Schiphol's continental and intercontinental hub function.[806] At the core of the TDR is the following provision:

> "Without prejudice to the Slot Regulation, an air carrier obtains priority to require slots at Lelystad Airport to take off or land in so far as that air carrier
> - Has transferred historical slots at Schiphol Airport to another air carrier or returned it to the slot coordinator; or
> - Commits to henceforth use historical slots at Schiphol Airport to operate transfer flights."[807]

The allocation priority applies to two tranches of slots made available at Lelystad Airport, namely up to and including 10,000 slots and from 10,001 to 25,000 slots.[808] Parent companies and their subsidiary companies, as well as all subsidiaries of the same parent company, shall be considered as a single carrier for the purposes of acquiring slot allocation priority.[809] The

[800] *Id.*
[801] *See* European Commission (Italian TDR's for the airport system of Milan), *supra* note 645.
[802] *See*, for more information on the practical effects of the TDR: Redondi, *supra* note 142 at 497-499.
[803] *See* International Transport Forum, *supra* note 162, at 64; Redondi, *supra* note 767, at 498.
[804] *See* Redondi, *supra* note 767, at 499.
[805] The TDR was adopted at the national level through a Draft Ministerial Decree and a Draft Order of the Minister for Infrastructure and Water Management for notification to the Commission.
[806] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraphs 22, 25 and 28.
[807] *Id.*, paragraph 5(b).
[808] *Id.*, paragraph 11.
[809] *Id.*, paragraph 10(4).

TDR will only apply in case of conflicting slot requests following the application of the primary criteria for slot allocation set out in the Slot Regulation.[810]

Observations submitted to the Commission by interested parties expose concerns related to the alleged discriminatory nature of the TDR because it makes a distinction between 'transfer flights' and 'point-to-point flights'. They also claim that KLM Group, its SkyTeam alliance and codeshare partners are the *de facto* main beneficiaries of the TDR, since almost 86% of KLM Group destinations are designated as 'transfer flights'. The TDR can therefore not be regarded as objective and proportionate.[811] Interested parties have also argued that TDR's cannot create slot allocation priorities, and that the Slot Regulation does not allow slots to be linked to destinations.[812]

According to the Commission, the Amsterdam-Lelystad TDR is compatible with Article 19(2) of EU Regulation 1008/2008.[813] The TDR is based on objective criteria, and does not entail any direct or indirect discrimination between air carriers on grounds of nationality and identity or between destinations. The difference between destinations does not entail discrimination, as the difference can be objectively justified on the basis of the legitimate aims of the network quality and promotion of Schiphol's hub functions.[814] Moreover, the measure does not go beyond what is necessary to achieve its objectives, hence the proportionality principle is complied with.[815] This shows that a TDR can intervene in the way slots are used, as has also been apparent from previous Commission decisions.[816]

In the case of the Amsterdam-Lelystad TDR, the distinction between transfer and point-to-point flights is inseparably linked to the legitimate objective of consolidating Schiphol as a hub airport and does not go beyond what is necessary for those purposes. The criteria are also objective in nature. The distinction can thus be considered objectively justified and not *per se* discriminatory as between destinations inside the EU.[817] All destinations that have the same effect on Schiphol as a hub are determined objectively and treated equally, ensuring there is no discrimination on the grounds of nationality or identity of air carriers.[818] Thus, the TDR does not display discrimination among destinations, and also not on the grounds of nationality or identity of the air carrier, even though interested parties asserted that KLM Group and its SkyTeam Alliance and codeshare partners would be the greatest beneficiaries of the TDR.[819] All carriers are treated equally on the basis of the same criteria.[820]

The Commission also acknowledged that slot allocation priorities established under Article 10(6) of the Slot Regulation may be adapted in the context of traffic distribution under Article 19(2) of EU Regulation 1008/2008, "provided that such adaptation is confined to what is strictly necessary to achieve the objective of the traffic distribution rules in question".[821]

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[810] *Id.*, paragraph 97. *See* also Chapter 2, section 2.2.3 for an overview of the primary criteria for slot allocation listed in the WASG, which is resembled largely by the Slot Regulation.
[811] *See* European Commission (the establishment of TDR's for the airports Amsterdam Schiphol and Amsterdam Lelystad), *supra* note 278, paragraphs 52-53.
[812] *Id.*, paragraph 56.
[813] *Id.*, paragraph 102.
[814] *Id.*, paragraphs 43-44.
[815] *Id.*, paragraph 47.
[816] *Id.*, paragraph 49.
[817] *Id.*, paragraph 88.
[818] *Id.*, paragraphs 89 and 92.
[819] *Id.*, paragraphs 53 and 91-92.
[820] *Id.*, paragraphs 91-92.
[821] *Id.*, paragraphs 53 and 98.

However, as mentioned above, the Amsterdam-Lelystad TDR only sets in after the primary allocation priorities of the Slot Regulation have been applied.[822]

In relation to the use of slots, the Commission acknowledges that the objective of the TDR can be achieved "thanks to the conversion of slots with a view to their exclusive use for transfer flights".[823] Such exclusive use "is inherent in the traffic distribution and indeed a feature typical to any such distribution", and is therefore compatible with the Slot Regulation.[824] With these statements, the Commission appears to open the door for the earmarking of slots, which are generally treated as non-aircraft and non-route specific pursuant to paragraph 8.10 of the WASG, as discussed in Chapter 2, section 2.1.2. The earmarking of slots is provided as a recommendation for flexing the slot regime in Chapter 6 of this dissertation.

4.4.4 The imposition of Public Service Obligations

The second exception to the freedom to provide intra-EU air services are PSO's. Member States may impose PSO's in accordance with the conditions and requirements set out in Article 16 of EU Regulation 1008/2008. Article 16(1) reads as follows:

> "A Member State, following consultations with the other Member States concerned and after having informed the Commission, the airports concerned and air carriers operating on the route, may impose a public service obligation in respect of scheduled air services between an airport in the Community and an airport *serving a peripheral or development region in its territory or on a thin route to any airport on its territory any such route being considered vital for the economic and social development of the region* which the airport serves. That obligation shall be imposed *only to the extent necessary to ensure on that route the minimum provision of scheduled air services* satisfying fixed standards of continuity, regularity, pricing or minimum capacity, *which air carriers would not assume if they were solely considering their commercial interest*. The fixed standards imposed on the route subject to that public service obligation shall be set in a transparent and non-discriminatory way." [italics added][825]

The interpretation of the adequacy of an envisaged PSO broadly depends on the judgment of the Member State introducing the PSO. In any case, Member States' discretion should be exercised on the basis of objective factors regarding connectivity needs.[826] The necessity and adequacy of an envisaged PSO is to be determined on the basis of four criteria:

1) proportionality to the economic and social development needs;
2) inadequacy of alternative transport modes;
3) existing air fares and conditions;
4) the combined effect of existing air transport supply.[827]

PSO's cannot be established with the aim of promoting or supporting a particular air carrier or to develop a particular airport, whether directly or indirectly.[828]

EU Regulation 1008/2008 allows the imposition of PSO's on two types of routes: routes to an airport serving a peripheral or development region, and thin routes to any airport. The

[822] *Id.*, paragraph 99.
[823] *Id.*, paragraphs 85 and 93.
[824] *Id.*, paragraph 100.
[825] EU Regulation 1008/2008, *supra* note 39, Article 16(1).
[826] *See* European Commission, *Commission Notice – Interpretative guidelines on Regulation (EC) No 1008/2008 – Public Service Obligations (PSO)* (2017), OJ C 194, paragraph 25; International Transport Forum, *supra* note 162, at 61.
[827] For further information on the contents of these four requirements, *see* European Commission, supra note 826, paragraphs 36-42.
[828] *Id.,* paragraph 27.

remoteness and isolation of a peripheral region – which is generally a remote region – should be assessed with regard to administrative, business, education and medical centers within the territory of the Member State, and within the territories of other Member States with which it shares a border. Development regions are lagging behind economically, as measured by for instance gross domestic product per capita or by unemployment rate. With regard to the 'thinness' of a route, the Commission considers routes with traffic exceeding 100,000 passengers per year cannot normally considered as a thin route within the meaning of EU Regulation 1008/2008.[829]

Since PSO's can only be implemented on routes between Community airports and between airports on the territory of a Member State, they may be suitable for services from, *exempli gratia,* London Heathrow into smaller UK regional airports, but less suitable for services to larger UK cities or not suitable for long-haul routes.[830] Though the Member State is imposing the PSO, the coordinator remains the entity to effectively allocate the slots. The slot coordinator may reserve the slots required for the operations envisaged on the route(s) designated under the PSO pursuant to Article 9(1) of the Slot Regulation, assuming there are any available slots in the pool.[831] If no carrier is interested in operating the route and the Member State does not issue a call for tenders under Article 4(1)(d) of EU Regulation 1008/2008, the slots shall either be reserved for another route subject to PSO's or be returned to the pool.[832]

Hence, the Slot Regulation allows for the reservation of slots for PSO's.[833] The reservation of slots is without prejudice to historic rights granted under the Slot Regulation. Only newly allocated slots may be reserved, which includes slots returned to the pool in accordance with Article 9(1) of the Slot Regulation.[834]

In 2019, 176 PSO routes covering fourteen Member States were established under EU Regulation 1008/2008. PSO routes are often domestic routes.[835] To bring transparency, consistency and clarity to government authorities and industry stakeholders on the imposition of PSO's, the Commission published interpretative guidelines in 2017.[836] These guidelines set out the Commission's interpretation of the criteria embodied in EU Regulation 1008/2008 and clarify the applicable procedures to be followed.[837] Each case should, however, be assessed on its own merits and approached in light of all of its specific circumstances.[838]

According to the Commission's interpretative guidelines, the imposition of a PSO on a route "does not necessarily and automatically create the right for the Member State concerned to restrict the access to the air route to a single operator or to grant compensations for the fulfilment of the PSO. . .".[839] Access to the route should remain free to any carrier respecting the conditions of the PSO, including for carriers willing to operate the route without exclusivity

[829] *Id.*, paragraph 20.
[830] *See* Burghouwt and De Wit, *supra* note 709, at 7.
[831] *See* European Commission, 'Communication from the Commission – Guidelines on State aid to airports and airlines' (2014), OJ C 99, at 73.
[832] EU Regulation 95/93, as amended, *supra* note 47, Article 9(1).
[833] *See* European Commission, supra note 826, paragraph 30.
[834] *Id.*, paragraph 33.
[835] *See* European Commission, List of Public Service Obligations, *available at* https://ec.europa.eu/transport/sites/default/files/pso_inventory_table.pdf (last visited July 26, 2021).
[836] *See* European Commission, supra note 826.
[837] *Id.*, paragraph 11.
[838] *Id.*, paragraph 13.
[839] *Id.*, paragraph 16.

and compensation. PSO's should furthermore be transparent, non-discriminatory and proportionate.[840]

4.4.5 Concluding remarks

Under both EU Regulation 1008/2008 and the Slot Regulation, the special position of regional services is recognized through the possibility to impose PSO's in Articles 16-18 of EU Regulation 1008/2008 in conjunction with Article 9 of the Slot Regulation. Member States may establish PSO's in order to maintain scheduled air services on routes considered to be vital for the socio-economic development of the region they serve, yet are unprofitable for any airline to operate under competitive market conditions.[841]

The Slot Regulation does not in so many words refer to the use and application of TDR's by coordinators. It does, however, provide in Article 10(6) that slots placed in the slot pool are to be distributed without prejudice to the existence of, *inter alia*, TDR's adopted under EU Regulation 1008/2008. Any TDR's need to be compliant with the principles of non-discrimination and national treatment, transparency, and proportionality. They furthermore need to be warranted by mandatory public interest requirements and the measures contained in them must be objective and constant over a certain period.

4.5 Capacity management without *ex ante* slot coordination in the US

4.5.1 The first-come, first-served approach in the US

The WASG guidelines for slot coordination are normally not applied at United States [hereinafter: US] airports for antitrust reasons, except for one high profile exception and for international flights as explained later on in sections 4.5.2 and 4.5.3.[842] In contrast to the EU, the vast majority of airports in the US are not slot-controlled and operate on a 'first-come, first-served' basis without *ex ante* coordination.[843] There are no laws in the US that relate to airport congestion generally. Airlines simply schedule their flights as they wish, taking into account expected delays at the busier airports.[844] Access to airport infrastructure facilities, such as check-in and baggage handling facilities and the use of gates are subject to separate negotiation and arrangements.[845]

Advantages of the 'first-come, first-served' approach include its administrative simplicity.[846] The system requires only a minimum of regulatory intervention, and airlines are not selected on any other basis except for their time of arrival. On the downside, the lack of restrictions does go hand in hand with high levels of congestion and over-subscription at commercially interesting flight times, and scarce airport capacity is mainly reflected in waiting

[840] *Id*., paragraph 18.
[841] *Id*., paragraph 1.
[842] *See* NERA Economic Consulting, *supra* note 5, at 271; Mendes de Leon, *supra* note 48, at 557.
[843] *See* Mendes de Leon, *supra* note 48, at 557; Brecke, *supra* note 491, at 186.
[844] *See* David Starkie, Aviation Markets: Studies in Competition and Regulatory Reform (2008), at 194; NERA Economic Consulting, *supra* note 5, at 271; Starkie, *supra* note 191, at 53.
[845] *See* Mott MacDonald, *supra* note 63, at 5-8.
[846] *See* Jaap de Wit and Guillaume Burghouwt, *Slot Allocation and Use at Hub Airports, Perspectives for Secondary Trading*, 8 European Journal of Transport and Infrastructure Research 2 (2008), at 149.

queues during starts and landings.[847] However, the majority of airports in the US do not face the overdemand problems prevalent in Europe.[848]

Generally, the assumption of the US, primarily US congress, is that access to airports does not need to be regulated.[849] Thus, there is no US legislation especially targeting airport congestion.[850] The presumption holds that the 'first-come, first-served' approach better facilitates competition between legacy carriers and new entrants, as new entrants can allegedly more easily enter the market in the absence of slot controls as opposed to new entrants at slot-controlled counterparts elsewhere in the world. Any interventions addressing airport congestion – if at all – tend to be reactive and driven by the public perception of problems, especially delays arising through the scheduling of an excessive number of flights.[851] Hence, the regulatory regime for slot coordination in the US evolved significantly different from that in the EU.[852]

As opposed to the US, the slot coordination process in another jurisdiction within North America, *id e*st Canada, resembles the guidelines of the WASG. However, the WASG guidelines are criticized by the Canadian Commission Bureau as not adequately addressing 'the competition concerns that would emerge in a dominant carrier scenario'.[853] The allocation process and any transactions are supervised by an independent slot coordinator.[854]

The next section sets out the airports that are or have been subject to the so-called High-Density Rule [hereinafter: HDR] to govern daily operations instead of being reliant on the first-come, first-served approach. Other legislative initiatives, such as the 'Air 21 Act' of 2000 and proposals by the Federal Aviation Administration [hereinafter: FAA] to coordinate slots by means of market-based mechanisms are addressed in sections 4.5.3 and 4.5.4.

4.5.2 Exemptions to the first-come, first-served approach

Access to most US airports is regulated by means of the 'first-come-first-served' approach discussed above, with the exception of a few airports experiencing severe capacity shortfalls. The FAA may impose Level 3 slot coordination or Level 2 facilitation when airport infrastructure is generally unable to meet carrier demand to ensure the efficient use of the airspace consistent with the FAA authority.[855]

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[847] However, the marginal costs of delays at airports dominated by a single carrier or an alliance tend to be overstated. The delay costs imposed by an airline on its own operations by adding additional flights are often internalized into the airline's business equation. In doing so, the airline takes into account the impact of adding additional flights on the operating costs of all the other flights scheduled at the airport. Internalization allows additional flights – so long as they are scheduled by the same airline – to not constitute a negative externality to that airline, but instead allow the airline scheduling flexibility. Hence, the higher the slot portfolio of an airline, the smaller the externality. Other carriers and their passengers, as well as the airport operator, belong to the negatively affected category. The internalization of delays is further addressed in, *inter alia,* Starkie, supra note 65 and De Wit and Burghouwt, supra note 846, at 149.

[848] *See* Sanchez, *supra* note 298, at 19.

[849] *See* Steer Davies Gleave, *supra* note 69, at 125.

[850] *See* Mott MacDonald, *supra* note 63, at 5-10.

[851] *See* Steer Davies Gleave, *supra* note 69, at 125.

[852] *See* Brecke, *supra* note 491, at 186.

[853] *See* House of Commons Canada, Restructuring Canada's Airline Industry: Fostering Competition and Protecting the Public Interest (1999), *available at* https://www.ourcommons.ca/DocumentViewer/en/36-2/TRAN/report-1/page-27 (last visited November 11, 2021).

[854] *See* Gillen and Morrison, *supra* note 114, at 183.

[855] The FAA is the agency charged with ensuring the safety and efficiency of the US National Airspace System and administers coordination or facilitation processes in order to align them with the policy goals established relative to performance goals and runway capacity at airports. *See* Federal Aviation Administration (FAA), Slot Administration – Schedule Facilitation, *available at* https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/slot_adm

Level 3 slot controls apply at two high profile airports in the US: New York John F. Kennedy International Airport and New York LaGuardia Airport, subject to FAA Orders. At Ronald Reagan Washington National Airport, slot controls equivalent to Level 3 coordination are in place pursuant to the HDR to govern daily operations.[856] More information on the HDR is provided in section 4.5.3 below.

Unlike New York LaGuardia Airport and Ronald Reagan Washington National Airport, New York John F. Kennedy International Airport has a large percentage of international flights and is the only airport in the US that generally follows the coordination process prescribed by the WASG. At New York LaGuardia Airport and Ronald Reagan Washington National Airport, slot allocations are indeed based on grandfather rights, but divert from the WASG through a two-month minimum slot usage requirement and other FAA rules or orders in effect for the specific airport.[857] Other airports, including Chicago O'Hare International Airport, Los Angeles International Airport, Newark Liberty International Airport and San Francisco International Airport are subject to Level 2 facilitation to the extent that WASG guidelines applicable to Level 2 facilitation do not conflict with US laws, rules or procedures.[858]

4.5.3 The High-Density Rule of 1968 and the Air 21 Act of 2000

Under the HDR[859], slots are defined as operating privileges to conduct one landing or take-off each day during a specific hour or 30-minute period.[860] The HDR distinguishes between domestic flights and international flights. Whereas domestic flights fall under the HDR, slots within a separate slot pool for international flights largely adhere to the procedures prescribed by the WASG.[861] The distinction between domestic and international flights yields that access to airports is always available to airlines designated by other contracting States under ASAs. At times, domestic slots have been reduced to make way for international services.[862] Currently, Ronald Reagan Washington National Airport is left as the only airport where operations are still regulated by the HDR, although it is unclear to the author if the separation of slot pools for domestic and international flights alike is still maintained.[863]

The HDR does not provide a method for coordinating the authorized number of runway operations between airlines. Instead, the US government conferred antitrust immunity to

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inistration/slot_administration_schedule_facilitation (last visited January 6, 2021). *See* Chapter 2, section 2.2.1 for definitions of Level 2 facilitation and Level 3 slot coordination.

[856] *See* Federal Aviation Administration (FAA), Slot Administration – U.S. Level 3 Airports, *available at* https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/slot_administration/slot_administration_schedule_facilitation/level-3-airports (last visited January 6, 2021).

[857] *Id.*

[858] *See* Federal Aviation Administration (FAA), Slot Administration, *available at* https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/slot_administration (last visited January 6, 2021).

[859] The HDR was vested in 33 Federal Register 17896, Dec. 3, 1968 until it was superseded by the United States Code of Federal Regulations, Title 14 Aeronautics and Space, *supra* note 40. In 1969, the FAA initiated the HDR as a temporary measure to beat the congestion problems at five high-profile airports via regulation of the number of permissible peak-hourly Instrument Flight Rule operations through the allocation of slots without providing prescriptive slot allocation rules, *see* Paul Stephen Dempsey, *Airport Landing Slots: Barriers to Entry and Impediments to Competition*, 26 Air and Space Law 1 (2001), at 22; Steer Davies Gleave, *supra* note 69, at 125.

[860] *See* Sanchez, *supra* note 298, at 4.

[861] *See* NERA Economic Consulting, *supra* note 5, at 234; Brecke, *supra* note 491, at 186.

[862] *See* Mott MacDonald, *supra* note 63, at 5-9.

[863] *See* Federal Aviation Administration (FAA), Slot Administration – U.S. Level 3 Airports, *available at* https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/slot_administration/slot_administration_schedule_facilitation/level-3-airports (last visited January 6, 2021).

coordination committees[864] comprised of airlines to allocate slots among themselves in order to reduce regulatory oversight.[865] However, as coordination committees are heavily dominated by incumbent airlines which resisted efforts for new entry, the entry of competitors into the market was often stifled prior to deregulation from 1978 on.[866] Because coordination committees in the US require unanimity and deadlock-breaking mechanisms are absent, the discussions often reached an impasse.[867]

In 2000, concerns over the ability of new entrants to acquire slots at congested airports, led US Congress to pass the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century[868] [hereinafter: Air 21 Act], which phased out the HDR at Chicago O'Hare International Airport, New York John F. Kennedy International Airport and New York LaGuardia Airport.[869] The Air 21 Act acknowledged that, although secondary trading under the Buy Sell Rule, as to which see section 4.5.4, had provided all carriers the opportunity to acquire slots, congested airports were still faced with significant unmet demand. The Air 21 Act introduced several changes, including the introduction of slots for 'essential air services' exempted from the HDR and the secondary market ('Air 21 slots'), the US equivalent of PSO's, with the aim of encouraging services to smaller communities as well as services started by new entrants.[870] Slots for general aviation are also earmarked and excluded from the trading system.[871] Low-cost carrier [hereinafter: LCC] JetBlue is perhaps the best illustration of a carrier taking advantage of the Air 21 slots, as it has since managed to carve out a significant slot share at New York John F. Kennedy International Airport.[872]

Only six months after the Air 21 Act became federal law, the relaxation of slot restrictions through the adoption of the Air 21 Act and the phasing out of the HDR triggered much higher demand by airlines wishing to operate services from the former HDR airports, handled to acute congestion and substantial traffic delays. Congestion problems were "spiralling out of control". At the request of the Port Authority of New York and New Jersey, the FAA eventually intervened to address the congestion problems at the airports on the basis that it had the statutory obligation to intervene in order to maintain safety and the movement of traffic as codified in the US Code of Federal Regulations.[873]

In January 2001, the FAA imposed temporary limitations comprising a limit on the number of flights at the most congested airports in the US, *id est* 75 scheduled operations per hour. Air 21 slot exemptions were to be coordinated by a lottery, also referred to as the 'slottery' at the time, and their number was restricted.[874] The measures were successful: within six months of their adoption, delays fell dramatically from 330 per day in October 2000 to 98 per day in April 2001.[875] Although the measures adopted by the FAA were meant to be temporary, they have

[864] At the time referred to as 'scheduling committees'.
[865] *See* Mendes de Leon, *supra* note 48, at 557; Dempsey, *supra* note 859, at 23.
[866] *See* David Starkie, *Slot Trading at United States Airports* (1992), at 7.
[867] *See* Dempsey, *supra* note 859, at 23.
[868] United States Code of Federal Regulations, Title 49 Transportation, § 42121.
[869] *See* Mott MacDonald, *supra* note 63, at 5-18.
[870] *Id.,* at 5-18.
[871] *See* NERA Economic Consulting, *supra* note 5, at 234.
[872] *See* Mott MacDonald, *supra* note 63, at 5-19.
[873] United States Code of Federal Regulations, Title 49 Transportation, § 41715(b).
[874] *See* Federal Aviation Administration (FAA), High Density Airports; Notice of Lottery of Slot Exemptions at LaGuardia Airport (2000); Mott MacDonald, *supra* note 63, at 5-20.
[875] *See* Mott MacDonald, *supra* note 63, at 5-20.

been extended several times. The latest extension was granted on September 18th, 2020 for New York John F. Kennedy International Airport and New York LaGuardia Airport.[876]

4.5.4 The use of market mechanisms for slot coordination

Since the implementation of the Buy Sell Rule in 1986, secondary slot trading has been widespread at US airports.[877] Under this rule, slots could be bought, sold, exchanged, or leased in a secondary market by airlines and third parties. This rule was applicable to the five most congested airports within the country, which had also been subject to the HDR in the past, and essentially substituted for rationing by queue on first-come, first-served basis.[878] Slot trading under the Buy Sell Rule was restricted to domestic slots.[879] International slots and general aviation slots were ringfenced and excluded from the trading system. They were, however, allowed to be exchanged between carriers on a one-for-one basis.[880] The Buy Sell Rule also allowed non-carriers to hold slots, which was something of significance for carriers wishing to use their slots as collateral for loans.[881]

Under the US Code of the Federal Regulations, international airlines were given priority at the slot constrained airports in order to ensure that the promulgation of the 1986 Buy Sell Rule would not impede access to slot constrained airports by foreign airlines, even if it means that a domestic airlines' operations will suffer.[882] The FAA stressed that it still owned the slots traded under the Buy Sell Rule and reserved the right to revoke the slots at any time.[883]

In 1993, modest amendments were made to the Buy Sell Rule. Slots that were traded had to be used according to a 80% threshold in a two month period, from 65% previously. Carriers entitled to slots from the reserved pool was widened to include incumbent airlines with relatively few slots, although restrictions were placed on incumbents to prevent them from acquiring slots intended for new entrants.[884]

Across the board, secondary slot trading in the US has proved to be a useful tool that has led to increased slot mobility.[885] Following the success of the Buy Sell Rule, the FAA has been actively considering alternative market-based and/or hybrid[886] approaches to better coordinate capacity at airports in New York with view to potential applicability to other congested US airports in the future.[887] Policy options comprising of market-based and/or hybrid

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[876] *See* Federal Aviation Administration (FAA), 'Operating Limitations at John F. Kennedy International Airport', 85 Federal Register 58258, Docket No. FAA-2006-25755; Federal Aviation Administration (FAA), 'Operating Limitations at New York Laguardia Airport', 85 Federal Register 58255, Docket No. FAA-2006-25755.

[877] *See* Steer Davies Gleave, *supra* note 69, at 128; Menaz and Matthews, *supra* note 194, at 34.

[878] *See* Mendes de Leon, *supra* note 48, at 557; Achim I. Czerny, Peter Forsyth, Hans-Martin Niemeier et al., *Airport Slots: International Experiences and Options for Reform* (Routledge 2008), at 63.

[879] *See* Forsyth and Niemeier, *supra* note 134, at 64.

[880] *See* NERA Economic Consulting, *supra* note 5, at 73.

[881] Typically, the lender takes possession of the slot and leases it back to the carrier whose debt is secured by the collateral of the slot. *See infra* Chapter 5, section 5.6.3.

[882] US Code of Federal Regulations, Title 14, Part 93, § 93.217(a)(8).

[883] US Code of Federal Regulations, Title 14, Part 93, § 93.223; Mott MacDonald, *supra* note 63.

[884] Since the adoption of the Air 21 Act in 2000, airlines have sought to acquire Air 21 'exemption' slots, since they wouldn't have to pay for these slots. *See* Mott MacDonald, *supra* note 63, at 5-14 and 5-29.

[885] *See* United States Department of Justice, *Comments on congestion and delay reduction at Chicago O'Hare International Airport* (2005); Mott MacDonald, *supra* note 63, at 5-28.

[886] Administrative measures supplemented by market-based measures.

[887] *See* Federal Aviation Administration (FAA), *Notice of Alternative Policy Options for Managing Capacity at LaGuardia Airport and Proposed Extension of the Lottery Allocation* (2001); Federal Aviation Administration (FAA) II, *Congestion Management Rule for LaGuardia Airport* (2006).

approaches were evaluated by the National Center of Excellence for Aviation Operations Research (2004)[888] and Ball et al. (2007)[889].

In 2007, the FAA proposed that slots allocated by it at New York LaGuardia Airport in 2007 would have a lifespan of between 3 to 13 years. In 2010, 10% of these authorizations would have expired, and would be withdrawn by the FAA if more slots would be needed for international flights, *exempli gratia*. This 10% tranche would then be reallocated with a renewed 10-year lifespan. Each year following 2010, 10% of the assigned slots would expire and be reallocated for ten years. According to the FAA, this proposal offers clear incentives for airlines to maximize the value of operating authorizations over the assigned time period. It evens out exposing airport access to market forces, providing access for new entrants, and preserving stability at the airport.[890]

In 2008, the FAA and the US Department of Transportation announced a new congestion management rule, which involved the auctioning of a portion of slots at three New York airports,[891] but those plans faced strong opposition by the airport's operating authorities, airline associations and other interest groups.[892] An FAA initiative to auction slots at the three largest airports serving New York was stayed by the Courts in 2008.[893]

4.5.5 Concluding remarks

In contrast to the EU, access to most US airports is not regulated under the presumption that the 'first-come, first-served' approach better facilitates competition between legacy carriers and new entrants.[894] To further reduce regulatory oversight, the US government has conferred antitrust immunity to coordination committees for airlines to allocate slots among themselves.[895] It is unclear to the author to what extent the US government still grants antitrust immunity to coordination committees to date.

Nonetheless, the entry of competitors into US airports has often been stifled. This seems at odds with the pro-competitive intention behind the US approach mentioned in section 4.5.1 to not regulate airport congestion with the intention to better facilitate competition between legacy carriers and new entrants. Instead, the grant of antitrust immunity may have empowered incumbent carriers in particular by essentially allowing them to self-regulate. To improve slot mobility and enhance market access, the US has proposed a myriad of techniques since the introduction of the HDR in 1968, including lotteries, slot allocation favoring international services and general aviation, services operated by new entrants, as well as the establishment of security interests in slots.[896]

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[888] *See* National Center of Excellence for Aviation Operations Research (NEXTOR), *NEXTOR Congestion Management Project – Interim Report: The Passenger Bill of Rights Game* (2005), at 1.
[889] *See* Michael Ball, Lawrence M. Ausubel, Frank Berardino et al., *Market-Based Alternatives for Managing Congestion at New York's LaGuardia Airport* (2017), at 13.
[890] *See* FAA II, supra note 887.
[891] *Id.*
[892] *See* Madas and Zografos, *supra* note 299, at 275.
[893] Court of Appeals for the district of Columbia Circuit, *Port Authority of N.Y. & N.J. v. Federal Aviation Administration*, No. 08-1329 (8 Dec. 2008)
[894] *See* Steer Davies Gleave, *supra* note 69, at 125.
[895] *See* Mendes de Leon, *supra* note 48, at 557; Dempsey, *supra* note 859, at 23.
[896] *See* Mendes de Leon, *supra* note 48, at 558.

4.6 The coordination of slots in other regions of the world

4.6.1 Preliminary remarks on slot coordination in other world regions

Besides the EU and US as prime examples of mature markets from the perspective of air transport liberalization and the subsequent adoption of rules in the area of slot coordination, rules for the coordination of slots in other jurisdictions around the world have also been drafted.

This section will primarily focus on slot coordination in the selected world regions of Latin America and the Asia-Pacific region, with a prime focus on Mexico City Benito Juárez Airport, China's three largest hub airports of Beijing Capital International Airport, Shanghai Pudong International Airport and Guangzhou Baiyun International Airport, and Sydney Kingsford Smith Airport. These airports have in common severe congestion rates posing barriers to airport access, as well as the efforts of the States whose territories they are located in to address these severe congestion rates via the coordination of slots, which is the reason why I chose these for discussion in the next sections.

4.6.2 Slot coordination at a selection of super-congested airports

4.6.2.1 Slot coordination at Mexico City Benito Juárez Airport

Besides Mexico City Benito Juárez Airport, the Latin American airports of, including but not limited to, Bogotá Eldorado, and São Paulo Guaralhus use slots to distribute access to scarce airport capacity. The slot regulations used in Latin America, however, differ from the international best practices laid down in the WASG, and also differ amongst themselves.[897] Garcia-Arboleda (2013) analyzes the existing regime for slot regulation at the three busiest airports in Latin America: Bogotá Eldorado, Mexico City Benito Juárez Airport and São Paulo Guaralhus.[898] This section limits itself to an analysis of slot coordination at Mexico City Benito Juárez Airport.

In Mexico, the airport determines the assignment of slots based upon the recommendations of a committee that takes into account several factors.[899] The committee usually comprises members of incumbent carriers and may not include members of competing airlines at all airports. Only airlines that are operating at the airport are represented in the committee, which is particularly problematic at super-congested airports where entry by new competitors may not be possible.[900] Since 2005, Mexico's Ministry of Transportation and Communications [hereinafter: SCT] and the operator of Mexico City Benito Juárez Airport have been empowered to implement market-based solutions for slot coordination, including auctions, but have not done so until 2017 as discussed in section 4.6.1.2 below.

Mexico City Benito Juárez Airport experienced a dramatic increase in traffic over the past several years. Demand exceeds airport capacity for each hour of the day, such that there are no slots freely available from the pool.[901] In 2005, the SCT declared Mexico City Benito Juárez Airport to be saturated, meaning that the number of slots during peak hours were at full capacity making it difficult for new entrants to effectively compete in the Mexico City market. It reached the limit of 54 operations per hour.[902]

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[897] *See* García-Arboleda, supra note 381, at 574 and 612.
[898] *Id.*
[899] Mexican Airport Law (*Ley de Aeropuertos*) of 2000, Article 95.
[900] *See* Augustin J. Ros, *A Competition Policy Assessment of the Domestic Airline Sector in Mexico and Recommendations to Improve Competition* (2010)
[901] *See* Victor Valdes and David Gillen, *The consumer welfare effects of slot concentration and reallocation: A study of Mexico City International Airport*, 114 Transportation Research Part A: Policy and Practice (2018).
[902] *See* Ros, *supra* note 900.

When an airport is declared by the SCT as saturated with respect to the availability of slots, a special regime for slot coordination applies and the airport can implement a number of reforms. The special regime consists of the General Operational Rules of Mexico City Benito Juárez Airport [hereinafter: GORMICA], which to the best of the author's knowledge still exists at the date of writing. Within the first four years following the declaration of saturation, the airport management will enforce the use it or lose it rule by withdrawing those slots that have not been used at least 85% of the time during the preceding year, as opposed to the 80% usage threshold mentioned in the WASG.[903]

GORMICA does not foresee in provisions with regard to new entrants. Hence, a competitor seeking to offer air services into Mexico City is dependent on available pool slots. The lack of available slots, however, tends to impede market access for new or expanding airlines wanting to compete with existing airlines.[904]

New slots, as well as slots withdrawn in observance of the 85% threshold and slots voluntarily returned by airlines, should be auctioned. The highest bidder will be allocated the respective slots and must start using them within three months following the allocation. Should the slots not be used during this period, they will be withdrawn by Mexico's airport management.[905] If saturation conditions still exist three years after the auction, the airport is empowered to take back 10% of slots that all airlines are using during the peak hours. These slots will then also be auctioned to the highest bidder.[906]

4.6.2.2 The involvement of Mexico's Federal Economic Competition Commission in the coordination of slots

Following Mexico City's declaration as a saturated airport, Mexico's Federal Economic Competition Commission [hereinafter: COFECE] stated the following in 2010:

> "The assignment of take-off and landing slots is an important barrier to the entry of new competitors given that the airport facilities are limited and those airlines that have ample slots within an airport that is saturated have a competitive advantage that converts itself into a barrier to entry for new competitors."[907]

The Commission also stated:

> "In an airport that is operating under saturation conditions the lack of take-off and landing slots becomes a competition problem given that since there are no slots for new competitors it becomes a barrier to entry."[908]

Accordingly, scarce airport infrastructure functions as a fortress for existing airlines as competitive entry is foregone.[909] Existing airlines include Aeromexico, the airport's sole network carrier, which controls approximately 55% of total slots at Mexico City Benito Juárez Airport.[910] Prior to the traffic increase, there already were concerns about the competitive conditions at Mexico City Benito Juárez Airport, with network carriers Mexicana and Aeromexico accounting for 75% of domestic slots in 2009. Mexicana ceased operations in 2010 and the slots were

[903] *See* García-Arboleda, supra note 381, at 598.
[904] *Id.,* at 598.
[905] *Id.*, at 598.
[906] *See* Ros, *supra* note 900.
[907] *Id.*
[908] *Id.*
[909] *See* García-Arboleda, supra note 381.
[910] *See* Valdes and Gillen, *supra* note 901.

reallocated largely to Aeromexico and to a lesser extent to LCCs. Valdes and Gillen (2018) investigate the impact of slot reallocation on consumer welfare for the case of Mexico City Benito Juárez Airport, stimulated by the bankruptcy of network carrier Mexicana in 2010.[911]

In a 2010 competition policy assessment of the domestic airline sector in Mexico, the Organisation for Economic Co-operation and Development [hereinafter: OECD] recommended, inter alia, to implement market-based solutions for slot coordination, to eliminate grandfather clauses that favor the incumbent carriers' access to essential airport infrastructure, and to modify the regulations so that both current and potential carriers are represented in the committees that administer and allocate slots.[912]

To address the 'competition problem' resulting from slot scarcity, COFECE issued a decision determining that Mexico City Benito Juárez Airport's infrastructure constituted an essential facility, and that the slot management procedures at the time were generating anti-competitive effects. In 2017, COFECE proposed a set of corrective measures for saturated airports.

Similar to GORMICA, slots would be auctioned to the highest bidder, and 10% of existing slots would be forfeited. Slots could be withdrawn on punctuality criteria, and slots cannot be allocated or transferred to air carriers that accumulate more than 35% of the total slots in the same timeslot. Furthermore, the 85% threshold as opposed to a 80% threshold is maintained. All these elements are described in Article 99 of the Regulations under Mexican Airport Law, in force since February 17, 2000.[913]

IATA has strongly criticized the scheme and urged Mexican authorities to embrace the principles of the current WASG instead.[914] COFECE, however, state that the new slot system fully complies with the relevant laws, *id est* the Mexican Airport Law of 2000.[915] So far, it appears that no slot auctioning has yet taken place at Mexico City Benito Juárez Airport.

Later in 2017, the SCT adopted a Decree to Reform the Regulations of the Airports Law and the General Principles to Allocate Take-Off and Landing Slots at Saturated Airports that contradicted COFECE's corrective measures. COFECE filed an appeal against the decree before the Supreme Court in 2017 arguing that COFECE was attributed the powers to regulate an essential facility, and that the Decree was a violation of COFECE's powers.[916] The Supreme Court, however, ruled that the regulation of slot allocation did not fall within COFECE's

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[911] *Id.*

[912] *See* Ros, *supra* note 900.

[913] *See* Comisión Federal de Competencia Económica (COFECE), COFECE responds to IATA's comments on corrective measures imposed on Mexico City's International Airport to promote competition (21 July 2017), *available at* <https://www.cofece.mx/wp-content/uploads/2018/02/COFECE-037-2017.pdf> (last visited November 12, 2021). Furthermore, the Mexican Airport Law, *supra* note 899, Article 99, under I(a), states that "The airport manager should revoke landing and take-off slots from carriers if slots are unused in a proportion equal to or greater than 85% or if carriers operate with delays equal to or over 15%, for reasons attributable to the carriers". Article 99 furthermore provides the basis for the auctioning system and the 10% confiscation under I(b) and II(a).

[914] *See* International Air Transport Association (IATA), IATA Urges Mexico to Embrace Global Standards for Slot Management (20 July 2017), *available at* https://www.iata.org/en/pressroom/pr/2017-07-20-02/ (last visited November 12, 2021).

[915] *See* COFECE, *supra* note 913.

[916] *See* Comisión Federal de Competencia Económica (COFECE), COFECE Filed a Constitutional Dispute against the Decree to Reform the Regulations of the Airports Law and the General Principles to Allocate Take-off and Landing Slots at Saturated Airports' (22 November 2017), *available at* https://www.cofece.mx/wp-content/uploads/2018/02/COFECE-054-2017.pdf (last visited November 12, 2021); Organisation for Economic Cooperation and Development (OECD), *OECD Peer Reviews of Competition Law and Policy: MEXICO* (2020), at 69.

competence. COFECE can only recommend the adoption of measures, but cannot supersede the original regulator power of the SCT.[917]

4.6.3 Slot coordination at the Chinese hub airports of Beijing, Shanghai and Guangzhou

4.6.3.1 Air transport liberalization in China and the impact on slot coordination

Although the Chinese airline market has been largely liberalized in many aspects in the past three decades, including in the areas of airfare setting, fleet planning and airline ownership,[918] airport slots at large Chinese airports, especially the super-congested hub airports of Beijing Capital International Airport, Shanghai Pudong International Airport, and Guangzhou Baiyun International Airport have been tightly controlled by the Civil Aviation Administration of China [hereinafter: CAAC], which is the competent authority in China for civil aviation.[919] The CAAC is responsible for, inter alia, the development, implementation and the supervision of strategy and planning of civil aviation industry development and the drafting of relevant laws, regulations, policies and standards, including for the coordination, allocation and supervision over the use of slots.[920]

The Chinese aviation industry has experienced rapid growth during recent decades, with an annualized passenger growth rate of 14.9% between 1990 and 2010. Although China lags behind other liberalized aviation markets in LCC development, China's largest LCC – Spring Airlines – has achieved rapid growth since its inauguration in 2005. Nonetheless, some legacy regulations remain untouched and the aviation market exhibits some distinctive characteristics, including the low penetration rate of LCCs.[921]

In order to control the excessive demand for air services at Chinese airports, the CAAC has enacted slot regulation since 2010.[922] Regulations on route entry and airport slot coordination in China are less liberalized than those adopted in mature markets such as in the EU and the US, with Chinese airlines often needing to secure approval for both route entry and airport slots when they add new destinations or frequencies on routes linked to hubs in metropolitan areas.[923] The allocation of slots used to be done on an *ad hoc* basis, and slot coordination committees comprised of representatives from the regional bureau, regional air traffic control authorities, airlines, and the airport.[924] A key responsibility of this committee is to suggest adequate slot allocation ratios between hub carriers vis-à-vis airlines based at other airports.[925] This partially changed in 2018, when the Methods for Management of Civil Aviation Slots [hereinafter: the Methods], came into effect on 1 April 2018. The Methods are the latest CAAC regulation covering slots management in China.[926] The Methods are similar to the WASG principles and are subject to discussion in section 4.6.3.2 below.[927]

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[917] Constitutional Dispute 301/2017. First Specialised Court A.R. 142/2018.
[918] *See* Meng Hou, Kun Wang and Hangjun Yang, *Hub airport slot Re-allocation and subsidy policy to speed up air traffic recovery amid COVID-19 pandemic – case on the Chinese airline market*, 93 Journal of Air Transport Management C (2021), at 2.
[919] *Id.,* at 2; Fu and Oum, *supra* note 398.
[920] Jason Jin, The Aviation Law Review: China (18 August 2021), *available at:* https://thelawreviews.co.uk/title/the-aviation-law-review-3/china (last visited: November 12, 2021).
[921] *See* Xiaowen Fu, Zheng Lei, Kun Wang et al., *Low cost carrier competition and route entry in an emerging but regulated aviation market – The case of China*, 79 Transportation Research Part A Policy and Practice 4 (2015), at 3.
[922] See Zhi-jian Ye et al., *Performance Comparing and Analysis for Slot Allocation Model* (2019), at 2.
[923] *See* Fu and Oum, *supra* note 398, at 10.
[924] *See* Fu et al., *supra* note 921, at 7.
[925] *See* Fu and Oum, *supra* note 398, at 10.
[926] *See* Jin, *supra* note 920.
[927] *See* Ye et al., *supra* note 922, at 2.

China's biggest LCC Spring Airlines is of the opinion that the previous system was unfair to LCCs in comparison with State-owned airlines, the latter of which were allocated all the commercially interesting slots at hub airports.[928] China's biggest hub airlines are largely State-owned and based at these hub airports where they grandfather large slot portfolios, preventing low-cost carriers from starting operations in order to avoid fierce competition.[929] For example, the CAAC rejected Spring Airlines access to serve Beijing Capital International Airport, although Spring Airlines have tried to apply for the slots for six years since its inauguration.[930]

In September 2020, the CAAC formally eliminated route entry restrictions for airlines at China's three large hub airports. The weekly maximum frequency of 49 busy routes involving Beijing Capital International Airport, Shanghai Pudong International Airport and Guangzhou Baiyun International Airport has been lifted, and airlines can now freely decide their frequencies according to market demand. Moreover, airlines can apply for slots at Beijing Capital International Airport, Shanghai Pudong International Airport and Guangzhou Baiyun International Airport to serve small airports with annual passenger throughput of less than 1 million, provided the airlines operate at least 15 routes from the hub airports. This policy is a remarkable step in China's airline market liberalization and is targeted at speeding up China's airline market recovery in light of COVID-19. Originally, the CAAC forbade airline services from hub airports to small airports, so that this market could only be served by high-speed rail.[931]

4.6.3.2 The Methods for Management of Civil Aviation Slots

With the Methods, the CAAC intends to

> ". . . further facilitate a fair, efficient, competitive and incorrupt allocation of slot resources, promote normal and orderly operations of flights, press ahead with supply-side structural reform in the civil aviation industry in an in-depth way and boost realization of the strategic goal of building China into a civil aviation power."[932]

The Methods consist of 8 chapters with 59 clauses, specifying the principles and basic rules for the overall management, allocation and oversight of slots. Airports are categorized into three types: coordinated, facilitated and non-coordinated airports, by reference to the three categories identified in the WASG. Slots at coordinated airports are divided into two pools, whereby international slots are reserved for international flights and domestic slots are reserved for domestic flights, which is a departure from the WASG where airlines themselves decide whether to designate a domestic or international flight for any obtained slots.[933] Slots in the same pool can be exchanged, swapped and operated jointly.[934]

The allocation method for international slots encourages airlines to introduce more new routes and favor large-aircraft and long-distance routes for airlines to improve their route networks. Conversely, the allocation method for domestic slots encourages airlines to add

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[928] *See* Reuters, China reforming slot-assignment process at some major airports (7 December 2015), *available at* https://www.reuters.com/article/china-airlines-slots-idUSL3N13W1P720151207 (last visited: November 12, 2021).
[929] *See* Hou et al., *supra* note 918, at 2; Fu et al., *supra* note 903.
[930] *See* Hou et al., *supra* note 918, at 3; Fu et al., *supra* note 903.
[931] *See* Hou et al., *supra* note 918, at 3.
[932] *See* Civil Aviation Administration of China (CAAC), Methods for Management of Civil Aviation Slots to be Implemented on April 1 (1 March 2018), *available at* http://www.caac.gov.cn/en/XWZX/201803/t20180301_55433.html (last visited: November 12, 2021).
[933] *Id.*
[934] *See* Beijing Arbitration Commission, *Commercial Dispute Resolution in China: An Annual Review and Preview* (2019), Chapter 2.1 on General Civil Aviation Provisions.

flights to remote and ethnic minority areas and old revolutionary bases.[935] Airlines may not alter the routes, schedules, aircraft types and operating dates associated with international slots without prior authorization of the CAAC and should make full use of them in order not to lose their international route operating permits to other airlines.[936]

The Methods furthermore provide that the allocation of slots will be prioritized by a formula.[937] In the absence of legal infractions, historic slots enjoy first priority when slots fall to be allocated. Historic 'retimings' have second priority, followed by new airlines. Within each category, airlines with high operating efficiencies will win high scores, which defines the order of prioritized allocation. According to the established order of prioritized allocation, airlines may then choose slots from the pool.[938] The Methods also specify exchange and swap of slots, code sharing, joint operation, transfer, voluntary return and the revocation of slots that can happen in the secondary slot market. A coordination committee is also established to further promote a fair, efficient, competitive and incorrupt allocation of slot resources.[939]

4.6.3.3 2016 slot auctioning trial run

As part of a trial run, slots for additional domestic flights at Guangzhou Baiyun International Airport and Shanghai Pudong International Airport were put up for sale in 2016. Slot allocations were decided by the drawing of lots, akin to a slot auctioning scheme. A total of 196 additional weekly slots were made available at each of the two airports, of which half will be reserved for international routes which will continue to be assigned by the government. The other half will be auctioned. Auction winners may use the slots for three years.[940]

Despite the presence of many other small-sized or privately-owned carriers, the major carriers became the only successful bidders in the trial run. China's four largest airlines, to wit Air China, China Eastern, China Southern and Hainan Airlines, and their affiliates won all slot pairs by paying a total of 550 million Renminbi, the local currency.[941]

4.6.4 Slot coordination at Sydney Kingsford Smith Airport

4.6.4.1 The legal framework for slot coordination at Sydney Kingsford Smith Airport

This section targets slot coordination in Australia, specifically Sydney Kingsford Smith Airport, where slots are coordinated in accordance with the Sydney Kingsford Smith Airport Demand Management Act 1997[942] [hereinafter: the Act of 1997] and its associated Sydney Airport Slot

[935] *See* CAAC, *supra* note 932.
[936] *See* Beijing Arbitration Commission, *supra* note 934, Chapter 2.1 on General Civil Aviation Provisions.
[937] *Id.*
[938] *See* CAAC, *supra* note 932.
[939] *Id.*
[940] *See* Routes News, China gambles on slot auctions (24 September 2016), *available at* https://www.routesonline.com/news/29/breaking-news/268813/china-gambles-on-slot-auctions/ (last visited: November 12, 2021).
[941] *See* Dian Sheng, Zhi Chun Li and Xiaowen Fu, *Modeling the effects of airline slot hoarding behavior under the grandfather rights with use-it-or-lose-it rule*, 122 Transportation Research Part E: Logistics and Transportation Review C (2019).
[942] Sydney Airport Demand Management Act 1997, No. 173, 1997, Compilation No. 12.

Management Scheme 2013, the Sydney Airport Compliance Scheme 2012[943] and the Sydney Airport Demand Management Regulations 1998.[944]

The rules target Sydney Kingsford Smith Airport, for it is the only slot coordinated airport in Australia.[945] Seven other Australian airports have implemented a slot system to manage congestion without the need for legislation, including Adelaide, Brisbane, Cairns, Darwin, Gold Coast, Melbourne and Perth airports. The legislation in place for SYD establishes a scheme for the allocation of slots, institutes the position of a so-called 'Slot Manager' (the Australian equivalent of the slot coordinator), and creates a compliance framework.[946]

The Act of 1997 defines the function of the Slot Manager as being responsible for the development, administration and amendments of the slot management scheme, as well as for the performance of other functions as conferred on the Slot Manager by the Act of 1997 and the supporting legislation.[947] The Slot Manager is appointed by the minister and may, among others, authorize the operator of Sydney Airport to exercise the Slot Manager's powers relating to the allocation of slots or in connection with a slot that has been allocated.[948]

The Act of 1997 was initially introduced by the Australian government to give effect to a movement cap which restricts the number of slots that can be issued at Sydney Kingsford Smith Airport to 80 per hour as a means of achieving a balance between the efficient use of the airport and broader environmental and noise impacts following the opening of Sydney Kingsford Smith Airport's third runway.[949] The Minister may, by legislative instrument, set a lower number of aircraft movements.[950] A curfew is in place between 11 pm and 6 am at Sydney Kingsford Smith Airport.[951]

Slots are used to manage the cap of 80 movements per hour.[952] A 'slot' permits an aircraft to conduct a gate movement in preparation for a take-off or following a landing. A slot is allocated for a specified day and time, and all commercial and private aircraft require a slot for landing or take-off into or out of Sydney Kingsford Smith Airport.[953] Slots are thus defined as gate movements, whereas aircraft movements are regarded as landings or take-offs of aircraft from a runway according to Schedule 1 of the Act. By comparison, under the WASG a slot is an approval for the use of all infrastructure available.[954]

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[943] Sydney Airport Compliance Scheme 2012, made under subsection 54(2) of the Sydney Airport Demand Management Act, *supra* note 942. The Compliance Scheme requires airlines to adhere to the slots they are allocated, with penalties applying for unauthorized (no-slot or off-slot) operations. It is administered by Airport Coordination Australia. Pecuniary penalties in respect of the contravention as the Federal Court determines to be appropriate may be imposed on aircraft operators, *see* Sydney Airport Demand Management Act, supra note 942, section 14(2). In determining the penalty, the Court must have regard to, inter alia, the nature and extent of the contravention, the nature and extent of any loss or damage suffered as a result of the contravention, the circumstances in which the contravention took place, and whether the operator has previously been found to have engaged in similar conduct.
[944] *See* Australian Government, Department of Infrastructure and Transport, Sydney Airport Slot Management Administration Manual (2013), at 3.
[945] *See* Gillen and Morrison, *supra* note 114, at 182.
[946] *See* Australian Government, Sydney Airport Demand Management: Discussion Paper (2020), at 23.
[947] Sydney Airport Demand Management Act, *supra* note 942, section 60.
[948] *See* Australian Government, *supra* note 946, at 29.
[949] Sydney Airport Demand Management Act, *supra* note 942, section 6(1).
[950] *Id.*, section 7(1).
[951] *See* Australian Government, *supra* note 946, at 37.
[952] Sydney Airport Demand Management Act, *supra* note 942, section 33.
[953] *Id.*, section 34(1).
[954] *See* Australian Government, *supra* note 946, at 30.

Slots are not transferable, save for provisions in section 20 and 21 of Sydney Kingsford Smith Airport's Slot Management Scheme of 2013.[955] The Slot Management Scheme may also deal with associated matters such as the variation, suspension, cancellation, surrender or swapping of allocated slots, and the conditions that may be imposed on slots.[956] The Minister may, by legislative instrument, determine additional requirements with which the Slot Management Scheme must be consistent, after consulting the Slot Manager about the proposed determination.[957] The Minister may, for instance, direct the Slot Manager "to vary, suspend or cancel slots that have been allocated under the Slot Management Scheme as specified in the direction".[958]

In order to ensure that the regulatory framework in place "continues to meet the current and future needs of the aviation industry, the travelling public and the local community", the Australian government is currently conducting a comprehensive review into, among others, the slot management scheme at Sydney Kingsford Smith Airport.[959]

4.6.4.2 Differences between Australian legislation on slots and the WASG

The Act of 1997 and its associated instruments have been developed with reference to the WASG guidelines for slot coordination, including the principles of historic precedence according to a 80% threshold and the new entrant rule covering 50% of slots in the pool, although it also provides additional provisions in comparison with the WASG.[960] Additional provisions reflect policy responses to airport capacity challenges in relation to aircraft size and the protection of regional slots for regional services across New South Wales [hereinafter: New South Wales]. Moreover, in 2001, the Slot Management Scheme was amended to include a minimum aircraft seat limit for new slots, which encouraged airlines progressively to introduce larger aircraft.[961] While the industry developed WASG guidelines have been enhanced, the Act of 1997 has not been updated since 2008 and its instruments have not been updated since 2013, so the legislation does not reflect the enhancements and changes made to the current WASG.[962]

Provisions that are also not featured in the WASG include the movement cap and the exclusion of the ability to trade slots. Airlines are permitted to swap slots, but not to trade them for consideration. According to the Australian government, lessons in other fields demonstrate that where "a limited public resource – such as a capped airport movement" is managed by trading, the greater may be the need for careful design to ensure consumer and wider interests than those of the direct negotiating parties continue to be delivered.[963]

4.6.4.3 The ringfencing of regional slots resembling PSO's in the EU

With regard to the protection of regional slots for NSW regional services[964], the Sydney Airport Slot Management Scheme 2013 reserves a number of slots in peak periods[965] for regional services, also known as Sydney Airport's "regional ring fence". It is designed to ensure required

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[955] Sydney Airport Demand Management Act, *supra* note 942, section 34(2).
[956] *Id.*, section 35(1).
[957] *Id.*, sections 36(1) and 36(2).
[958] *Id.*, section 46(1)(a).
[959] *See* Australian Government, *supra* note 946, *supra* note 946, at 3.
[960] *See* Australian Government, supra note 944, at 4.
[961] *See* Australian Government, supra note 944, at 6.
[962] *See* Australian Government, *supra* note 946, at 24.
[963] *See* Australian Government, *supra* note 946, at 25.
[964] A 'regional service' can be defined as a flight that takes off and lands within NSW, noting that a particular service might consist of several legs.
[965] Peak periods at Sydney Airport are between 6-11 am and 3-8 pm, Monday to Friday.

access for airlines operating flights between Sydney Kingsford Smith Airport and communities in regional NSW to guarantee that the NSW communities were able to maintain access to their state's capital city. The regional ring fence slots are reflected in law as the Permanent Regional Service Series [hereinafter: PRSS] and is deemed the Australian equivalent of the imposition of PSO's under EU Regulation 1008/2008.[966] The number of PRSS was set in 2001 by reference to the number of regional slots in the previous season. In 2001, they made up 26% of movements, which has declined to 19% in 2019.[967]

In peak periods, regional flights can only be conducted using a PRSS slot. A PRSS slot cannot be moved between peak and off-peak periods. During peak hours, conversion of non-PRSS slots into PRSS slots is prevented in order to effectively cap the number of regional services able to be operated in peak periods. Non-PRSS slots can be converted to PRSS slots in off-peak periods if the slot series was used for regional flights in the previous to equivalent scheduling seasons, and vice versa.[968]

4.6.4.4 The 'size of aircraft' test

In addition to the use-it-or-lose-it rule, the 'size of aircraft' test for slot series allocated in the previous equivalent scheduling season is applied in Australia by the Slot Manager to support efficient use of Sydney Kingsford Smith Airport's constrained capacity.[969] It is not featured in the WASG, nor in the Slot Regulation. To satisfy this test, an airline has to have used at least 80% of the relevant gate movements in the series using an aircraft in the size category for which the slot was allocated. The size of aircraft test only applies to series where it has been specified by the Slot Manager that the rule applies, whereas the use it or lose it rules applies to all slot series. Section 19 of the Sydney Airport Slot Management Scheme 2013 furthermore accords priority to applications for larger aircraft over smaller aircraft.[970]

4.6.5 Concluding remarks

The variance in measures adopted by different States are illustrative of the non-binding nature of the WASG guidelines, which instead acknowledge that States or regions may have national regulations pertaining to slot coordination preceding over the WASG guidelines.

Analysis of the rules for slot coordination applicable to Mexico City Benito Juárez Airport, Guangzhou Baiyun International Airport, Shanghai Pudong International Airport and Sydney Kingsford Smith Airport and of the evolution of these rules show that States are actively looking for solutions to address levels of super-congestion faced by the airports located within their territories. Initiatives are various and often not limited to a one-off exercise. They range from administrative measures such as the ringfencing of regional slots and the 'size of aircraft' test at Sydney Kingsford Smith Airport to the market-based solution of slot auctioning at Mexico City Benito Juárez Airport and the Chinese airports of Guangzhou Baiyun International Airport and Shanghai Pudong International Airport.

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[966] *See* Australian Government, *supra* note 946, at 15-17. The price cap and price notification regime for PRSS is discussed in Australian Government, Economic Regulation of Airports – Productivity Commission Inquiry Report (2019), at 28.
[967] *See* Australian Government, *supra* note 946, at 17-18.
[968] *Id.*, at 15-17.
[969] Sydney Airport Slot Management Scheme 2013 made under subsection 44(2) of the Sydney Airport Demand Management Act, *supra* note 942, section 8.
[970] *See* Australian Government, *supra* note 946; Sydney Airport Slot Management Scheme 2013 made under subsection 44(2) of the Sydney Airport Demand Management Act, *supra* note 942, section 19(2).

4.7 Concluding remarks

The WASG, global guidelines for the coordination of slots administered by the WASB consisting of airport, airline and coordinator representatives, acknowledge in their Preface the right of each national regulator to derogate or regulate differently from the guidelines incorporated in the WASG.[971] The variance in measures adopted by different States to address slot coordination at (super-)congested airports, as discussed in this chapter, are illustrative of the non-binding nature of the WASG guidelines. In the words of ACI, "[t]he WASG is intended as a minimum common denominator rather than a binding regulation".[972]

In the context of the imbalance between supply and demand of airport capacity as elaborated in Chapter 2, sections 2.3 and 2.4, the Slot Regulation provides the EU's 27 Member State, Iceland, Norway, Liechtenstein and, for the greater part, also Switzerland, with a legally binding slot regime based on the principles of neutrality, transparency and non-discrimination as to nationality and identity of air carriers.[973] The guidelines and procedures laid down in the WASG served as the basis for the Slot Regulation, which entered into force in 1993. In essence, the Slot Regulation gave legal force to existing best practices provided by the WASG.[974]

Although the EU has exclusive external competence in the field of slot allocation in the conclusion of ASAs, the EU cannot enforce this competence without the executive powers of the Member States, thus opening the way for local or national rules. Hence, this chapter has argued that slot coordination is not regulated exclusively at intra-EU level. Member States and coordinators are thus free to adopt national measures on slot allocation, including local guidelines, local procedures and local operational rules insofar as these do not conflict with EU provisions. Under the Slot Regulation, there is no concept of slots being divided into categories, such as 'intra-EU' and 'intercontinental', similar to practices in the US and China.

The general regime for slot coordination elaborated upon in Chapter 3, nor the special regimes for slot coordination discussed in this chapter offer structural solutions to remedy the specific challenges faced by super-congested airports. Analysis of the continuing initiatives of States to revise existing rules and practices for slot coordination applicable in the EU, the US, as well as the super-congested airports of Mexico City Benito Juárez Airport in Mexico, Guangzhou Baiyun International Airport and Shanghai Pudong International Airport in China and Sydney Kingsford Smith Airport in Australia illustrates the global need for structural solutions.

Chapter 5 of this dissertation analyzes a number of concepts related to the coordination of slots at super-congested airports that could potentially assist in drafting structural solutions, including the debate on who holds the legal title to a slot, the functional and financial independence of the coordinator, the application and use of the new entrant rule and secondary slot trading, as well as the imposition of slot commitments to safeguard airport access for new entrants. Chapter 6 holds conclusions and recommendations.

[971] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, Preface.
[972] *See* Airports Council International (ACI) World, *Demand Management at Sydney Airport* (2020).
[973] *See* European Commission, *supra* note 26, at 2.
[974] *See* European Commission, *supra* note 26, at 2; Odoni, *supra* note 61, at 20; Bauer, *supra* note 602.

5 CHAPTER FIVE

Slots as a conceptual instrument

5.1 Preliminary remarks on slots as a conceptual instrument

Chapter 5 introduces several concepts that may be relevant for the coordination of slots at super-congested airports. Before moving to concluding remarks and recommendations in Chapter 6, Chapter 5 aims to discuss these concepts and explore whether they offer scope for finding solutions for the specific issues experienced with the slot regime at super-congested airports, as to which see Chapter 2, sections 2.3 and 2.4.

Each section starts with an explanation as to how the specific concept discussed is relevant from the perspective of the research questions identified in Chapter 1 of this dissertation. Concepts central to this dissertation include the debate on who holds the legal title to a slots as increasingly scarce capacity resources that slot coordinators have allocated to airlines and, as a related question, what happens to the slots when the airline that holds the slots enters into administration. This question will be examined in section 5.3.

A second concept includes the role of the functionally and financially independent coordinator and its discretionary powers in section 5.4, followed by an analysis as to the capacity of the new entrant rule to ease airport access for competitive entry in section 5.5. Secondary slot trading and leasing as an alternative for primary slot allocation, and market-based instrument to acquire slots at super-congested airports are elucidated in section 5.6. Finally, the relationship between slot allocation and competition law in the European Union [hereinafter: EU] is studied in section 5.7.

5.2 The *lex lacunae* with regard to slot ownership: grandfather rights in the context of property law

5.2.1 Why it is important to clarify who holds the legal title to a slot

Slot ownership is a complex legal issue from which industry stakeholders and regulators have shied away over a long period of time.[975] Besides the merely factual-technical definitions of a slot laid down in the Worldwide Airport Slot Guidelines [hereinafter: WASG] and the Slot Regulation as discussed in Chapter 2, section 2.1.1, case law, sector expertise and academic theory have not yet advanced sufficiently in producing a clarification on who holds the legal title to a slot, or in other words, who is the rightful owner of a slot.[976]

[975] *See* Odoni, *supra* note 61, at 93.
[976] *See* European Parliament, *supra* note 624, recital 5(a).

The lack of clarity regarding the legal title to a slot is not purely an academic problem. Slots are the object of relevant social and legal interests,[977] yet their ownership lacks an explicit legislative recognition.[978] Notably at super-congested airports where airport access has been particularly difficult, the current slot rules have raised discussions among stakeholders and governments about who owns a slot and, accordingly, who may benefit from its proceeds.[979] After all, at super-congested airports in particular, slots constitute a significant and scarce resource for airlines as the holders of slots, because they can ensure competitive advantage, as to which see also section 5.7.[980]

Identifying the owner of a slot touches upon the roots of the coordination process. It is therefore relevant to identify the law governing their creation and consequent utilization by way of slot leasing, exchanges, transfers, cancellations, bankruptcies and insolvencies, general administration and all issues related to their existence.[981] So as to create a solid basis for a coordination system at super-congested airports, there is an apparent need to clarify the legal status of slots.[982]

Before Chapter 6 of this dissertation can provide concluding remarks and recommendations as to how the global and specific legal regimes pertaining to airport slot coordination can be used as an instrument to influence coordination decisions at super-congested airports, as well as what measures can be identified to flex the slot regime to better reflect the socio-economic value of a slot in coordination decisions at super-congested airports, it is first important to clarify who is and/or should have final control over the declaration, allocation and use of scarce slots and who is not by addressing the question of slot ownership. After addressing the issue of slot ownership, Chapter 6 of this dissertation is designed to not only recommend measures to flex the slot regime, but to also provide recommendations as to the division of responsibilities with regard to the drafting and implementation of said measures.

To identify who holds the legal title to a slot, this dissertation goes back to the definition of an airport slot and the conditions upon which slots are allocated for them to become the object of grandfather rights. The next sections will provide insights in how slot ownership is perceived by industry stakeholders in section 5.2.2 and governments in different regions of the world in section 5.2.3, and will show that the perceptions with regard to the discussion of ownership are diverse.[983] Section 5.2.4 dives into the key principles of property law and assess *de iure* grounds for protection from intervention with historic slots, as well as the role of slots in

[977] According to Mendes de Leon, *supra* note 48, at 578, slots are multi-faceted instruments within a multifunctional process of coordination that interacts with and has implications for various branches of law and policy, including but not limited to international aviation law, competition and antitrust law, network planning, transport economics, national administrative law, environmental law and international relations.
[978] As Colangelo, *supra* note 10, at 178, put it: "The allocation of entities that lack an explicit legislative recognition but are the object of relevant social and legal interests is a very complex topic that involves several kinds of rights belonging to the category of immaterial goods and asks the law to regulate their assignment and use."
[979] *See* European Commission, *supra* note 54, paragraph 11.
[980] *See* Case M.8633 – Lufthansa/certain Air Berlin assets. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) in conjunction with Article 6(2), 21 December 2017, paragraphs 167 and 286.
[981] *See* Colangelo, *supra* note 10, at 185.
[982] The relevance of addressing who holds the legal title to a slot extends beyond super-congested airports. It may also help answer a host of important questions that are not necessarily related to super-congestion. *Inter alia*, knowing who holds the legal title to a slot may help clarify if a series of historic slots can be withdrawn from an airline for reasons other than not meeting the 80% usage threshold, as discussed in sections x. Moreover, do historic rights expire if an airport's designated level changes from Level 3 to Level 2 or Level 1? Can slots be seen as investments made by airlines, even though they were allocated free of charge? *See* European Commission, *supra* note 54, paragraph 11; Odoni, *supra* note 61, at 94.
[983] *See* Behrens et al., *supra* note 67, at 1.

financial proceedings in section 5.3 to arrive at an answer to the central question if grandfather rights are synonymous with ownership.

5.2.2 Claims as to the legal title to a slot

On the basis of the current definition of a slot,[984] airports, governments and airlines have claimed the ownership of slots.[985] According to the NERA (2004) study, airlines, and also airports have been inclined to consider slots as assets belonging to them, or at least that they are *quasi*-owners of slots.[986] Airports could claim that slots are inextricably linked to the airport infrastructure which they own and operate as a service to their customers, and they should be regarded as the slot owner accordingly.[987] Airlines may claim that the principle of historic precedence encouraged them to invest heavily in aircraft and network expansion upon which they built a network of connections, thus they may reasonably expect to be entitled to the same set of slots in the next equivalent seasons, if not in perpetuity.[988]

Indeed, the coordinator may be the designated entity to exert control over both the allocation and use of scarce slots, which fits the current definition of a slot as a "permission given by a coordinator . . . to use the full range of airport infrastructure . . .".[989] However, practical experience shows that slots are not necessarily used as merely "permissions to use", also referred to as *entitlements*. From section 5.3.3, it becomes clear that slots are treated as part of an airline undertaking when an airline takeover is forthcoming, and as such, slots define the market value of an airline, at least in part. In other words, slots are identified as forming part of the possessions of an undertaking that may be (partially) transferred to another undertaking.[990] Several cases have produced interesting slot ownership-related questions, including if slots should be treated as assets in case of a holder's insolvency, and potentially also answers, some of which will be elaborated upon in this dissertation, as to which see section 5.3.3 below.

Moreover, slots are leased and traded at the super-congested airports of London Heathrow and London Gatwick, often on terms and conditions decided as between airlines and without involvement of the coordinator, as to which see section 5.6.3 below. The issue of slot ownership also underpins much of the controversy regarding so-called 'windfall profits' that airlines may accumulate from secondary trading in slots although initially having been allocated the slots for free, as well as the issue of bonds securitized against their slot portfolios.[991] After all, being able to transfer a slot and benefit from the proceeds implies

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[984] Chapter 2, section 2.1.1 discussed that the definitions of a slot in both paragraph 1.6.1 of the WASG and Article 2(a) of the Slot Regulation imply a permission to use, which essentially comes down to an entitlement to use the airport infrastructure at the appointed date and time.

[985] *See* Colangelo, *supra* note 10, at 39.

[986] *See* NERA Economic Consulting, *supra* note 5, at 253; Abeyratne, *supra* note 55.

[987] *See* NERA Economic Consulting, *supra* note 5, at 254. However, if the airport would be the recipient from the proceeds generated from a slot lease or sale, it may have little incentive to invest in capacity expansion as they would not want to lose out on the scarcity rents generated from existing slots. This would come down to a *de facto* fiscal monopoly, which is prohibited under Article 37 TFEU.

[988] The concept of grandfather rights allows airlines to operate without having to fear losing slots to competitors as long as they meet the 80% usage threshold, *see* Chapter 2, section 2.2.3, and therefore airlines may argue that they should be the beneficiary of any monetary benefits related to slot value. *See* European Commission, *supra* note 54, paragraph 17.

[989] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.6.1.

[990] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 13.

[991] *See* Mott MacDonald(II), *supra* note 113, at 45. The question of slot ownership seems to remain subordinate to the resolution of the legality of slot trading between airlines. However, the issue of slot ownership is a separate policy decision that needs to be distinguished from the objective of maximizing the value and use of slots via market mechanisms. *See* Colangelo, *supra* note 10.

ownership, and, *vice versa*, also depending on the applicable law, ownership indicates that the holder is free to sell the property at its discretion.

As several cases relating to airlines entering administration and the subsequent suboptimal or even non-utilization of slots have shown, some of which are studied in section 5.3.3 below, slots may be 'frozen' by the coordinator for multiple scheduling seasons in a row until the financial difficulties have been overcome by the airline concerned upon the request of the respective national administrator, as to which see section 5.3.2 below. This is the case even without the airline having been pinpointed as the legal owner of the slots. Meanwhile, the slots are not reallocated to other airlines and are 'hanging over the market', so to say.

The former practices see airlines acting as *quasi*-owners of slots, even though airlines have not been marked as holding the legal title to the slots which have been allocated to them. Allowing airlines to use slots as they deem fit may productively block any future measures to flex the slot regime at super-congested airports in line with applicable public interest considerations. Unless, however, the introduction of a guarantee that the slots allocated to airlines will also be effectively used in line with the terms and conditions imposed upon initial allocation sees the light of day.

The existing *lex lacunae* as to the legal title of slots may lead to coordinators not being able to release potentially scarce airport capacity to other airlines,[992] thus acting as a barrier to airport access in terms of slots. At super-congested airports where slots are extremely scarce, such practices appear at odds with the prime objective of slot coordination pursuant to the WASG, that is "to ensure the most efficient declaration, allocation and use of available airport capacity in order to optimize benefits to consumers . . .".[993]

Hence, as discussed in section 5.2.1 above, although there is a legal definition of what an airport slot is, it is unclear whether anyone – be it airlines, airports or States – holds the legal title to a slot, if at all. This *lex lacunae* raises the question as to whether airport slots are purely entitlements to use the airport infrastructure, or whether airlines, airports or States can also derive other rights from an airport slot comparable to those of ownership. Neither approach has so far been recognized in law. If the issue of slot ownership is not resolved in a definitive way through a clarification of who holds the legal title to a slot, the controversy will persist.[994]

5.2.3 Perspectives on slot ownership in the EU, the UK and the US

In 2012, the European Parliament [hereinafter: the Parliament] noted that it is expedient to draft a guideline for the legal title to slots, the point of departure being the use of slots in the public interest. According to the Parliament, it should be determined that slots may become the object of rights,[995] however not in any sense the object of property. The view that slots are merely defined as entitlements in the Slot Regulation and do not give the airline concerned any legal claim has also been expressed by the European Commission [hereinafter: the Commission] in its 2001 Explanatory Memorandum to EU Regulation 95/93, as amended [hereinafter: the Slot Regulation], in which the Commission also for the first time mentioned "the need to clarify the legal nature of slots", which was echoed by Boyfield et al (2003).[996] According to the Commission, slots are allocated as *public goods* to the most deserving airline,

[992] For instance, due to slot babysitting practices as discussed in section 5.6.2 below.
[993] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1.
[994] *See* Odoni, *supra* note 61, at 92.
[995] *See* European Parliament, *supra* note 624, recital 5(a).
[996] *See* Boyfield, *supra* note 46, at 21 and 39.

based on certain rules.[997] Former competition Commissioner Karel Van Miert openly stated that runway slots are public property and regarded air services as a public service.[998]

John Prescott, Deputy Prime Minister of the United Kingdom [hereinafter: UK] at the time, held a similar view in an interview with British Broadcasting Company's Radio 4's World at One on 11 August 1998. During negotiations over whether UK-based British Airways should surrender slots at London Heathrow and London Gatwick in order to gain regulatory approval for its proposed alliance with American Airlines from the Commission, he said: "The slots don't belong to British Airways. The slots belong, I believe, to the community".[999] Sir Malcolm Rifkind, former Secretary of State for Transport in the UK, said that "no airline has a legal right to a landing or take-off slot. Rather, airlines have permission and this must be subject to the public interest".[1000]

The Commission did not solve the issue of slot ownership in its 2004 revision of the Slot Regulation. Identifying the legal owner of a slot was considered by the Commission as a fundamental reform that required more time to look into and was put aside for later examination.[1001] However, as discussed in section Chapter 4, section 4.1.4, there have been no substantial amendments of the Slot Regulation since the 2004 revision. Yet, as discussed in sections 5.2.1 and 5.2.2, resolving the issue who holds the legal title to a slot has only increased in relevance.

The Slot Regulation does not stipulate that airlines should be viewed as holding the legal title to a slot. Article 2(a) of the Slot Regulation seems to confirm the view that slots are not property rights of airlines in its definition of an airport slot:

> "[S]lot shall mean the permission given by a coordinator in accordance with this Regulation to use the full range of airport infrastructure necessary to operate an air service at a coordinated airport on a specific date and time for the purpose of landing or take-off as allocated by a coordinator in accordance with this Regulation."[1002]

The term "permission" used in this Article confirms the Commission's earlier statements that slots are allocated to airlines, according to which airlines are *entitled* to use those slots. Moreover, the wording of Article 2(b) of the Slot Regulation describes airlines as merely "holding" slots at an airport.[1003] Slots must be returned to the slot pool when the airline does not intend to use them as per Article 10(2) of the Slot Regulation. Airlines may attribute value to certain rights they legally derived from becoming a slot holder, including the right to exchange and/or transfer slots subject to Article 8a of the Slot Regulation and paragraph 8.11 of the WASG. However, airlines do not necessarily need to be the legal owner of a slot in order to attribute value to it, which is reflected in slot babysitting practices as addressed in section 5.6.2 and the development of a secondary market in slots in the UK, among others.[1004]

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[997] *See* European Commission, *supra* note 54, paragraph 12.
[998] *See* Kociubínski, *supra* note 3, at 31; Speech by Commissioner Karel Van Miert at the Royal Aeronautical Society in London of 9 March 1998, titled 'Competition policy in the air transport sector'.
[999] *See* Boyfield, *supra* note 46, at 29-30.
[1000] Sir Malcolm Rifkind expressed this view in the Parliamentary Select Committee on Transport on 15 May 1992, *see* Martyn Gregory, *Dirty Tricks: British Airways' Secret War Against Virgin Atlantic* (2000).
[1001] *See* European Commission, *supra* note 54, paragraph 12.
[1002] EU Regulation 95/93, as amended, *supra* note 47, Article 2(a).
[1003] Article 2b(i) of the Slot Regulation refers to a new entrant as a ". . . carrier requesting, as part of a series of slots at an airport, a slot at an airport on any day, where, if the carrier's request were accepted, it would in total *hold* fewer than five slots at that airport on that day. . ." [italics added]. Similar wordings are found in Articles 2(b)(ii) and 2b(iii) of the Slot Regulation.
[1004] *See* Haylan and Butcher, *supra* note 116, at 6.

In the United States [hereinafter: US], slots are regarded as an 'operating privilege'. The Federal Aviation Administration [hereinafter: FAA] has repeatedly rejected the notion that incumbents hold a property interest in slots, stating that "slots do not represent a property right but represent only an operating privilege subject to absolute FAA control. Slots may be withdrawn at any time to fulfill the US Department of Transportation's [hereinafter: US DoT] operational needs".[1005] This viewpoint is consistent with the approach of Colangelo (2012) that slots are an intellectual concept that only exists on paper and that are directly linked to a 'piece' of capacity as discussed in Chapter 2, section 2.1.2.[1006]

Paradoxically, and as previously discussed in Chapter 4, section 4.5.4, the FAA initiated the Buy Sell Rule in 1985, under which slots could be bought, sold, exchanged, or leased in a secondary market, which took effect in 1986.[1007] Perceiving slots as a tradable commodity raises questions with regard to the legal owner of a slot, regardless of slots being defined as 'operating privilege', particularly because the ability to sell or lease slots to private investors like a property right may give the appearance that the airline selling or leasing the slot acts as if it holds the legal title to said slot. However, even though slots may be perceived as tradable commodities under the Buy Sell Rule, slots were always allocated conditionally. After all, a slot is not a *terra nullius* in the US.[1008] The FAA may withdraw slots at any time.[1009]

In the *Northwest Airlines, Inc. v. Goldschmidt*-case, the US Court of Appeals held that the power of the FAA to create slots *ex nihilo* and to consequently allocate them to airlines always encompasses the possibility of policy changes, including a potential reduction of existing slots or an imposition of conditions upon their use.[1010] Thus, the airline slot holder does not have full control over what happens to a particular slot, as slots may be withdrawn or conditions may be attached to said slot if and when the FAA deems it appropriate. It appears that the airline carries the risk of a potential withdrawal when entering into a trade, or another form of financial construction.[1011]

As opposed to the US, the Slot Regulation does not foresee in a general right for Member States to withdraw slots. In certain specific circumstances only, such as slot abuse, slot coordinators may withdraw slots. Slots may also be withdrawn as part of remedy solutions agreed with regulators responsible for the implementation of competition law.[1012]

[1005] US Code of Federal Regulations, Title 49 Transportation, § 41714 and US Code of Federal Regulations, Title 14 Aeronautics and Space, § 93.223. In the US, however, the question of slot ownership cannot be fully isolated from the issue of ownership or control of gates, as gates in the US are owned or controlled by airlines through their terminal rights. *See* Haanappel, *supra* note 151, at 202.
[1006] *See* Colangelo, *supra* note 10, at 178.
[1007] *See* Mendes de Leon, *supra* note 48, at 557; Mott MacDonald, *supra* note 63, at 5-11 and 5-12.
[1008] *Terra nulius* is a Latin expression meaning "nobody's land", or "land belonging to nobody".
[1009] *See* United States General Accounting Office, *Airline Competition: Barriers to Entry Continue in Some Domestic Markets. Statement of John H. Anderson, Jr.* (1998), at 4; US Code of Federal Regulations, Title 49 Transportation, § 41714 and US Code of Federal Regulations, Title 14 Aeronautics and Space, § 93.223.
[1010] US Court of Appeals, *Northwest Airlines, Inc. v. Goldschmidt*, 645 F.2d 1309 (8th Cir. 1981).
[1011] Apart from slots being traded under the Buy Sell Rule, slots have in practice also been treated as assets in, *inter alia,* a credit and guarantee agreement with Citibank, as to which *see* section 5.3.3 below.
[1012] *See* Mott MacDonald, *supra* note 63, at 5-8. The imposition of slot remedies and the relationship between slot allocation and competition law in general is analyzed in section 5.7.4.

5.2.4 Grandfather rights and property law: de iure grounds for intervention with historic slots and protection thereto

5.2.4.1 The legal concept of property

In common law and civil law conceptions of property,[1013] there is a trend towards recognizing property rights over a variety of things other than material objects.[1014] Incorporeal things such as slots can, in theory, be the object of ownership.[1015] A wide range of academic publications have been dedicated to the legal concept of property, including Demsetz (1967), Alchian (1973) and Emerich (2018).[1016] The criteria used to identify the things that can be objects of property include: economic value, alienability and non-interference or enforceability against third parties.[1017] This section assesses whether slots, particularly slots with historicity, meet the criteria of economic value and alienability, and if they may be subject to intervention by a third party such as the coordinator.[1018]

Slots at least meet the first two criteria: they represent an economic value as discussed in section 5.3.3 below and may be exchanged with other airlines, or in some cases even transferred pursuant to paragraphs 8.11 and 8.12 of the WASG.[1019] Slots may also be leased to other airlines as part of a lease agreement. Slot trade and lease agreements are subject to discussion in section 5.6 as alternative means to access congested airports. The third criterion to identify if slots can be the object of property constitutes non-interference or enforceability against third parties. Although there is no directly relevant case law on the matter,[1020] the question whether airlines would enjoy any *de iure* protection if the slot coordinator, possibly following a decision made by the public authority that designated the airport, were to withdraw a slot is a much more practical question than the largely theoretical question of slot ownership according to Haanappel (1994).[1021]

5.2.4.2 Intervention with historic slots from the perspective of European Convention on Human Rights

For the purposes of answering the question whether airlines enjoy protection against intervention with historic slots, it is helpful to look at Article 1 of the First Protocol to the European Convention on Human Rights[1022] [hereinafter: ECHR], which guarantees the right to property as follows:

[1013] By nature, the common law tradition is more open to immateriality as compared to the civil law tradition, which is more influenced by corporality. However, the civil law tradition has increasingly embraced the view that immaterial things may be the object of property rights. This subject is addressed further in Yaëll Emerich, *Conceptualising Property Law: Integrating Common Law and Civil Law Traditions* (2018), at 183.

[1014] *See* Ugo Mattei, *Basic Principles of Property Law: A Comparative Legal and Economic Introduction* (2000), at 76.

[1015] *See* Emerich, *supra* note 1013, at 189.

[1016] According to Alchian (1973), property rights refer to socially recognized rights of action. Demsetz (1967) notes that property rights are a social artifact that creates incentives to efficiently use assets, and to maintain and invest in these assets. *See* Armen Albert Alchian and Harold Demsetz, *The Property Right Paradigm*, 33 The Journal of Economic History 1 (1973); Harold Demsetz, *Toward a Theory of Property Rights*, 57 The American Economic Review 2 (1967); Emerich, *supra* note 1013.

[1017] *See* Emerich, *supra* note 1013, at 194.

[1018] The object of property depends on the exclusion of all interference by third parties, *see* also US Supreme Court ruling *International News Service v. Associated Press*, 248 U.S. 215 (1918) and, for an overview of perceptions of property, *see* Emerich, *supra* note 1013, at 189-198.

[1019] One of the traditional criteria of property resides in its transferable character, *see* a Court of Appeal for Ontario, Canada, judgment in *Caratun v. Caratum* (1992) 42 R.F.L. (3ed) 113 C.A.

[1020] There is case law on the role of slots in financial proceedings that may be relevant indirectly, including but not limited to the *Monarch*-case, *supra* note 45. *See infra* section 5.3.3 (addressing the *Monarch*-case).

[1021] *See* Haanappel, *supra* note 151, at 201.

[1022] European Convention for the Protection of Human Rights and Fundamental Freedoms (Rome, 4 Nov. 1950), as amended by Protocols No. 11 and 14, ETS 5.

> "Every natural or legal person is entitled to the peaceful enjoyment of his possession. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law. The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties."[1023]

Hence, everyone has the right to peacefully enjoy his or her possessions pursuant to Article 1 ECHR, unless public necessity so demands. In case someone is deprived of his or her property, the State should guarantee fair compensation.[1024] The Universal Declaration of Human Rights[1025] also recognizes the right to property, although more concisely.[1026]

To know whether or not a legal person[1027] can invoke Article 1 of the First Protocol to the ECHR, we must first establish if historic slots are a "possession" within the scope of this Article. The European Court of Human Rights has interpreted the term "possession" widely. It does not only include the right of ownership, but also a whole range of intangible property such as rights arising from shares, patents, entitlements to a rent, and even rights arising from the running of a business.[1028] Other assets, including claims in respect of which a legal person can argue that it at least has a legitimate expectation,[1029] which must be of a nature more concrete than a mere hope that they will be realized, qualify as "possessions".[1030] One could argue that airlines may entertain legitimate expectations to the effect that they have invested significantly in operating routes, encouraged by the principle of grandfather rights that will see

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[1023] *Id.* at Article 1 of the First Protocol to the ECHR. What may qualify as a possession must be assessed by the law of the State where Article 1 of the First Protocol to the ECHR is invoked. "Possession" as a legal term can mean something different in the UK as compared to France.

[1024] Article 1 of the First Protocol to the ECHR does not contain an explicit reference for a right to compensation for intervening with any property. In practice, however, the right to compensation is implicitly required, *see* the ECHR judgment in *The Holy Monasteries v. Greece* 13092/87 and 13984/88 [1994] ECLI:CE:ECHR:1994:1209JUD001309287.

[1025] United Nations General Assembly (Paris, 10 Dec. 1948). *Universal Declaration of Human Rights*.

[1026] Article 17 of the Universal Declaration of Human Rights is as follows: "1. Everyone has the right to own property alone as well as in association with others; 2. No one shall be arbitrarily deprived of his property."

[1027] Companies, including airline companies, are deemed a "legal person" in the context of Article 1 of the First Protocol to the ECHR. *See* Directorate General of Human Rights and Legal Affairs (Council of Europe), *The right to property under the European Convention on Human Rights: A guide to the implementation of the European Convention on Human Rights and its protocols* (2007), at 6.

[1028] In case of intangible assets such as shares, patents and licenses, the Court has also taken into consideration whether the legal position in question gave rise to financial rights and interests, and therefore the object had economic value. The Court has addressed this in, *inter alia*, *The Traktorer v. Sweden* 10873/84 [1989] ECLI:CE:ECHR:1989:0707JUD001087384, paragraph 53, concerning the removal of a license to serve alcoholic drinks. Other cases include *Anheuser-Busch Inc. v. Portugal* 73049/01 [2007] ECLI:CE:ECHR:2007:0111JUD007304901, paragraphs 72, 76 and 78; *Alatulkkila and Others v. Finland* 33538/96 [2005] ECLI:CE:ECHR:2005:0728JUD003353896, paragraph 66; *O'Sullivan McCarthy Mussel Development Ltd v. Ireland* 44460/16 [2018] ECLI:CE:ECHR:2018:0607JUD004446016, paragraph 89.

[1029] A legitimate expectation may arise as a result of a practice or policy made, adopted or announced by or on behalf of government or a public authority on the part of, among others, individual citizens, businesses and institutions concerning future administrative conduct. It extends to a benefit that someone or something has received and can legitimately expect to continue. Hence, legitimate expectations are predictive, meaning that they are partially constituted by beliefs or predictions about what will or will not happen in the future. The principle of legitimate expectation recognizes that, in the absence of any overriding reason of law or policy excluding its operation, a situation may arise in which individuals or businesses may have a legitimate expectation of a substantive outcome or benefit. Should such a legitimate expectation be defeated, the individual may perceive that administrative decision as illegal. The theory of legitimate expectations is addressed extensively in Alexander Brown, *A Theory of Legitimate Expectations*, 25(4) Journal of Political Philosophy (2017).

[1030] *Pressos Compania Naviera S.A. and Others v. Belgium* 17849/91 [1995] ECLI:CE:ECHR:1995:1120JUD001784991, paragraph 31*; J.A. Pye (Oxford) Ltd and J.A. Pye (Oxford) Land Ltd v. the United Kingdom* 44302/02 [2007] ECLI:CE:ECHR:2007:0830JUD004430202, paragraph 61.

the slots they hold renewed in the next equivalent season if they operate them according to the 80% threshold. Therefore, historic slots could be interpreted by airlines as "possessions" in the sense of Article 1 of the First Protocol to the ECHR.[1031] Law firm Clyde & Co, which undertook the legal analysis underpinning the Steer Davies Gleave (2011) study, deems it unlikely that a challenge on such grounds would succeed, provided sufficient notice were given of the intention to limit or end grandfather rights.[1032]

Furthermore, as described at the start of this section, a property claim may only be regarded as a possession when it is sufficiently established to be enforceable. In other words, a legal person who complains of a violation of his or her right to property laid down in Article 1 of the First Protocol to the ECHR must first of all show that such a right existed, as has also been confirmed by the court on various occasions.[1033]

A conditional claim which lapses following the non-fulfillment of the condition *cannot* be considered a possession.[1034] As historic slots were always allocated conditionally to airlines,[1035] it follows that they cannot be considered possessions and, as such, they do not qualify to get protection from Article 1 of the First Protocol to the ECHR. Hence, an airline would also not be entitled to compensation by the State for any damage incurred.

Even if historic slots were seen as possessions instead of as conditional claims, it is questionable whether historic slots are enforceable against third parties and whether the non-intervention criterion can be upheld. Pursuant to Article 1 of the First Protocol to the ECHR, States have a wide power to interfere with the right to property if such an intervention pursues the general or public interest.[1036] Moreover, three conditions must be fulfilled cumulatively before a State may interfere: interference with the right to property shall be allowed only if (1) it is prescribed by law, (2) it is in the public interest, and (3) it is necessary in a democratic society.

The first condition shows that it is imperative that the requirement of legality is satisfied. After all, the principle of legal certainty is one of the fundamental principles of a democratic society.[1037] Since domestic authorities have a better knowledge of their society and its needs, the Court is of the opinion that domestic authorities are usually better placed than the Court to establish what is in the public interest.[1038] The Court will therefore respect their judgment as to whether or not something is in the public interest, unless that judgment is manifestly without reasonable foundation.[1039] Hence, a wide variety of arguments could

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[1031] *See* Steer Davies Gleave, *supra* note 69, at 140.
[1032] *Id*., at 140.
[1033] *See* Council of Europe, *supra* note 1027, at 5, 7 and 8. Furthermore, the Court held in various cases that the protection of Article 1 does not apply unless it is possible to lay a claim to certain property, *see Pistorová v. the Czech Republic* 73578/01, ECLI:CE:ECHR:2004:1026JUD007357801, paragraph 38; *Zhigalev v. Russia* 54891/00, ECLI:CE:ECHR:2006:0706JUD005489100, paragraph 131. Moreover, in *Marckx v. Belgium* 6833/74, ECLI:CE:ECHR:1979:0613JUD000683374, paragraph 50 the ECHR clarified that the scope of Article 1 of the First Protocol to the ECHR only applies to existing possessions, and "does not guarantee the right to acquire possessions".
[1034] *Prince Hans-Adam II of Liechtenstein v. Germany* 42527/98, ECLI:CE:ECHR:2001:0712JUD004252798, paragraphs 82-83.
[1035] The 80% utilization threshold serves as a *conditio sine qua non* for continued operations in the next equivalent season. Moreover, other conditions may be attached to a slot. *Inter alia,* a slot may only have been allocated for use by a new entrant, on the basis of year-round priority or for other reasons depending on locally identified allocation criteria. *See* Chapter 2, section 2.2.3 for an explanation on allocation priorities pursuant to the WASG.
[1036] *See* Council of Europe, *supra* note 1027, at 5.
[1037] *Id.* at 12.
[1038] For an analysis of the subsidiarity principle applied to slot coordination, *see* Chapter 4, section 4.3.5.4 of this dissertation.
[1039] *See* Council of Europe, *supra* note 1027, at 14.

support an intervention with historic rights, including but not limited to environmental, safety and competition concerns, as long as the intervention eventually benefits the consumer to meet the public interest criterion and having regard to proportionality.[1040] Lastly, any intervention that is prescribed by law and in the public interest, must also be necessary in a democratic society.[1041]

Additionally, although airline companies are legal persons that may rely on human rights protection, they may find it more challenging to succeed in their appeal as compared to natural persons.[1042] The debate on whether a State may intervene with historic slots would likely focus on whether the benefits of the modification or withdrawal of a historic slot would sufficiently outweigh the benefits of schedule stability and continuity offered by incumbent airlines. When the reasons underpinning the intervention fulfill the three cumulative conditions mentioned above,[1043] the intervention could be regarded proportionate and not in breach of Article 1 of the First Protocol to the ECHR.[1044]

In the hypothetical situation that airlines would be able to rely on the protection offered by Article 1, it is doubtful whether a damage action against a public authority subsequent to the interference – whether by modification or withdrawal – with a slot would succeed.[1045] Haanappel (1994) stresses that, in many jurisdictions

> ". . . courts might actually require an intention to harm rather than mere negligence; or courts could reason that public authority should have a wide margin of policy choice and not be easily actionable for damages in such a sensitive field of public policy, involving the allocation of a scarce resource."[1046]

5.2.4.3 Slot ownership and the division of responsibilities under the slot regime

Another argument why historic slots should not be regarded as airline possessions enforceable to third parties is found in the inextricable link between slots and airport infrastructure discussed in Chapter 2, section 2.1.2, and in the distribution of responsibilities identified in the WASG.[1047] If, for whatever reason,[1048] the capacity of the airport would not be sufficient anymore to accommodate a particular slot, it could be deemed highly contentious to continue renewing the slot simply because the airline has acquired historic rights over the slot. The possession of historical rights could qualify as a possession under Article 1 of the First Protocol to the ECHR. Even though Article 1 provides an exemption for States to intervene with possessions if this is considered to be in the "public interest", a qualification of historic rights

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[1040] The principle of proportionality holds that any interference should take place on the basis of a trade-off between the collective interest and the interests of an individual, and in such a manner which is not arbitrary and in accordance with the law. *Id.* at 5.
[1041] *Id.* at 12.
[1042] For companies, the consequences of an intervention are more likely to be regarded as an incident of their business arrangements. *See* Steer Davies Gleave, *supra* note 69, at 141.
[1043] The criteria used to identify the things that can be objects of property include: economic value, alienability and non-interference or enforceability against third parties. *See* Emerich, *supra* note 1013, at 194.
[1044] *See* Steer Davies Gleave, *supra* note 69, at 141.
[1045] *See* Haanappel, *supra* note 151, at 201.
[1046] *Id.,* at 202.
[1047] According to paragraphs 5.3, 5.4 and 5.5 of the WASG, the role of airlines in slot coordination is being the recipients of slots, which are allocated to them by the independent coordinator in a neutral, transparent and non-discriminatory way. Airports are responsible for the declaration of the coordination parameters, as discussed in Chapter 2, section 2.2.2 of this dissertation. According to Article 4(5) of the Slot Regulation, "[t]he coordinator shall be the sole person responsible for the allocation of slots".
[1048] *Exempli gratia,* when the number night flights has to be reduced for noise nuisance purposes. At Amsterdam Airport Schiphol, the amount of night flights will go down from 32,000 to a maximum of 29,000 per year in the coming years. *See* Airport Coordination Netherlands (ACNL), *Advice reduction night flights Schiphol* (2021).

as possessions would still erode the responsibility of the airport or any other competent authority, to declare the limits of the maximum capacity available at the airport discussed in Chapter 2, section 2.2.2 of this dissertation. The power of a public authority to determine the capacity of an airport is in some States laid down in domestic regulations. Additionally, a reduction of capacity does not necessarily need to be a reflection of public interest considerations, but may also be motivated by operational and/or technical constraints.

Considering historic slots as property of the airlines would also affect the independent function of the coordinator, who has been bestowed with the exclusive responsibility for the management and allocation of slots as discussed in section 5.4. After all, a property claim implies that the slots reside with a specific airline. Anyone else is excluded from gaining access to it without the slot holder's prior permission, which the airline could give in the form of slot leasing or trading.[1049] In such a situation, the slot coordinator is deprived from his or her exclusive responsibility for the management and allocation of slots, as it would be up to the airline with a property right over the slot to decide how, and by whom, the slot may be used.

Relying on the exemption grounds for intervention with historic rights provided by Article 1, *id est* based on "public interest" or "conditions provided for by law and by the general principles of international law" would likely make the coordinator's tasks unmanageable due to the continuous risk of legal challenge made by airlines. Also, as with the setting of declared capacities explained in the above paragraph, coordination decisions may be based on operational and/or technical factors which are not of a 'public interest' character nor are they provided for by (international) law.

In essence, airlines would turn into coordinators, which development appears to undermine the intention of the drafters of the WASG. After all, property rights with respect to slots enable private persons, including airlines as private enterprises, to control such resources that might otherwise have been controlled by the independent coordinator.[1050]

5.2.5 Concluding remarks

Although slots represent relevant operational, economic, legal and social interests,[1051] they cannot, in my view, be identified as property rights.[1052] Pursuant to the EU, US and industry definitions of an airport slot, slots are *entitlements* allocated at no cost to airlines twice yearly to land at and take-off from international airports and use the full range of airport facilities, subject to conditions such as utilization thresholds.[1053] By no means do the available definitions explicitly state that airlines own slots in terms of being able to legally claim slots as property rights, which would give an unequivocal right of ownership to the airline.[1054] Slots may have been allocated to airlines according to which airlines are *entitled* to use those slots, but that does not mean that airlines are entitled to consider slots as their property. The FAA even legally established that slots can be withdrawn if and when the FAA deems it appropriate, as discussed in section 5.2.3 above.

[1049] *See* Colangelo, *supra* note 10, at 12. Slot trade and lease agreements are subject to discussion in section 5.6 below as alternative ways to access congested airports.
[1050] *See* William H. Riker, A *Political Theory of the Origin of Property Rights: Airport Slots*, 35 Political Science 4 (2008), at 951.
[1051] *See* European Commission, *supra* note 54, paragraph 11.
[1052] *See* Abeyratne, *supra* note 55, at 36.
[1053] The WASG and the EU by word of "permission to use", the US by word of "operating privilege". Both terms appear appropriate to label the entitlement that comes with an allocated slot, *see* section 5.2.3 for further analysis. *See* also Steer Davies Gleave, *supra* note 69, at 141.
[1054] *See* Abeyratne, *supra* note 55, at 36.

In the view of the author, the fact that slots have been treated as part of the possessions of an airline in take-overs is ill-considered. After all, due to their public functions as discussed in Chapter 2, sections 2.3 and 2.4, slots are valuable resources to society at large for which 'competition' among airlines is fierce, in particular at super-congested airports. Although both airports and airlines may have invested heavily in airport infrastructure and aircraft and network expansion respectively, the beneficiary of a slot should not be determined on the basis of financial objectives of an airline or an airport.

Instead of allowing private enterprises property rights over slots, which implies that slots may be used, exchanged and transferred as the owner deems fit as discussed in section 5.2.4.1, it is ultimately the public that should benefit from the socio-economic value of a slot. Hence, slots are essentially public goods. This view is reflected in the fact that the existence of slots depends entirely on the public authority that designated the airport and the coordinator that allocated the slots to airlines. Slots are allocated within the limits of the capacity declaration, and airlines may build history over these slots.[1055] Once the limits of the capacity declaration change, the number of available slots changes accordingly. In other words, available capacity is a prerequisite for utilizing a slot as the permission to use the range of available infrastructure. Grandfather rights are merely a creation of legislation within the boundaries of the declared capacity, which means that airlines could not reasonably expect to enjoy them in perpetuity.

Generally, legislators and courts do not regard slots as the property of an airline. It henceforth appears that grandfather rights are not synonymous with ownership rights. However, depending on the applicable law and the context in which the question of the legal title with respect to slots is considered, slots could be identified as possessions of an airline as evidenced by practices of, *inter alia,* the listing of slots on airline balance sheets as discussed in section 5.3.3 below. A definition of possession in legal terms again depends on the applicable law.

In order to solve the existing *lex lacunae* on slot title, at least in the WASG and the Slot Regulation, it is critical to elucidate in the laws and regulations governing slot coordination that the independent coordinator has final control over slots that have already been allocated, and subsequently allocates them to airlines as entitlements to use the available infrastructure. Since slots are essentially public goods as concluded in the above paragraph, the coordinator should ensure that the slots are used in a way that reflects their public interest.

5.3 The role and valuation of slots in financial proceedings

5.3.1 Preliminary remarks

The next sections illustrate the role of slots in several types of financial operations, including bankruptcies and insolvencies of airlines as well as take-overs, as previously referred to in section 5.2.2 above. As a result of COVID-19, several airlines have entered into financial proceedings.[1056] Airline bankruptcies and/or airlines ceasing operations are, however, a perennial issue resulting from market dynamics in a broad sense and are not necessarily related to the COVID-19 pandemic. The slot rules would benefit greatly from clarity as to whether airlines entering bankruptcy proceedings should be able to hold and sell slots purely to raise finance to repay creditors.

[1055] *See* Chapter 2, sections 2.2.2 and 2.2.3 for an overview of the capacity declaration and allocation processes respectively.
[1056] *See* Eurocontrol, *What COVID-19 did to European Aviation in 2020, and Outlook 2021*, Aviation Intelligence Unit, Think Paper #8 (2021).

Several pre-COVID-19 related court judgments and developments following the financial distress of, *inter alia*, Air Berlin and Monarch Airlines, will be analyzed below, since these cases have contributed to the ongoing debate amongst industry parties and regulators on the role, and the legal status, of slots in the event of airline bankruptcies and airlines ceasing operations for other reasons. The *Monarch*-case constitutes a particularly important precedent for the management of slots in financial proceedings as well as for legal analysis pertaining to secondary slot trading, to wit that a defunct airline is able to obtain and trade slots.[1057]

5.3.2 Guidance provided by paragraphs 8.14 and 8.15 of the WASG

Paragraphs 8.14 and 8.15 of the WASG are designed to provide guidance for the coordinator and industry stakeholders as to what happens to slots when an airline ceases to operate at an airport, and/or when it loses its operating license,[1058] regardless of the reason. Paragraph 8.14 reads as follows:

> "8.14.1 An airline that ceases operations at an airport must immediately return all of the slots allocated to it for the remainder of the season and for the next season (if already allocated) and advise the coordinator whether or not it will use the slots in the future.
> 8.14.2 If an airline fails to provide the necessary information by a reasonable deadline date set by the coordinator, then the coordinator may withdraw and reallocate the slots."[1059]

Hence, airlines must return all of the slots allocated to them when an airline leaves a particular airport or when it has entered administration as per the WASG. Should an airline fail to provide the information required by the coordinator, the coordinator may withdraw and reallocate the slots at his or her discretion. A judgment issued by the Dutch Council of State in a case between KLM Royal Dutch Airlines and Airport Coordination Netherlands [hereinafter: ACNL] in 2019,[1060] however, provides a window of opportunity for airlines to exchange slots with partners if they cease operations at an airport instead of returning them to the coordinator in case they entered into a 'joint operation' with another airline.[1061]

[1057] *Monarch Airlines v. Airport Coordination Limited*, *supra* note 45, paragraphs 54-56.

[1058] In order to obtain a valid operating license, airlines should have been granted a valid Air Operator Certificate [hereinafter: AOC], which confirms that the airline operator has the "professional ability and organization to ensure the safety of operations", as to which *see* Articles 2(1) and 2(8) of EU Regulation 1008/2008. *See* also European Commission, *Report pursuant to Article 10a(5) of Regulation (EU) 2020/459 amending Council Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports*, COM/2020/558 final, at 10.

[1059] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.14.

[1060] *KLM v. Airport Coordination Netherlands* [2019], *supra* note 558.

[1061] When Malaysia Airlines ceased operations at Amsterdam Airport Schiphol following two major air crashes of flights MH17 and MH370, Dutch slot coordinator ACNL required Malaysia Airlines to return their slots back to the slot pool according to paragraphs 8.5.1 and 8.15.1 of the WSG (now WASG). At the time, however, KLM had entered into a codeshare agreement with Malaysia Airlines and therefore asserted that, instead of returning the slots to the pool, the Malaysia Airlines' slots should be transferred to KLM instead because the two airlines had conducted so-called 'shared operations' in keeping with Article 10(8) of the Slot Regulation. Although the court initially ruled in 2016 that ACNL was right to require the Malaysia Airlines' slots to be returned in line with WSG provisions, three years later the Dutch Council of State overturned this decision.

The situation gets even more complicated when an airline take-over is forthcoming as per paragraph 8.15 of the WASG:

> "8.15.1 Slots can only be held by an airline with a valid operating license. If an airline ceases to hold a valid operating license, its slots revert to the slot pool.
> 8.15.2 In the case of bankruptcy (or similar proceedings), the representatives of the airline should enter into dialogue with the coordinators to discuss their future intentions for the slots and provide the contact details of the administrator.
> 8.15.3 The slots may be reserved by the coordinator pending reinstatement of the airline's operating license or a formal takeover of the airline's activities. The airline, its legal representatives, or the responsible licensing authority should keep the coordinator informed of the airline's status.
> 8.15.4 If dialogue has not been initiated within a reasonable deadline set by the coordinator, and if there is no legal protection linked to bankruptcy under national law, then the coordinator should reallocate the slots."[1062]

In essence, paragraph 8.15 of the WASG reads that slots must be returned to the coordinator if an airline loses its operating license following, *inter alia*, financial difficulty. The line of thought of the WASG appears to be that slots can only be held by an airline with a valid operating license, notwithstanding existing jurisprudence which will be discussed shortly.

However, the airlines' administrators can request the coordinator to 'freeze' the slots until the financial difficulties have been overcome or pending formal acquisition of the company's activities by third parties pursuant to paragraph 8.15.3. This is the case even if the slots are not used in practice, thus wasting valuable capacity, in particular when capacity-constrained airports are concerned.

As such, the 'freezing' of slots is a different concept than the revocation or the reallocation of slots due to the non-use or non-compliant use thereof in accordance with the 80% threshold, as discussed in Chapter 2, sections 2.2.3 and 2.2.4. Paragraph 8.15 of the WASG provides that the coordinator should reallocate the slots in case of a lost operating license "if (1) dialogue has not been initiated within *a reasonable deadline* and (2) if there is no legal protection linked to *bankruptcy under national law*" [italics added].[1063]

As opposed to the WASG, which provide guidance for the freezing of slots, the Slot Regulation does not cover the assumption of 'freezing' and national policies with regard to the applicable timeframes in case of airline bankruptcies and/or insolvencies form somewhat of a patchwork.[1064] However, even the WASG do not provide much clarity. No timeframe during which slots can be frozen by the coordinator is presented, and perspectives on what constitutes "a reasonable deadline" may vary depending on the various interests of the parties involved.[1065]

[1062] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.15.
[1063] *Id.* at 8.15.4.
[1064] Airports Council International (ACI) Europe, *Working Paper – "OFF THE GROUND" – Handling of Airline Slots in case of Bankruptcy/Insolvency* (2020), paragraph 2.4. Article 8a(1)(b) under (iii) of the Slot Regulation merely reads that slots may be transferred "in the case of a total or partial take-over when the slots are directly related to the air carrier taken over." Moreover, Article 8a(2) provides that slot transfers "shall not take affect prior to the express confirmation by the coordinator" and that the coordinator may refuse such transfers if, for example, the coordinator is not convinced that airport operations would not be prejudiced following the transfer, taking into account all technical, operational and environmental constraints explicated in the airport's capacity declaration.
[1065] *Id.* When an airline enters administration or insolvency, the authorized licensing authority issues a notice to the airline to terminate its AOC. Normally, the airline will then get a defined period within which it has an opportunity to appeal the decision of the licensing authority as per the notice and appeal periods established under national bankruptcy laws. States may have different procedures and timelines in place for the handling of (airline) bankruptcies, so that airlines may be declared bankrupt at different stages of the process in different States. As a

Italy, for instance, has rules in place for slots held by carriers for which freezing is expected pending their financial restructuring. The Italian Aviation Authority establishes that a carrier in financial distress can obtain the 'freezing' of slots if it initiates contact with the coordinator within 30 days from the suspension of its Air Operator Certificate [hereinafter: AOC] in order to inform the coordinator about the future use of the slots. The coordinator may then block the slots pending the restoration of the AOC up to a maximum of two consecutive scheduling seasons. Should the carrier fail to contact the coordinator, the coordinator may return the slots to the slot pool.[1066]

5.3.3 Case law and slot questions pertaining to bankruptcy proceedings

As mentioned at the start of the section, several court judgements have been issued on the management of slots in relation to bankruptcy proceedings. In *R (Monarch Airlines) v. Airport Coordination Limited*,[1067] more commonly known as the *Monarch*-case of 2017, the slots held by Monarch Airlines were sold by the airline to raise finance to repay creditors following Monarch's financial distress. The facts of the case show that Monarch Airlines' AOC was provisionally suspended, pending the suspension of the airlines' operating license. Monarch Airlines challenged the decision of UK-based coordinator Airport Coordination Limited [hereinafter: ACL] to deny Monarch Airlines the allocation of slots for the Summer 2018 season,[1068] asserting that it was still formally designated as an air carrier with a valid operating license and that it had complied with the use-it-or-lose-it rule by meeting the 80% threshold.

Although the Slot Regulation is silent on the handling of slots in bankruptcy proceedings, it prescribes that an airline should have a valid operating license to be allocated slots in Article 2(f)(i). Eventually, the Court of Appeal of England and Wales considered that a carrier in bankruptcy proceedings can indeed be referred to as an air carrier in a legal sense, even if it has no realistic prospect of resuming air transport services. Therefore, the UK Court of Appeal rules that Monarch Airlines was in fact still an air carrier when slots fell to be allocated and was entitled under Article 8(2) of the Slot Regulation to the slots that it had claimed and to subsequently sell these slots, even though it wasn't flying them and wouldn't be flying them in the future.[1069] Although the Court's verdict in the Monarch-case is based on the Slot Regulation, it is not binding for courts in EU Member States.

The insolvency of Air Berlin also created slot questions, albeit of a different nature. In the case of Air Berlin, the slots allocated to it at 19 airports were to be transferred to Lufthansa following the purchase of shares from Air Berlin by Lufthansa, which included the whole of *Luftfahrtgesellschaft Walter GmbH* [hereinafter: LGW] as wholly-owned subsidiary of Air Berlin, to which Air Berlin had transferred the slots allocated to it following its insolvency.[1070]

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result, the AOC may also be terminated at different times. Should there be an appeal by the airline, then the appeal process can be subject to a court injunction. If the appeal is granted, the timeline for the handback of the slots becomes unknown and may be subject to a protracted legal process which may vary from one jurisdiction to the other.

[1066] *See* Italian Civil Aviation Authority (ENAC), Assegnazione di bande orarie sugli aeroporti coordination nazionali *(in Italian), available at* https://www.enac.gov.it/sites/default/files/allegati/2018-Lug/EAL-18_firmato%20.pdf (last visited: November 12, 2021).

[1067] *Monarch Airlines v. Airport Coordination Limited*, *supra* note 45.

[1068] ACL argued that Monarch Airlines was no longer eligible to claim slots because the airline was no longer operational and therefore could not be considered an "air carrier" in the sense of the Slot Regulation. ACL based itself on Article 2(e) of the Slot Regulation, which holds that a Community air carrier refers to an air carrier with a valid operating license.

[1069] *Monarch Airlines v. Airport Coordination Limited*, *supra* note 45, paragraphs 54-56.

[1070] As a result of the transaction, Lufthansa would acquire sole control over the aircraft, crew and slots of LGW, including the slots previously held by Air Berlin. The legal entity LGW, including the additional aircraft, crew and

Moreover, Air Berlin had also entered into an asset purchase agreement with easyJet to take over "certain assets and rights held by Air Berlin for parts of its airline operations at Berlin Tegel Airport". As a result, easyJet would require sole control over assets and rights of Air Berlin.[1071] The transfers took place in the framework of the Slot Regulation, which allows for an exchange or transfer of slots between airlines in certain specified circumstances, including between parent and subsidiary companies, as part of the acquisition of control over the capital of an air carrier and in the case of a total or partial take-over when the slots are directly related to the air carrier taken over.[1072]

The slot questions primarily arised in the context of the EU Regulation 139/2004 of 30 January 2004 on the control of concentrations between undertakings[1073] [hereinafter: the Merger Regulation] and focused on whether the transactions were likely to lead to "the creation or strengthening of a dominant position in slot holding having anti-competitive effects" at the airports where Lufthansa would increase its slot holdings,[1074] as well as whether the entry of easyJet at Berlin Tegel Airport would lead to competitive disadvantages for easyJet's competitors.[1075] Both transactions secured clearance from the Commission in 2017. Lufthansa received the green light from the Commission in 2017 to buy Air Berlin's subsidiary LGW in return for giving up slots at Dusseldorf Airport, whereas the asset purchase agreement between Air Berlin and easyJet secured unconditional clearance.[1076]

LOT Polish Airlines subsequently challenged the clearance given by the European Commission with the Court of Justice of the EU [hereinafter: CJEU]. Nevertheless, the actions of LOT Polish Airlines against the Commission's decisions authorizing the mergers concerning the acquisition by easyJet and Lufthansa, respectively, of certain assets of the Air Berlin group, were dismissed by the CJEU in late October 2021. According to the CJEU, the Commission has a "margin of discretion" when ruling on complex economic transactions like the disputed Air Berlin deals. Moreover, the slots acquired by Lufthansa and easyJet would not give either airline an unfair market advantage, especially since the airports where the two airlines gained the slots were relatively uncongested.[1077] It is yet unknown whether LOT Polish Airlines will use its right of appeal to the CJEU.

The relationship between slots and competition law in the context of Articles 101 and 102 of the Treaty on the Functioning of the EU [hereinafter: TFEU] and the Merger Regulation, of which further analysis of the *Air Berlin*-cases forms part, is addressed in section 5.7. What is relevant for this section is that, in these *Air Berlin*-cases which were assessed by the Commission, slots are identified as forming part of the possessions of an undertaking that may be (partially) transferred to another undertaking pursuant to Article 8a of the Slot Regulation.[1078]

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slots that would be transferred to Lufthansa constitute an undertaking within the meaning of the Merger Regulation, *see* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraphs 7, 13 and 119.

[1071] *See* Case M.8672 – easyJet/certain Air Berlin assets, *supra* note 57, paragraph 12.

[1072] EU Regulation 95/93, as amended, *supra* note 47, Article 8a(1)(b).

[1073] EU Regulation 139/2004, *supra* note 28.

[1074] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 162.

[1075] *See* Case M.8672 – easyJet/certain Air Berlin assets, *supra* note 57, paragraph 157.

[1076] *See See* Case M.8672 – easyJet/certain Air Berlin assets, *supra* note 57; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980.

[1077] General Court of the European Union, Press Release No 188/21, Luxembourg, 20 Oct. 2021, Judgments in Cases T-240/18 and T-296/18 *Polskie Linie Lotnicze 'LOT' v. Commission*.

[1078] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 13.

Also, slots have been used as collateral to financial institutions in the US and they have also been included in the estate of an airline by bankruptcy courts. After all, when airlines file for bankruptcy, the slots they hold at busy airports are often their most valuable resource.[1079] As part of a credit and guarantee agreement with Citibank in 2014, American Airlines and American Airlines Group pledged slots as collateral.[1080] Slots at US airports covered by the High Density Rule [hereinafter: HDR] were treated as 'possessions' belonging to airlines in practice, despite the FAA's proposition that slots are operating privileges subject to withdrawal by the US DoT, putting private titles to slots at risk of private investors such as banks.[1081] These slots were accepted by banks as collateral in bankruptcy proceedings and were listed at balance sheets. For example, airlines have mortgaged their slots to financial institutions and security interests have been vested in them.[1082] American Airlines included domestic slots on their balance sheet and depreciates them over 25 years.[1083]

The potential of slots as intangible possessions has also materialized in the UK, where airlines identify the economic value of slots on their balance sheets over which they can raise finance. In 2007, for example, BMI valued its London Heathrow slot portfolio on its balance sheet at £770 million pounds, which equates to £9,9 million per daily slot pair.[1084] Moreover, British Airways, easyJet and Lufthansa have listed slots on their balance sheets as intangible possessions, even though Lufthansa is registered in Germany and Germany has not permitted a secondary market in slots. Other airlines, including Air France-KLM, have also listed intangible possessions on their balance sheets, though they do not specify if slots are amongst these. These carriers do not list their total slot holdings, but instead only include the value of slots acquired as part of acquisitions of other carriers.[1085] Air Canada stated in its Annual Report of 2011 that the value of its international route rights and slots amounted to 97 million Canadian dollars as of 1 January 2019.[1086]

One could argue that, if airlines are able, and entitled to add historic slots to their balance sheets in a State where a secondary market in slots exists, they may be able to raise finance against the historic slots they hold. After all, the value of the historic slots on the balance sheets may influence the credit ratings achieved by ratings agencies and banks, which will affect airline finances.[1087] Such practices could lead to financiers with deep pockets pressurizing airlines to legally challenge the coordinator for, in their opinion, unfavorable coordination decisions affecting slots over which said financiers have taken security. The pressure imposed on the coordinator's resources and potentially unexpected legal outcomes could destabilize the entire slot coordination system.[1088]

5.3.4 Concluding remarks

The financial default of airlines raised a number of delicate issues linked to the debate on slot title, including whether it is legally possible to prevent the so-called 'freezing' of slots held by these carriers until the financial difficulties have been overcome, meanwhile blocking the efficient use of declared capacity. The current slot rules do not provide much guidance on this

[1079] *See* Boyfield, *supra* note 46, at 39.
[1080] *See* Egeland and Smale, *supra* note 276, at 23.
[1081] *See* NERA Economic Consulting, *supra* note 5, at 255.
[1082] *See* Mendes de Leon, *supra* note 48, at 571.
[1083] *See* United States Securities and Exchange Commission, Form 10-K: American Airlines Group Inc., *available at* https://www.sec.gov/Archives/edgar/data/4515/000119312516474605/d78287d10k.htm (last visited: November 12, 2021).
[1084] *See* Mott MacDonald(II), *supra* note 113, at 120.
[1085] *See* Steer Davies Gleave, *supra* note 69, at 278.
[1086] *See* Air Canada, *2020 Annual Report* (2021).
[1087] *See* Egeland and Smale, *supra* note 276, at 26; Mott MacDonald, *supra* note 63, at 10-15.
[1088] *See* ACL, *supra* note 118, at 21.

matter, and bankruptcy laws and policies vary from State to State, also in the EU. Leaving slot coordination to the whims of national bankruptcy regimes for extensive periods of time, and often outside of the view of the coordinator, seems ill-considered at the least, given that the WASG presume an open, fair and transparent allocation of scarce capacity by an independent slot coordinator for the benefit of all parties involved.[1089] Moreover, it may erode the coordinator's independent function in the performance of their exclusively assigned duties as capacity allocator as per Article 4(5) of the Slot Regulation.

It appears that the absence of specific rules addressing the legal position of slots in bankruptcy proceedings, including any next steps including timeframes may be reflective of the period in which the WASG and the Slot Regulation were developed. The drafters of the WASG and the Slot Regulation may not have approached the issue of financial restructuring as one of much concern at the time, as demand for air transport was characterized by growth and available airport capacity was plentiful. The drafters appear to have been more focused on promoting the development of scheduling consistency and networks rather than competitiveness or on the situation of airlines affected by financial default. Both instruments apparently did not presume that slot capacity scarcity was here to stay. Alternatively, the drafters of the WASG and the Slot Regulation may have left the delicate question as to the legal position of slots in bankruptcy proceedings consciously to national laws, which are not harmonized.

5.4 The role of the financially and functionally independent slot coordinator and its discretionary powers

5.4.1 The coordinator's main tasks

In States where the WASG guidelines apply, whether directly as guidelines or because the WASG guidelines are implemented in regional or national laws, the exclusive responsibility for the allocation of slots at Level 3 airports is vested with the slot coordinator, who ensures slot allocation takes place through a system of fair, non-discriminatory and transparent rules so as to ensure optimal utilization of airport capacity.[1090]

As elaborated upon in Chapter 2, section 2.2.3, the coordinator allocates the slots for the Winter and Summer season as closely as possible to the requested slot time, subject to the limits of the capacity declaration and in line with the basic notions and principles of the coordination process set forth in the relevant laws and guidelines for slot coordination. One of the main tasks of the coordinator is to find the most efficient allocation solutions that comply as closely as possible with slot requests submitted by airlines.[1091] In doing so, the coordinator is assisted by a coordination committee comprised of, among others, the airport managing body and the airlines operating to and from the airport.[1092]

In States where the WASG guidelines do not apply and the coordinator is not given independent functions, the coordinator may be a body of the government or the airport.[1093] The analysis in

[1089] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1(c).
[1090] *Id.,* at 1.2.1(c).
[1091] *See* Odoni, *supra* note 61, at 31.
[1092] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 5.6.1. The principal tasks of coordination committees are set out in paragraph 5.6.2, including but not limited to providing advise on the possibilities of adjusting the capacity of the airport and consult on coordination parameters.
[1093] In China, slot allocation falls within the control of the central government by means of the Civil Aviation Administration of China [hereinafter: CAAC], *see* Chapter 4, section 4.6.3.1. In the US, the FAA fulfills the role of slot coordinator or facilitator at US airports subject to Level 3 slot controls or Level 2 facilitation. *See* Federal Aviation Administration (FAA), Slot Administration – Slot Allocation Process, *available at*

this section limits itself to the principles of the WASG and their application in the Slot Regulation in particular.

5.4.2 De facto financial and functional independence of the coordinator

With slot scarcity levels and therefore the risk of judicial reviews rising as discussed in Chapter 2, section 2.2.4, especially in the EU, coordinators play an increasingly important role in the correct application of the slot allocation rules. Thus, it is imperative that coordinators fulfill their tasks in an effective, neutral and independent way. To ensure that the independent functioning of the coordinator is beyond any doubt, the WASG require that the slot coordinator manages the process independent from government, airlines and airport operators.[1094] It should, however, also be ensured that the entity responsible for slot allocation at a coordinated airport is not only *de iure*, but also *de facto* independent.[1095]

According to the Commission, *de facto* independence requires the coordinator to have a legal status which enables it to carry out its allocation activities under complete freedom and autonomy, without being pressurized or having to take instructions from the government or the airport managing body.[1096] In a case between the Commission and the Portuguese Republic of 2016, the CJEU held that the mere risk of not being able to perform its duties with complete freedom is enough to hinder the independent performance of the coordinator's activities.[1097]

Besides the functional independence of the coordinator, the Commission also considers that the financing of the coordinator's activities should be set up in such a way that the coordinator is financially autonomous from any interested party.[1098] The introduction and subsequent withdrawal of a national law[1099] in Italy in 2007 that sought to give the regional government the right to participate in slot allocation decisions at airports in Lombardy to ensure regional development aims were met illustrates the exclusive responsibility of the coordinator in relation to the allocation of slots. The law was challenged and overturned by the Italian Constitutional Court in 2009 on the basis that the region was not competent to introduce such a law.[1100]

Another case that illustrates the neutrality and independence of the slot coordinator is the *Laker*-case.[1101] In 1997, Laker had sued British Airways under federal and state antitrust laws in the Florida courts, alleging that British Airways conspired with ACL, a private English corporation appointed by the UK government to coordinate requests for landing and take-off slots at UK airports, to prevent Laker from being allocated desirable slots at London's Gatwick Airport for a London-Miami service. Laker argued that it was denied access to slots at Gatwick at commercially viable times, leading to the failure of Laker's new services between Gatwick and Florida. The Court upheld the trial court's dismissal of these claims for failure to join ACL, an indispensable party. ACL was considered indispensable because resolution of Laker's claims

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https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/perf_analysis/slot_administration/slot_allocation_process (last visited January 7, 2021).

[1094] In the EU, the coordinator is *de iure* independent pursuant to recitals 6 and 7 of the Preamble and Article 4b(2) and 4(5) of the Slot Regulation.

[1095] *See* European Commission, *supra* note 54, paragraph 9.

[1096] *See* European Commission, *supra* note 165, at 3.

[1097] Case C-205/14 (European Commission v. Portuguese Republic, *supra* note 647, paragraph 18.

[1098] *Id.,* paragraph 25.

[1099] LOMBARDIA, L.R. n. 29/2007, Norme in materia di trasporto aereo, coordinamento aeroportuale e concessioni di gestione aeroportuali *(in Italian)*.

[1100] Corte Costituzionale, *supra* note 648

[1101] *Laker Airways Inc v. British Airways PLC, supra* note 501.

would "inevitably comment upon the neutrality and independence" of the slot allocation process as required under EU law, thereby implicating ACL and prejudicing its interests.[1102]

5.4.3 The discretion of the coordinator in allocation decisions

The coordinator has a certain degree of discretion when it comes to allocation decisions.[1103] A degree of coordinator discretion and flexibility is deemed to support the fundamental requirement of coordinator independence, which in turn underpins air transport liberalization. ACL has stated that rules that are overly prescriptive or that essentially come down to plain government instructions could potentially erode the independence of the coordinator and the industry's trust in fair allocation if no reservations on coordinator discretion are made.[1104] Chapter 4, section 4.3.3.2 provides examples of local procedures introduced by coordinators.

A recurrent complaint from airlines, airports and governments relating to the coordinator's discretion is that the rationale for allocation decisions is not always transparent for airline and airport stakeholders,[1105] which especially poses a problem at airports where there is excessive overdemand and no alternative offers can be made, the so-called 'super-congested' airports. It may be unclear for stakeholders what additional criteria were used, what information the coordinator's decision was based on, and how the relevant criteria were applied and weighted.[1106] According to the UK Competition & Markets Authority, it is often unclear what reasoning UK-based coordinator ACL uses for their decisions on in the allocation of slots from the slot pool, as publicly available information is limited.[1107]

Arguably, it is a matter of public interest that there is publicly available information about the identity of airlines that are the recipients of slots, and what they are going to use them for. After all, the allocation of slots involves the transfer of valuable elements for use by private enterprises, that is airlines. By publicly providing the rationale and methods for the use and application of additional criteria at the Dutch airports of Amsterdam Airport Schiphol, Rotterdam The Hague Airport and Eindhoven Airport by way of a 'Policy Rule', the Dutch coordinator ACNL seems to have alleviated any transparency concerns, although the initiative was stalled by the court in November 2021.[1108]

Another criticism of the coordinator's discretion posed by airlines and airport stakeholders is that they are not adequately consulted with regard to the implications of allocation decisions, whereas these implications could have been better resolved had coordinators been made aware of additional available information. A complaint typically expressed by airports is that they receive information about slot requests only when slots have already been allocated, thereby foregoing the opportunity for airports to advise the coordinator about additional points or data that should be considered with regard to capacity utilization.[1109]

[1102] *Id.* at Conclusion.
[1103] As we have seen in Chapter 4, sections 4.3.2 and 4.3.3.2 of this dissertation, the adoption of local procedures may assist the coordinator with decisions on competing slot requests belonging to the same priority class.
[1104] *See* ACL, *supra* note 118, at 3.
[1105] *See* Odoni, *supra* note 61, at 134.
[1106] *Id.*, at 134.
[1107] *See* UK Competition and Markets Authority, *supra* note 448, at 31.
[1108] *See* ACNL, *supra* note 726; Airport Coordination Netherlands (ACNL), Additional Allocation Criteria – Destination Lists, *available at* https://slotcoordination.nl/slot-allocation/additional-allocation-criteria/?preview=true%20 (last visited: August 14, 2021).
[1109] *See* Odoni, *supra* note 61, at 134.

Regarding additional allocation criteria, paragraph 5.4.3 appears to foresee in the needs of airports to provide advise to the coordinator on allocation decisions where competing requests are concerned. Paragraph 5.4.3 reads as follows:

> "The airport managing body or other competent body should provide relevant information to the coordinator in order to assist in applying the additional criteria for slot allocation given in 8.4.1 . . .."

ACL, and other coordinators as well, recognize that transparency is important.[1110] However, greater transparency may also place an additional burden on the coordinator through an increased risk of judicial review.[1111] Going forward, allocation decisions may increasingly become the subject of judicial review. With scarcity levels rising, airlines are becoming more open to challenge allocation decisions in court, for example if they do not receive the slots they feel entitled to and the allocations were made based on the discretion of the coordinator.[1112]

ACL regards government guidance as a potential useful mechanism to reduce the risk of judicial review, though this would not exhaustively mitigate the risk of challenge.[1113] ACL's viewpoint connects with Article 11(2) of the Slot Regulation, stating that

> "Member States shall take appropriate measures, in accordance with national law, to protect coordinators with regard to claims for damages relating to their functions under this Regulation, save in cases of gross negligence or willful misconduct."[1114]

5.4.4 Concluding remarks

The exclusive responsibility for the allocation of slots at Level 3 airports is vested with the slot coordinator, who must ensure that slot allocation takes place through a system of fair, non-discriminatory and transparent rules so as to ensure optimal utilization of airport capacity according to both the WASG and the Slot Regulation.[1115] A vital degree of flexibility and discretion is therefore imperative when it comes to the interpretation and application of the slot regime and will enable the coordinator to respond to ever-changing market realities, specifically as local situations differ and may therefore require different solutions as discussed in Chapter 2, sections 2.3. and 2.4.

Given the role of the government with respect to the designation of airports as Level 1, 2 or 3 as discussed in Chapter 2, section 2.2.1 and in defining the functions of an airport, for example through the use and applications of Traffic Distribution Rules as discussed in sections 4.4.2 and 4.4.3, the coordinator should, however, also *take into account¸* though should not be forced to apply, relevant public interest objectives as defined by government authorities, as well as local guidelines proposed by the coordination committee as discussed in Chapter 4, section 4.3.2. Except for rules established by law which are without prejudice to the principles of transparency, neutrality and non-discrimination as to nationality or identity, any form of industry or government guidance should not be binding upon the coordinator to preserve its independent function.

[1110] *See* ACL, *supra* note 118, at 10.
[1111] *See* UK Competition and Markets Authority, *supra* note 448, at 31.
[1112] *See* ACL, *supra* note 118, at 31.
[1113] *Id.¸* at 31.
[1114] EU Regulation 95/93, as amended, *supra* note 47, Article 11(2).
[1115] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1(c). At Level 2 airports, slots are allocated under the guidance of a facilitator, *see* paragraph 1.7.1 of the WASG.

Chapter 6 of this dissertation provides suggestions on how a balance between the functions of the coordinator, government authorities and the industry can be achieved, without compromising the independency of the coordinator and while addressing transparency concerns expressed by industry stakeholders and governments in the meantime.

5.5 The New Entrant rule: fit for purpose?

5.5.1 The background of the new entrant rule

To alleviate the increasing concerns of the Commission that the grant of grandfather rights was anti-competitive, since it may deny new entrants opportunities to enter the market, a provision to set aside a portion of slots for new entrants to stimulate competitive entry was introduced in what is currently the WASG.[1116] The new entrant rule may be seen an 'asymmetric approach' pursuant to which new entrants are given preferential treatment in slot allocation over incumbent carriers, akin to handicapping a golf player in order to make competition more even.[1117]

As discussed in Chapter 2, section 2.2.3, the new entrant rule provides that 50% of the slot pool is set aside for priority allocation to new entrants. An airline only qualifies for new entrant priority if it holds fewer than five or seven slots at an airport on a given day.[1118] In the EU, airlines do not qualify as a new entrant if it holds more than 4% of the slots at an 'airport system' level, even if they do not hold any slots at the airport they are requesting slots for and considering that different airports may serve entirely different markets.[1119] At super-congested airports with limited to no slots available, it is questionable whether and to what extent the new entrant rule is capable of easing market access, a question which is addressed in the next sections.

5.5.2 Shortcomings of the new entrant rule

Although the opening up of numerous routes has been observed in recent years, many of which have been built up by low-cost carriers, this has mostly been for other reasons than a well-functioning new entrant rule. Reasons for this are multifold.

At most European airports, Steer (2011) has found that less than 50% of the slots are allocated under the new entrant rule, partly due to a lack of requests that meet the current criteria, and partly due to a total lack of slots. Available pool slots – if at all – for priority allocation to new entrants at the most congested airports are more likely to be off-peak, limiting the benefits of the existing network of connections at an airport. Hence, despite the *raison d'être* of the current system – namely to promote effective competition and use capacity efficiently – new entrants usually begin their operations on less favorable conditions.[1120] At super-congested airports where there is an active secondary market, airlines are likely to seek to monetize slots through the secondary market, which is subject to discussion in section 5.6 below, instead of returning them to the pool. At these airports, the potential impact of the new entrant rule on market access is limited as the number of available slots is low.

[1116] *See* Chapter 4, section 4.1.2 of this dissertation.

[1117] *See* Jaap de Wit, *Unlevel playing field? Ah yes, you mean protectionism*, 41 Journal of Air Transport Management (2014), at 23; Lumbroso, *supra* note 328, at 26-28.

[1118] The WASG has always defined new entrants as airlines holding fewer than 5 slots at a specific airport on a specific day. However, the first edition of the WASG shows that the definition of 'new entrant' has been modified to airlines holding fewer than 7 slots at a specific airport on a specific day, thus allowing for 3 rotations per day in its list of Terms and Abbreviations. The Slot Regulation still follows the 'old' definition referring to fewer than 5 slots in Article 2(b) under (i) of the Slot Regulation.

[1119] EU Regulation 95/93, as amended, *supra* note 47, Article 2(b).

[1120] *See* Kociubínski, *supra* note 3, at 36.

Conversely, where slots are readily available through the pool, the application of the new entrant rule is more or less irrelevant, because at these airports, airlines tend not to claim new entrant status even when they would be entitled to do so. It appears airlines do not want to be restricted in how they use the slots allocated to them, *exempli gratia,* the prohibition to transfer new entrant slots for two consecutive years).[1121]

The majority of the airlines currently operating at an increasing number of (super-)congested airports would not satisfy the new entrant criteria, including the ones with limited slot holdings, as the maximum of 5 or 7 slots per day is easily exceeded. This shortcoming has induced excessively fragmented outcomes, with a large number of small airlines holding only very limited slot holdings operating at London Heathrow.[1122] For example, airlines holding as much as 3% of the total slot holdings available would qualify as 'incumbents', despite the fact that the dominant carrier has a majority slot share, and would have to acquire slots – of which there currently are none – through the initial allocation procedure carried out by the coordinator. Due to the 'airport system qualifier', low-cost carriers [hereinafter: LCCs] such as easyJet or Ryanair would not qualify for new entrant slots at London Heathrow because their slot holdings at the London airport system level exceed 4% of total slot holdings, even though they have no operations at London Heathrow.[1123]

Another factor affecting the new entrant rule is that it is susceptible to circumvention by airlines with multiple AOC's and airline groups, which may 'game' the system by using the loopholes of the new entrant rule. Since the new entrant rule applies to individual airlines, it is possible for the smaller members of an airline group to obtain new entrant status, despite other members already having significant slot holdings. After two years, the slots may then be transferred to partners. This airline behavior, though not prohibited by the WASG and the Slot Regulation, has already been labeled as a "potential form of gaming" of the slot allocation system by ACL and needs legislative clarification.[1124]

The specific characteristics of the new entrant rule have reduced the ability of incumbent carriers with limited or modest slot holdings to effectively compete with larger carriers.[1125] Any new entrant would need to achieve a large minimum scale in order to operate economically in a given market. The fact that new entrants are limited in the number of slots they may hold to get accorded new entrant priority hinders smaller and medium-sized airlines from expanding their services. Accordingly, they are unlikely to be able to establish a viable network and a competitive critical mass of operations in order to compete with incumbent carriers in terms of destinations and frequencies served.[1126] Instead of spiking competitive entry, DotEcon (2006)[1127], European Commission (2007)[1128], Menaz and Matthews (2008)[1129], Steer Davies Gleave (2011)[1130], Competition and Markets Authority (2019)[1131] and Van Houten and Burghouwt (2021)[1132] have warned that the new entrant limitation could result in fragmented

[1121] *See* Steer Davies Gleave, *supra* note 69, at 104.
[1122] *See* UK Competition and Markets Authority, *supra* note 448, at 29.
[1123] *Id.,* at 28.
[1124] *See* ACL, *supra* note 118, at 29.
[1125] *See* UK Competition and Markets Authority, *supra* note 448, at 29.
[1126] *See* European Commission, *supra* note 26, at 27; Odoni, *supra* note 61, at 67; DotEcon Ltd., *supra* note 64, at 73; European Commission, *supra* note 208, at 4.
[1127] *See* DotEcon Ltd., *supra* note 64.
[1128] *See* European Commission, *supra* note 208.
[1129] *See* Menaz and Matthews, *supra* note 194.
[1130] *See* Steer Davies Gleave, *supra* note 69.
[1131] *See* UK Competition and Markets Authority, *supra* note 448.
[1132] *See* Van Houten and Burghouwt, *supra* note 22.

slot allocation outcomes amongst many small operators to the benefit of the relative position of incumbent carriers at hub airports.

5.5.3 Deliberations as to a broadening of the new entrant qualification

In order to remedy schedule fragmentation and to help ease airport access, the Commission proposed in 2011 to broaden the definition of a 'new entrant' airline.[1133] At the aggregate level, it replaces the existing limit of 5% of the total slots with a limit of 10% together with the entire parent group an airline may be part of.[1134] This proposal remained blocked in the European Council at the time of writing, although EU Regulation 2021/250, which incorporates temporary relief measures into the Slot Regulation in response to the COVID-19 crisis, includes a revised new entrant definition resembling the Commission's 2011 proposal.[1135] The Commission has the power to adopt delegated acts based on EU Regulation 2021/250 until 21 February 2022.

Yet, in relation to super-congested airports, it is unlikely that these airports will have a slot pool sufficiently large to accommodate any single new entrant, let alone a new entrant seeking as many as 10% of the total number of slots. Hence, the change in new entrant designation may only be feasible for the lesser congested Level 3 airports.[1136]

The question is whether broadening the scope of the new entrant rule as is will result in a more efficient allocation. After all, it may well be the case that slots that would otherwise be allocated to new entrants could be better used for routes served by larger incumbent airlines. Competition at the route level could be improved if flights on a particular route could benefit from more connecting traffic or from raising the number of frequencies – both likely only achievable by airlines holding a more substantial slot portfolio.[1137] Ultimately, and primarily depending on the local situation, a region may reap more benefits from services carried out by a smaller number of larger operators.[1138] From that perspective, it may be more efficient from a socio-economic point of view to encourage the current players in the market at super-congested airports to utilize existing capacity more efficiently.[1139]

Although some successful services have been launched as a result of the new entrant rule, the new entrant rule paired with the principle of historic precedence makes it very difficult for new entrants to establish a competitive foothold and challenge the dominant position of incumbent airlines at the most congested airports where slot mobility is low. Its future scope is also limited because of the rarity of capacity increases at European airports.[1140] It follows that most major Level 3 airports are dominated by a small number of incumbents with large shares of slots, while numerous other carriers have each been allocated small portions of slots.[1141]

[1133] *See* European Commission, *supra* note 26, at 27.
[1134] *See* Odoni, *supra* note 61, at 71.
[1135] The revised definition sets the maximum number of daily slots held by a new entrant at an airport at seven, or nine for a non-stop intra-EU service at an airport where at most two other carriers operate. It also excludes from new entrant status carriers, which together with their parent companies, their own subsidiaries or the subsidiaries of the parent company, hold more than 10% of the total slots allocated on the day in question at a particular airport. *See* Council Regulation (EU) 2021/250 of 16 February 2021 amending Council Regulation (EEC) No 95/93 as regards temporary relief from the slot utilization rules at Union airports due to the COVID-19 crisis, OJ L 58.
[1136] *See* Odoni, *supra* note 61, at 73.
[1137] *See* UK Competition and Markets Authority, *supra* note 448, at 29.
[1138] *See* UK Competition and Markets Authority, *supra* note 117, at 9.
[1139] Bryan Matthews and Betool Menaz, *Airport Capacity: The Problem of Slot Allocation* (2003), at 4.
[1140] *See* Chapter 2, section 2.3 on the factors hampering airport capacity increases, particularly in Europe.
[1141] *See* Mott MacDonald(II), *supra* note 113, at 24-25.

Chapter 6 provides recommendations on the potential application of the new entrant rule at the route level, instead of at the overall airport level.

5.5.4 Concluding remarks

At first glance, the new entrant rule appears to make congested airports more accessible for smaller competitors. Nonetheless, this favorable scenario depends in its entirety on the effective availability of slots to accord new entrant priority to.[1142] Even where slots are available, it appears that the specific characteristics of the new entrant rule have reduced the ability of airlines with limited or modest slot holdings to effectively compete with larger airlines. Instead of spiking competitive entry, the new entrant rule may instead result in fragmented slot allocation outcomes to the benefit of the position of incumbent carriers.[1143]

Nonetheless, the specificities of the new entrant rule have not stopped the substantial overall growth of LCCs in the air transport market, which has occurred largely without assistance of the new entrant rule. Many LCCs have entered the market by other means. They have developed operations at secondary airports and have acquired slots through the secondary market, where applicable, which is subject to discussion in the next section.

5.6 Secondary slot trading and slot leasing as a means to increase slot mobility: multiple shades of grey

5.6.1 The terminology and economic theory behind secondary slot trading

In States where the WASG guidelines are followed and/or are implemented in national or regional laws, the process for the coordination of scarce capacity in the form of airport slots relies on purely administrative decision-making mechanisms, with little or no economic considerations playing a role in the coordination of slots. The primary allocation mechanism refers to the administrative allocation of slots, as carried out by an independent slot coordinator, to the airlines. It is based on the principle of historic precedence, followed by the remaining priority rules. On the contrary, secondary allocation mechanisms refer to the redistribution of slots between airlines, with the purpose of improving allocative efficiency through the allowance of further changes once the primary allocation of slots has been established, which should mitigate residual inefficiencies resulting from the administrative allocation process.[1144]

The current administrative system based on grandfather rights, especially in the context of increasingly scarce capacity at airports, is widely viewed by academics and US, UK and EU regulators to be economically inefficient, for instance through the strategic behavior of slot babysitting discussed in section 5.6.2 below.[1145] With incumbent airlines being given priority to use the same slots in the next equivalent season,[1146] the system does not ensure that slots are allocated to those airlines who attach the highest economic value to them in terms of the profit

[1142] *See* García-Arboleda, supra note 381, at 593.
[1143] *See* European Commission, *supra* note 26, at 27; Steer Davies Gleave, *supra* note 69, at 111.
[1144] The administrative mechanism which has grandfathered slots means that some slots have been held by airlines for a long period, meaning that the allocation has not evolved fully to reflect and incorporate changes to the market. It is unlikely that all incumbent slot holders are the most efficient users of those slots. *See* NERA Economic Consulting, *supra* note 5, at 69; European Commission, *supra* note 26, at 7; UK Competition and Markets Authority, *supra* note 448, at 17.
[1145] *See* Chapter 2, section 2.1.4 for an overview of authors who have expressed criticism toward grandfather rights.
[1146] Equivalent is understood to refer to the same season in the next year, meaning winter-winter and summer-summer.

they are able to reap from that slot and, henceforth, does not adequately reflect the scarce nature of airport slots.[1147]

Accordingly, *secondary slot trading* represents an alternative mechanism through which air carriers can acquire slots, next to the initial allocation process, and is therefore expected to increase slot mobility and enhance market access at congested airports, since airlines are faced with the *opportunity cost* of a slot and will increasingly engage into trade-offs with themselves whether or not they need a certain slot, and to what extent they might be better off selling the slot to airlines that would use the slot more efficiently.[1148]

Secondary slot trading involves historic slot transfers between airlines that include monetary compensation, and possibly also other non-monetary considerations such as agreements relating to codeshares, ground handling or marketing in respect of such transfer.[1149] It lets airline face the 'opportunity cost' – the revenue foregone by not trading the slot – of the slots they hold.[1150] Secondary slot trading is therefore distinguished from the vertical (re)allocation of slots by coordinators to airline applicants, which is a form of *primary* allocation.[1151] Slot trading is often documented in formal written agreements that are confidential to the parties involved.[1152]

For the purposes of the present dissertation, a *slot transfer* is taken to mean a permanent, unidirectional transfer of slots from airline A to airline B. All the rights and obligations associated with that slot, including grandfather rights, will transfer as well.

A *slot lease* refers to a temporary slot swap, where airline A and airline B bilaterally agree to reverse the swap in a future season under contracts of varying terms. In the case of leasing, the initial slot holder retains control over the slot. Upon the discontinuation of the lease, the slot will revert back to the airline to whom the slot was initially allocated.[1153] Both transfers and leases involve a redistribution of slots after the primary allocation has been completed by the coordinator.[1154]

There is a sizeable body of economic theory on secondary slot trading, including but not limited to DotEcon (2001 and 2006)[1155], Boyfield et al (2003)[1156], Sentance (2003)[1157], NERA (2004)[1158], Madas and Zografos (2006)[1159], Mott MacDonald (2006, 2019)[1160], De Wit and Burghouwt (2008)[1161], Czerny et al (2008)[1162], Menaz and Matthews (2008)[1163], Steer Davies

[1147] *See* Menaz and Matthews, *supra* note 194, at 35.
[1148] *See* Boyfield, *supra* note 46, at 12; NERA Economic Consulting, *supra* note 5, at 331; Colangelo, *supra* note 10, at 188; Mott MacDonald, *supra* note 63, at 10.2.1; Dempsey, *supra* note 859, at 20.
[1149] *See* Odoni, *supra* note 61, at 85; Steer Davies Gleave, *supra* note 69, at 90; Mott MacDonald(II), *supra* note 113, at 45.
[1150] *See* Odoni, *supra* note 61, at 86.
[1151] *See* Mott MacDonald, *supra* note 63, at 4-1.
[1152] *Id.,* at 5-34.
[1153] *See* NERA Economic Consulting, *supra* note 5, at 127.
[1154] *See* Menaz and Matthews, *supra* note 194, at 33.
[1155] *See* DotEcon Ltd.(II), *supra* note 110; DotEcon Ltd., *supra* note 64.
[1156] *See* Boyfield et al., *supra* note 13.
[1157] *See* Sentance, *supra* note 158.
[1158] *See* NERA Economic Consulting, *supra* note 5.
[1159] *See* Madas and Zografos, *supra* note 216.
[1160] *See* Mott MacDonald, *supra* note 63; Mott MacDonald(II), *supra* note 113.
[1161] *See* De Wit and Burghouwt, *supra* note 846.
[1162] *See* Czerny et al., *supra* note 878.
[1163] *See* Menaz and Matthews, *supra* note 194.

Gleave (2011)[1164], Zografos et al (2012)[1165], Fukui (2014)[1166], Kociubinski (2014)[1167], Behrens and Van Spijker (2018)[1168], Florence School of Regulation (2019)[1169], UK Competition and Markets Authority (2019)[1170], and Odoni (2020)[1171]. Secondary trading already exists in many sectors.[1172] See MottMacDonald (2006) and NERA (2004) for an analysis of secondary trading in other sectors, such as gas and electricity entry capacity rights, EU ETS, spectrum trading, fishing quotas and water abstraction rights.[1173]

This dissertation will focus on the legality of slot leases and slot transfers as alternative sources of slots in section 5.6.3 and provides perspectives for discussion if these alternatives should be given a place in a future slot regime in section 5.6.4. First of all, section 5.6.2 introduces the practice of slot babysitting, which may become increasingly prevalent under a mechanism of secondary slot trading. Primary market-based coordination mechanisms such as slot auctions and differential peak pricing are deemed out of scope for this dissertation.[1174]

5.6.2 The practice of slot babysitting

The use-it-or-lose-it rule, as discussed in Chapter 2, section 2.2.2, appears to encourage high levels of slot utilization, since airlines will lose slots to the pool if they do not operate the slots they hold according to the 80% threshold. However, as also indicated in Chapter 2, section 2.1.4 of this dissertation, grandfather rights have also been frequently criticized for preventing an optimal use of scarce airport capacity, especially at super-congested airports.

Instead of returning slots to the pool, the use-it-or-lose-it rule may provide an incentive for airlines to hold on to slots for future operations, a practice that is also known as 'slot babysitting', even if their use is not financially viable at the time.[1175] Concerns as to an increased use of babysitting practices rise with the introduction of a secondary market for slots. Although airlines may have other justifiable reasons for airlines to hold onto slots, slot babysitting prevents slots from ending up with competitors, which could potentially make more efficient use of them.[1176] Incumbent carriers could be inclined to retain surplus slots they hold and simply forego the opportunity cost they could have received by selling the slots. If they would have sold the slots instead, the revenue gained through the sale might have been offset by the additional competition created by the sale at a later stage.[1177]

Babysitting practices come in many forms. One example can be found in the employment of small aircraft on short distance routes, which enables the airline to retain the slot at a relatively low cost for more profitable use later on.[1178] Airlines may also lease slots to

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[1164] *See* Steer Davies Gleave, *supra* note 69.
[1165] *See* Zografos et al., *supra* note 664.
[1166] *See* Fukui, supra note 66.
[1167] *See* Kociubínski, *supra* note 3.
[1168] *See* Behrens et al., *supra* note 67.
[1169] *See* Finger et al., *supra* note 18.
[1170] *See* UK Competition and Markets Authority, *supra* note 448.
[1171] *See* Odoni, *supra* note 61.
[1172] *See* Colangelo, *supra* note 10, at 31.
[1173] *See* Mott MacDonald, *supra* note 63, Chapter 6.
[1174] For a discussion of primary coordination mechanisms, *see*, for instance, Boyfield et al., *supra* note 13; DotEcon Ltd., *supra* note 64; Ribeiro et al., *supra* note 133.
[1175] *See* Claudio Noto, *Airport slots, secondary trading, and congestion pricing at an airport with a dominant network airline*, 79 Research in Transportation Economics (2020), at 7; Steer Davies Gleave, *supra* note 69, at 88; Haylan and Butcher, *supra* note 116, at 12.
[1176] *See* Finger et al., *supra* note 18, at 7.
[1177] *See* NERA Economic Consulting, *supra* note 5, at 130-31; Czerny et al., *supra* note 878, at 267.
[1178] *See* Steer Davies Gleave, *supra* note 69, at 88.

partner airlines that cannot immediately be used by the airline they were allocated to,[1179] a practice introduced in section 5.6.3 below. Furthermore, in order to retain slot portfolios at the super-congested airport of London Heathrow, airlines have resorted to flying smaller planes than necessary in order to spread seat capacity across the slots they hold. London Heathrow is also familiar with the occurrence of so-called 'ghost flights', that is to say airlines operating empty or nearly empty flights to ensure that the airport infrastructure is booked at the appointed time.[1180]

Strategic behavior such as slot babysitting raises interesting questions as to whether or not airlines should be allowed to request or purchase slots with the sole intention of leasing them out to another airline or to safeguard them for future operations, thereby affecting the competitive position of its rivals.[1181] Section 5.6.4 provides further considerations for the implementation of secondary slot trading and slot leasing in a future slot regime.

5.6.3 The legality and practice of secondary slot trading and slot leasing

Although the flexibility for airlines to swap slots on a one-for-one basis is broadly accepted at Level 3 airports,[1182] *exempli gratia* for scheduling and logistic reasons, both the WASG and the Slot Regulation fail to unambiguously address the question whether or not the transfer of slots may be accompanied by financial considerations. They do not specifically allow the buying and selling of slots, nor do they explicitly prohibit it.[1183] Secondary slot trading for remunerative purposes is, nonetheless, explicitly permitted in the UK and the US, which is subject to analysis later on in this section.[1184]

Henceforth, there appears to be a *lex lacunae* in many States when it comes to the regulation of secondary slot trading. The WASG allow slot transfers where they are not prohibited by the laws of the relevant State, whether or not for compensation or consideration.[1185] In the EU, slot exchanges and transfers are permitted in specified circumstances listed in Article 8a(2) of the Slot Regulation, subject to the explicit confirmation from the slot coordinator.[1186] Slots may also be transferred within a slot portfolio of the same airline.[1187] The Slot Regulation is silent on whether slots, once allocated, may be exchanged accompanied by monetary or other considerations. Notably, the terms 'sale' or 'leasing' do not appear anywhere in the Regulation.

Though the term 'leasing' does not appear anywhere in the WASG nor in the Slot Regulation, slot leases do take place in practice. Slot leases may occur through one-for-one slot exchanges on the basis of paragraph 8.11 of the WASG and Article 8a(1)(c) of the Slot Regulation. They may also occur through a joint operation of a flight, which is explicitly permitted pursuant to paragraph 8.13 of the WASG and Article 10(8) of the Slot Regulation. Generally, the airlines involved sign contracts that commit them to an initial exchange at a particular time and then to reverse the exchange at a future date.[1188] One of the first known examples of a slot lease dates back to 1997, when Lufthansa was using slots of its alliance

[1179] *See* Mott MacDonald(II), *supra* note 113, at 49.
[1180] *See* UK Competition and Markets Authority, *supra* note 448, at 7.
[1181] *See* Gillen and Morrison, *supra* note 114, at 189.
[1182] *See* Mott MacDonald(II), *supra* note 113, at 40.
[1183] *See* European Commission, *supra* note 165, at 6.
[1184] *See* Mott MacDonald(II), *supra* note 113, at 44. The regime for slot coordination in the US, including the use of market mechanisms, has also been analyzed in Chapter 4, section 4.5.
[1185] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 8.12.
[1186] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 224.
[1187] EU Regulation 95/93, as amended, *supra* note 47, Article 8(1).
[1188] *See* Odoni, *supra* note 61, at 97.

partner United Airlines to accommodate 3 daily roundtrips by Lufthansa between London Heathrow and Germany.[1189]

Slot leases between unrelated airlines may occur through the joint operations clause offered by Article 10(8) of the Slot Regulation. Article 10(8) allows a carrier to operate a flight using the slots of another carrier, if both carriers entered into, inter alia, a codeshare agreement with one another. For instance, Delta operates slots at Amsterdam Airport Schiphol using KLM slots, and at London Heathrow using both Air France and KLM slots. This is part of their extensive commercial agreement by way of a joint venture for transatlantic services. There is a substantial difference between a codeshare agreement and a full joint venture with sharing of revenue and costs. Hence, it should be clarified what the scope of a joint operation must be to meet this Article.[1190] Generally, airlines sign contracts that commit them to an initial exchange at a particular date and time and then to reverse the exchange at a future date.[1191] It is not clear what conditions are attached to exchanges or leases, although lease contracts typically include provisions requiring the leasing carrier to use the slot according to the 80% threshold so as to avoid losing it to the pool.[1192]

In the US, slot leasing is explicitly permitted while it is conditional upon FAA approval. As discussed in Chapter 4, section 4.5.2, slot coordinated airports in the US are subject to Temporary Orders, of which the most recent one dates back to 18 September 2020, extending slot coordination to 29 October 2022. Given its limited validity, the Temporary Order also appears to have as its effect that slots can only be leased up for the duration of the order.[1193] Slot leases also take place in the UK, with lease durations varying from one season or year to typically 5-year terms.[1194] In 2017, slot leases and temporary transfers accounted for around 4% of slots in operation at New York John F. Kennedy International Airport and New York LaGuardia Airport, and 1% of slots at Ronald Reagan Washington National Airport.[1195]

In 2001, a Dutch court adopted in summary proceedings a fairly restrictive view of Article 8(4) of the Slot Regulation, stating that this provision is designed to limit transfers amongst carriers. According to the court, private exchanges of slots would undermine the objectives of the slot coordination process as prescribed in the Slot Regulation as well as the position of new entrant carriers.[1196]

In the UK, secondary slot trading accompanied by financial considerations was explicitly approved by the High Court in a ruling, also referred to as the *Guernsey*-ruling[1197], over a slot deal between British Airways and KLM in 1999. The case centered around the precise legal meaning of the words “freely exchanged” in Article 8(4) of the Slot Regulation. The judge in place ruled that slots may be traded accompanied by financial considerations as long as it concerns exchanges, or ‘reciprocal transfers’, between air carriers, regardless of the unevenness of the exchange from an economical point of view and of whether an airline intends to use the slots, and may not entail plain slot transfers from one airline to another.[1198] The respective

[1189] *See* US General Accounting Office, *supra* note 509, at 13.
[1190] *See* Steer Davies Gleave, *supra* note 69, at 87 and 138.
[1191] *See* Steer Davies Gleave, *supra* note 69, at 87; Mott MacDonald(II), *supra* note 113, at 48.
[1192] *See* Steer Davies Gleave, *supra* note 69, at 87.
[1193] *See* the operating limitations for New York John F. Kennedy International Airport and New York LaGuardia Airport as delivered by the FAA, *supra* note 876; Mott MacDonald(II), *supra* note 113, at 48.
[1194] *See* Mott MacDonald(II), *supra* note 113, at 49.
[1195] *Id.,* at 105.
[1196] *Dutch Bird v. Transavia Airlines, supra* note 652.
[1197] *Regina v. Airport Co-ordination Ltd ex parte The States of Guernsey Transport Board, supra* note 651.
[1198] *See* Czerny et al., *supra* note 878, at 209.

judge based his decision "on what I believe to be the clear meaning of the relevant words in the EU Regulation 95/93".[1199] Where an airport operates at or near saturation and there are insufficient slots in the pool to facilitate a one-for-one exchange, ACL issues so-called 'dummy' or 'junk' slots that are not operationally usable solely to facilitate the exchange, after which these slots must be immediately returned to the pool. In essence, this artificial exchange of slots ensures that the requirements of Article 8(4) are met.[1200]

The findings of the High Court in the *Guernsey*-ruling are not binding for courts in other Member States, and the CJEU has not yet had an opportunity to issue a clarifying judgment.[1201] Nearly two decades later in 2008, the Commission communicated that it did not intend to pursue infringement proceedings against Member States which allowed secondary trading in slots, so long as it takes place in a transparent manner and in accordance with all other administrative requirements for slot coordination. With that statement, the Commission seems to have adopted a tolerant attitude towards secondary slot trading, albeit the mechanism itself is still not regulated and therefore not transparent.[1202] Each Member State may thus adopt its own rules and policies with regard to secondary slot trading. In its 2012 proposal for a revised Slot Regulation, the European Parliament even explicitly allowed carriers to buy, sell and lease slots at EU airports to enhance airline competition.[1203]

Knowledge of trading has also been reported in EU Member States and Brazil.[1204] Although there is no evidence of secondary slot trading accompanied by financial considerations at airports in the EU, it is rumored amongst stakeholders that it also takes place at other airports in Europe, though it is not clear what conditions are attached to slot exchanges and if an exchange can actually be regarded as a trade.[1205] Steer Davies Gleave (2011) also report from meetings with stakeholders that there are indications for secondary slot trading in Europe, for example at the airports of Dusseldorf, Frankfurt and Vienna, although "some of the air carriers involved denied that there had been any payments".[1206] Moreover, 'grey trading' through airline take-overs as discussed in section 5.3.3 above and lease contracts with financial or other considerations attached may already be going on at numerous congested airports around the world.[1207]

From the perspective of the *raison d'être* of the current slot regime, secondary slot trading and slot leasing forego the exclusive responsibility of the slot coordinator for the allocation of slots pursuant to Article 4(5) of the Slot Regulation. The WASG do not speak of "exclusive responsibility" but provide that slot coordinators should act independently in paragraphs 1.2.1(c) and 1.7.2(i). The role of the coordinator is reduced as slots are moved directly between carriers rather than being returned to the pool and reallocated, up to the extent that a dominant airline at a congested airport could act as the 'shadow coordinator' who determines which airlines can and cannot engage in slot transfers and leases and under what conditions this will happen, as to which see also section 5.6.4 below.

[1199] *Regina v. Airport Co-ordination Ltd ex parte The States of Guernsey Transport Board, supra* note 651; Czerny et al, *supra* note 878, at 209.
[1200] *See* Airport Coordination Limited (ACL) International, *Guidance on One for One Slot Exchanges* (2020).
[1201] *See* Czerny et al, *supra* note 878.
[1202] *See* Brecke, *supra* note 491, at 192.
[1203] *See* European Parliament, *supra* note 624; Mott MacDonald, *supra* note 63, at 4-5, and Steer Davies Gleave, *supra* note 69, at 84 on the 'artificial' changes of slots or 'junk slots'.
[1204] *See* Mott MacDonald(II), *supra* note 113, at 44.
[1205] *See* Behrens et al., *supra* note 67, at 5 and 9.
[1206] *See* Steer Davies Gleave, *supra* note 69, at 84.
[1207] *See* Behrens et al., *supra* note 67, as cited in Van Houten and Burghouwt, *supra* note 22.

5.6.4 *Considerations for the implementation of secondary slot trading and slot leasing in a future slot regime from an airport access perspective*

At London Heathrow, secondary slot trading has developed as a significant source of slots compared with the slot pool since the *Guernsey*-ruling. Until 2008, airlines could still obtain a limited number of afternoon and evening slots at London Heathrow from the pool, and the secondary market was primarily a source of highly scarce morning slots. With the introduction of the capacity limit of 480,000 movements per year in 2008, slots began to be scarce at all times of day. From 2008 on, the secondary market became the primary source of slots for airlines wishing to start or expand services at London Heathrow.[1208] The successful implementation of the US-EU 'Open Skies' agreement in 2008 was only possible through slot trading, allowing Continental, Delta, Northwest and US Airways to enter the severely congested market of London Heathrow, and triggering high slot prices.[1209]

Prior to 2008, slot values at London Heathrow were relatively steady at an average of GBP 6,5 million per daily slot pair. The average trade price in 2008 was 20 million GBP and the record price for a morning slot pair was GBP 36 million at the 2008 exchange rate.[1210] In 2017, SAS sold two slot pairs to American Airlines for 75 million USD, preceded by a slot sale by Air France-KLM to Oman Air of equally 75 million USD in 2016.[1211] With the assistance of slot trading, London Gatwick has transformed from a secondary London hub into Europe's largest low-cost carrier airport. It has allowed easyJet to become the largest operator at London Gatwick with a 44% slot share.[1212]

There are also certain drawbacks to secondary slot trading which require careful consideration by regulators prior to the implementation of the practice. Concerns may arise in the field of increased concentration and the prospect of airlines strategically participating in secondary slot markets. A prime concern relates to the argument that while secondary slot trading and leasing intends to ease market entry as an alternative source of slots, it may instead reinforce the dominant position of already dominant airlines at already congested airports as net slot buyers, for instance through slot babysitting practices discussed in section 5.6.2 above.[1213] After all, based on knowledge of their competitors, the dominant carrier may be inclined to retain its slots and simply forego the opportunity cost it could have received by selling the slots. The revenue gained through the sale might have been offset by the additional competition involuntarily created at a later stage by the sale.[1214]

Moreover, carriers may attract prohibitive conditions to the sale of a slot. These conditions may require the purchaser, for example, to not use the slot to compete with the selling party on a specific route ('non-compete clause') or to use the seller's ground handling facilities ('restrictive covenants' or 'tying').[1215] Competition policy aspects related to secondary slot trading are discussed in NERA (2004), European Competition Authorities (2005)[1216], the

[1208] *See* Mott MacDonald(II), *supra* note 113, at 106-107.
[1209] *Id.*, at 104.
[1210] *Id.,* at 119.
[1211] *See* Youcef Berour Minarro, What Is A Landing Slot And How Much Is One Worth? (IBA.aero, 2 December 2019), *available at* https://www.iba.aero/insight/what-is-a-landing-slot-and-how-much-is-one-worth-december-2019/ (last visited: November 12, 2021).
[1212] *See* Mott MacDonald(II), *supra* note 113, at 105.
[1213] *See* Starkie, *supra* note 65; Menaz and Matthews, *supra* note 194, at 34; Boyfield et al., *supra* note 13.
[1214] *See* Czerny et al., *supra* note 878, at 267, as well as section 5.6.2 above on slot babysitting.
[1215] *See* OFT and CAA, *supra* note 72, at 13; European Competition Authorities, *Progress Report of the Air Traffic Working Group on Slot Trading* (2005), at 6-7
[1216] *See* OFT and CAA, *supra* note 72; European Competition Authorities, *supra* note 1215.

UK Office of Fair Trading and the Civil Aviation Authority (2005)[1217] and Gillen and Morrison (2008)[1218].

There is also a risk that secondary trading may not promote the public interest, even though the practice may offer network benefits.[1219] According to NERA (2004), an airline's willingness to pay for a slot may be an imperfect indicator of the socio-economic value of the service provided by that airline. In particular, the value of the service may not reflect in full the external effects caused by that service, including noise and emissions.[1220] This concern is echoed by Borenstein (2007)[1221] and Van Houten and Burghouwt (2021), arguing that there can be a poor correlation between the amount of profit and the amount of social surplus.[1222] DotEcon (2006) states that a high willingness to pay for a slot may indeed merely reflect anticipated excess profits by the airline, rather than "being the result of superior efficiency or offering a more attractive proposition to customers".[1223] Hence, it depends on the reason of the high willingness to pay if trading fits within the applicable policy context, for instance the promotion of the public interest.[1224] Other concerns relate to the entry of airlines with 'deep pockets'.[1225]

Moreover, the UK and US experiences are not necessarily representative of the effects secondary slot trading would have at other airports. It is plausible that there are differences in the competitive effects at different airports, given variances in size of local markets and the share of origin and destination, also referred to as Origin and Destination [hereinafter: O&D], versus transfer passengers.[1226] In any case, the number of airports at which secondary trading is demonstrated is very limited. Therefore, there is currently no strong evidence proving the effectiveness of secondary trading, and certainly not evidence that would be applicable to all airports.[1227]

5.6.5 Concluding remarks

Secondary slot trading offers scope for airlines planning to access airports to expand or start new services where no slots are readily available from the pool. However, in effect, secondary slot trading takes away allocation decisions from the formal coordination system, of which the independent coordinator is the central part. Allocation decisions may become based on an airlines' willingness to pay and the divesting carrier's view of how it can best protect its competitive position at an airport, rather than based on an independent assessment undertaken by the coordinator of the fairest allocation outcome to ensure the most optimal distribution of slots at the airport concerned and the best outcome for consumer choice. Instead of stimulating airport access, secondary slot trading may result in the reverse effect of increasing slot shares on the side of already dominant carriers.

All things considered, the pros and cons of secondary slot trading call for a careful and tailor-made approach. Although secondary slot trading offers an alternative means to access super-congested airports, the practice also offers scope for the reinforcement of the dominant position of already dominant airlines, which could potentially nullify the potential for smaller

[1217] *See* OFT and CAA, *supra* note 72.
[1218] *See* Gillen and Morrison, *supra* note 114.
[1219] *See* Odoni, *supra* note 61, at 88-89; *See* Behrens et al., *supra* note 67, at 18; Menaz and Matthews, *supra* note 194, at 34.
[1220] *See* NERA Economic Consulting, *supra* note 5, at 65.
[1221] *See* Borenstein and Rose, *supra* note 465.
[1222] *See* Boyfield et al., *supra* note 13, at 57.
[1223] *See* DotEcon Ltd., *supra* note 64, at 19.
[1224] *See* Behrens et al., *supra* note 67, at 15.
[1225] *See* Finger et al., *supra* note 18, at 4.
[1226] *See* Behrens et al., *supra* note 67, at 10.
[1227] *See* Behrens et al., *supra* note 67, at 5.

or medium-sized carriers to expand or start new services and gain competitive foothold at super-congested airports. Hence, Chapter 6 recommends that the implementation of secondary slot trading, if at all, should be paired with clear rules and conditions to avoid adverse impacts on capacity utilization, the public interest and, especially relevant to this dissertation: airport access.

Another way to access a super-congested airport in the EU is through the use of 'remedy slots' made available based on concerns in the field of competition law, as to which see section 5.7.2 below. Section 5.7.1 reflects on the relationship between slots and competition law in a general sense, in which the imposition of slot remedies may play a role.

5.7 The relationship between slot allocation and competition law in the EU

5.7.1 Competition law provisions relevant to slot allocation

This section focuses on the use of slots as a competitive concept subject to *ex ante* regulation through national, regional and international rules and procedures on slots, and subject to *ex post* competition legislation. The fact that airlines effectively 'compete' for the same scarce slots at super-congested airports is not *strictu sensu* 'competition' within the meaning of the competition rules, as the slot pool at a specific airport does not qualify as a 'relevant market' for air transport services on which competition takes place. The level of competition within a relevant market for air transport services is measured in terms of geography and product or service and is the first step in any competitive assessment, as to which see section 5.7.5 below.[1228]

There is, however, no market for slots at airports where secondary slot trading, as discussed in section 5.6 above, is not permitted. Slots are available for allocation from the slot pool or potentially through the alternative means of secondary slot trading or slot commitments and are attached to the capacity of one particular airport, but are not attached to any specific route, as discussed in Chapter 2, section 2.1.2.[1229] Hence, slots are flexible concepts which can be used by airlines in a wide range of downstream markets according to the airlines' business plan, *id est* on any route of their choice.[1230] Because there is no market for slots, competition policy cannot be used to protect competition in downstream markets.[1231] Yet, the slot regime can be linked to the competition rules. After all, "the main barrier to entry in the air transport sector is the lack of available slots at the large airports", that is to say primarily at the super-congested airports.[1232]

Where the communication of business plans between airlines, airports and coordinators is involved, the WASG provide that "[n]o party shall act in any way contrary to applicable competition or other laws".[1233] The Slot Regulation refers to competition legislation in its Preamble, specifically Articles 101 and 102 TFEU and the Merger Regulation.[1234] Section 5.7.2 discusses the extent to which Articles 101 and 102 TFEU may be applied to slot allocation, followed by an overview of slot commitments imposed under the Merger Regulation in section 5.7.3.

[1228] For more explanations on the product and geographic market, *see* European Commission, *Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law*, OJ C 372.
[1229] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 48.
[1230] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 170.
[1231] *See* Gillen and Morrison, *supra* note 114, at 179.
[1232] Case T-177/04 easyJet v. Commission [2006] EU:T:2006:187, paragraph 166.
[1233] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 10.6.3.
[1234] EU Regulation 95/93, as amended, *supra* note 47, recital 17.

5.7.2 The applicability of Articles 101 and 102 TFEU to the allocation of slots

The application of Articles 101 and 102 TFEU is intended to correct and, where found necessary, penalize infringements of the competition rules *ex post*. However, the ability of the TFEU to address all the potential competitive issues in relation to airport slots is limited.[1235]

Article 101 TFEU prohibits:

> "all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market . . .".[1236]

The application of Article 101 TFEU to the allocation of slots could become relevant where secondary trading in slots is allowed, a concept which has been considered in section 5.6 above. However, it would presumably still be very difficult to apply Article 101 TFEU as slot transactions with only one or a small number of slots is unlikely to have an "appreciable effect" on competition.[1237]

It may be more likely that competition concerns arise due to a growing slot share of an already dominant airline than through any single transaction.[1238] For instance, if an airline with a dominant position in the supply of slots leased slots to another airline but then refused to renew the lease in order to prevent the airline competing with its own service on a specific route, the refusal could amount to an abuse in breach of Article 102 TFEU,[1239] which reads:

> "Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States . . ."[1240]

The Commission considers a dominant position as being in a position "to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers".[1241] This corresponds to the definition given by the CJEU in *Hoffmann-La Roche* and subsequent judgments. A dominant position usually arises when a firm or group of firms account for a large share of the supply in any given market, provided that there are other factors such as entry barriers which point in the same direction.[1242]

Because the definition of a slot currently does not constrain the route operated, there is no direct link between secondary slot trading and market concentration at the route level.[1243] Yet, assuming an airline holds most of the slots at a particular airport, it could be alleged that its refusal to sell or lease slots to competitors amounts to an abuse of a dominant position.[1244] The UK Office of Fair Trading and the Civil Aviation Authority (2005) provide suggestions for the application of competition law under a regime of secondary trading. An assessment of airlines holding large slot portfolios at (super-)congested airports from the perspective of Article 102 TFEU is provided in section 5.7.3.

[1235] *See* OFT and CAA, *supra* note 72, at 17-18.
[1236] TFEU, *supra* note 589, Article 101.
[1237] *See* OFT and CAA, *supra* note 72, at 4 and 49.
[1238] *Id.*, at 47.
[1239] *Id.*, at 52.
[1240] TFEU, *supra* note 589, Article 102.
[1241] Case C-85/76, *Hoffmann-La Roche v. Commission* [1979] ECLI:EU:C:1979:36, paragraph 38; Case C-27/76, *United Brands v. Commission* [1978] ECLI:EU:C:1978:22, paragraph 65.
[1242] *See* European Commission, *supra* note 1228, paragraph 10.
[1243] *See* Behrens et al., *supra* note 67, at 4.
[1244] *See* OFT and CAA, *supra* note 53.

In relation to airports, the abuse of a dominant position under Article 102 TFEU may arise where the airport operator seeks to prioritize its main airline in the matter of slot coordination. The airport operator could be deemed an operator of an "essential facility",[1245] and is expected to provide airport access on a fair and non-discriminatory basis. The operator of the essential facility carries the burden of proof that it has provided equal access to all users of the facility.[1246]

As evidenced by the imposition of slot commitments discussed in section 5.7.4 below, the Commission intervenes in the process of slot allocation under the competition law regime in the context of merger control under the Merger Regulation, as well as in decisions relating to airline alliances, antitrust proceedings and State aid. For instance, the acquisition of additional slots by an airline that already controls a large slot share at a congested airport and/or on specific routes might be made subject to the approval of the Commission.[1247] It previously also intervened in the process of slot allocation in the context of the provision of so-called 'block exemptions' under EU Regulation 1617/93.[1248]

It follows from the above clarifications that there is a relationship between the role of the general competition law regime in the EU and the special regime on slot allocation.[1249]

5.7.3 An assessment of large slot portfolios from the perspective of Article 102 TFEU

An airlines' slot portfolio at an airport, as well as the airport's capacity constraints, provide a measure of the airlines' ability to compete on the air transport markets to or from that airport.[1250] An airline's slot portfolio or slot share is defined as "the ratio between the number of slots held by an air carrier (or the air carriers that are part of the same group) at an airport and the total available slots at that airport (i.e., the airport capacity)".[1251]

Holding a large slot portfolio at an individual airport could potentially qualify as holding a dominant position, although there is no case law on this issue so far.[1252] The mere holding of slots by airlines, nonetheless, even if it concerns a large slot portfolio, does not in itself constitute an *abuse* of a dominant position.[1253] A dominant position as such is not forbidden under competition law, only its abuse is. One may only speak of abuse when a company's activities distort competition in the market.[1254]

Before the abuse of a dominant position can be ascertained, it is necessary to establish the existence of a dominant position in relation to a particular market, and not dominance in general.[1255] Hence, the mere holding of an extensive slot portfolio does not constitute a *prima facie* scenario which reveals that a dominant position is being exploited by an airline pursuant to Article 102 TFEU. Equally, it may reflect the exploitation of network effects with benefits for consumers.[1256]

[1245] The 'essential facilities' doctrine is concisely addressed in section 5.7.6 below.
[1246] *See* NERA Economic Consulting, *supra* note 5, at 250; Case C-7/97 (*Bronner*), *supra* note 83.
[1247] *See* NERA Economic Consulting, *supra* note 5, at 109.
[1248] *See* Truxal, *supra* note 10, at 93; NERA Economic Consulting, *supra* note 5, at 240.
[1249] *See* NERA Economic Consulting, *supra* note 5, at 249.
[1250] SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 178.
[1251] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 87.
[1252] *See* Milligan, *supra* note 14, at 97; OFT and CAA, *supra* note 72, at 15.
[1253] *See* Colangelo, *supra* note 10, at 49.
[1254] *See* Czerny et al., *supra* note 878, at 267; Case C-85/76 (*Hoffmann-La Roche v. Commission, supra* note 1241, paragraph 91.
[1255] Case T-61/99, *Adriatica di Navigazione SpA v. Commission* [2003] ECLI:EU:C:2003:335, paragraph 27.
[1256] *See* OFT and CAA, *supra* note 72, at 15-16.

"There is no 'magic' share of slots at which point a hub carrier would be considered dominant, . . .".[1257] In a merger case between IAG and Aer Lingus, the Commission considered an increase IAG's slot portfolio at London Heathrow from 53% to 56-57% to not give rise to competition concerns, given that the airport was already heavily congested and the impact of the increase was limited given the relatively limited incremental share.[1258] Based on Lufthansa's slot share at Fraport, which amounts to 50-60% in the summer season year, of which 75-85% at peak times, the Commission thus finds that Lufthansa has "significant market power" on the market for the provision of passenger air services to and from Fraport,[1259] yet the Commission did not label the mere holding of a majority slot portfolio by Lufthansa as abuse.

Where the holding of large slot portfolios by airlines gives rise to competition concerns, the Commission may require slot commitments for concentrations be rendered compatible with the internal transport market pursuant to EU Regulation 1008/2008, as to which see section 5.7.4 below.

5.7.4 Slot commitments to alleviate competitive concerns in the EU

In its assessment of, *inter alia,* airline mergers and alliances under the Merger Regulation and EU Regulation 1/2003,[1260] the Commission may make its approval conditional upon the offering of remedial commitments, such as slot concessions, in order to lower barriers to entry and facilitate new entry or expansion of service by existing competitors, in particular at airports where entry is constrained for capacity reasons pursuant to Articles 6(2) and 8(2) of the Merger Regulation.[1261]

To be able to provide air services, airlines need access to airport infrastructure. At coordinated airports, airlines must thus hold slots to operate routes from or to those airports.[1262] The Commission has previously noted that "slots are a rare resource" and that "access to such resources is of crucial importance for the provision of air transport services and for the maintenance of effective competition".[1263] A lack of access to slots constitutes a barrier to an airlines' ability to compete for passengers and/or cargo on routes between an airport and the destinations served from that airport, especially at the busiest airports.

Hence, holding slots can create competitive advantage. Slot commitments granting access to scarce airport infrastructure for new entrants are the most frequently required commitments in the case of, *inter alia,* airline mergers or alliances in order to render concentrations compatible with the internal transport market safeguarded by EU Regulation 1008/2008 in particular as a result of the creation or strengthening of a dominant position.[1264] At the core of a remedial commitment is the commitment by the entity or entities under review to make available slots.[1265]

[1257] *Id.,* at 53.
[1258] *See* Case M.7541 – IAG/Aer Lingus, *supra* note 33, paragraph 440.
[1259] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 190.
[1260] EU Regulation 1/2003, supra note 29.
[1261] *See* European Commission, *supra* note 30, paragraph 63. *See* also Simon Vande Walle, *Remedies in EU Merger Control – An Essential Guide* (2021), at 58.
[1262] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 177.
[1263] *See* European Parliament, *supra* note 624, recital 4. These statements were repeated in, among others, Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 34.
[1264] *See* Colangelo, *supra* note 10, at 51; Milligan, *supra* note 14, at 145; European Commission, *supra* note 30, paragraphs 4 and 5.
[1265] *See* Vande Walle, *supra* note 1261, at 58.

Slot commitments are only acceptable in order to facilitate competitive market entry in circumstances where it is "sufficiently clear that there will be actual entry of new competitors that would eliminate any significant impediment to effective competition",[1266] which is in line with the requirements for all access remedies.[1267] In other words, the number of slots divested needs to be high enough to enable new entrants to operate a sufficient number of frequencies to exercise a significant competitive constraint on incumbent airlines.[1268] After all, in order to effectively compete with an established airline, a competitor needs to be able to build up a sustainable slot portfolio.[1269]

Most of the time, the divestiture of scarce slots as an individual measure may not always be sufficient to ensure competitive entry on those routes where competition problems arise. Instead, a package comprising a combination of divestiture remedies and access commitments is required.[1270] This dissertation limits itself to slot commitments. Besides slot commitments, examples of access commitments are commitments granting access to pay-TV platforms and access to energy via gas release programs, as well as the granting of access to pipelines, telecom and similar networks.[1271]

Slots may only be taken up by new entrant airlines that have exhausted all reasonable efforts to obtain slots through the normal workings of the slot allocation procedure.[1272] In other words: the prospective slot holder must have tried to acquire slots from the slot pool pursuant to Article 10(6) of the Regulation. Any bids will be evaluated by the Commission.[1273] Even if the slots are not directly taken up by a new entrant, they may be claimed at any time in the future.[1274] In its assessment of the merger between Lufthansa and Swiss in 2005, the new entrant airline could be granted grandfather rights once it would have operated the slots for at least six seasons.[1275] Eight consecutive seasons were required in Lufthansa's acquisition of control over Austrian Airlines in 2009.[1276]

Examples of cases in which slots have been divested include, *inter alia,* Connect Airways/Flybe in 2019[1277], Lufthansa and certain Air Berlin assets in 2017[1278], IAG/Aer Lingus

[1266] *See* European Commission, *supra* note 30, paragraph 63; Case M.9287 – Connect Airways/Flybe, *supra* note 34, paragraph 620; Case T-177/04 (*easyJet v. Commission*), *supra* note 1232, paragraphs 197 et seq.
[1267] *See* European Commission, *supra* note 30, paragraph 63.
[1268] *See* European Competition Authorities, *Report of the ECA Air Traffic Working Group: Mergers and alliances in civil aviation* (2004), at 32.
[1269] *See* European Commission, *supra* note 26, at 7; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 51; SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 223.
[1270] *See* European Commission, *supra* note 30, paragraph 63.
[1271] *See*, for instance, Case No COMP/M.2876 – Newscorp/Telepiu. Regulation (EEC) No 4064/89 Merger Procedure, Article 8(2), 2 April 2003, paragraph 225 et seq; Case No COMP/JV.37 – B Sky B/Kirch Pay TV. Regulation (EEC) No 4064/89 Merger Procedure, Article 6(1)(b) NON-OPPOSITION, 21 March 2000, as confirmed by a judgment of the Court of First Instance in Case T-158/00, *ARD v. Commission* [2003] ECLI:EU:T:2003:246; Case No COMP/M.2803 – Telia/Sonera. Regulation (EEC) No 4064/89 Merger Procedure, Article 6(2) NON-OPPOSITION, 10 July 2002; Case No COMP/M.2533 – BP/E.ON. Regulation (EEC) No 4064/89 Merger Procedure, Article 8(2), 20 December 2001; Case No COMP/M.2389 – Shell/DEA. Regulation (EEC) No 4064/89 Merger Procedure, Article 8(2), 20 December 2001.
[1272] *See* Case M.3280 – Air France/KLM, *supra* note 31; European Commission, *supra* note 36, paragraph 28; Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37, paragraph 85.
[1273] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 74.
[1274] *See* Milligan, *supra* note 14, at 147.
[1275] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraphs 193 and 196.
[1276] *See* Case M.5440 – Lufthansa/Austrian Airlines, *supra* note 35, paragraph 342.
[1277] *See* Case M.9287 – Connect Airways/Flybe, *supra* note 34.
[1278] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980.

in 2015[1279], Alitalia/Etihad in 2014[1280], US Airways/American Airlines in 2013[1281], IAG/bmi in 2012[1282], Lufthansa/Austrian Airlines in 2009[1283], Lufthansa/Eurowings in 2005[1284], Lufthansa/Swiss in 2005[1285] and Air France/KLM in 2004.[1286] The latter case between Air France and KLM in 2004 can be regarded as the starting point of the 'slot commitments' movement.[1287] Slot remedies have also been imposed in several antitrust cases,[1288] for instance in a procedure involving Air Canada, United Airlines and Lufthansa in 2013.[1289] Practice has shown that slot commitments have not always yielded the desired pro-competitive results. On that account, the Commission now appears to be willing to more strongly intervene with respect to the implementation of any slot commitments.[1290]

In response to the industry's sharp downturn following the outbreak of the coronavirus and in contrast with most earlier practices regarding, *inter alia,* mergers and alliances, the Commission approved German and French State aid measures for Lufthansa and Air France respectively in 2020 and 2021, paired with slot commitments at airport level instead of at the route level. In return for recapitalization grants, hub carriers Lufthansa and Air France committed to divest 18 respectively 24 daily slot pairs at the congested airports of Frankfurt, Munich and Paris Orly, where these airlines have significant market power, in favor of competitive entry.[1291] Section 5.7.4 discusses the measurement of competition in terms of slot concentration at both the airport level and the route level.

The Commission scrutinized the viability of hub-and-spoke networks in multiple decisions in its approval of, *inter alia*, mergers and alliances. The exploitation of hub-and-spoke networks may bring benefits to consumers in the form of a more comprehensive timetable and network of destinations.[1292] The Commission thus finds it imperative to strike a balance between the need to 1) foster potential competition on hub-to-hub routes and 2) ensure that

[1279] *See* Case M.7541 – IAG/Aer Lingus, *supra* note 33.
[1280] *See* Case M.7333 – Alitalia/Etihad, *supra* note 32.
[1281] *See* Case No COMP/M.6607 – US Airways/American Airlines. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) in conjunction with Art 6(2), 5 May 2013.
[1282] *See* Case M.6447 – IAG/BMI. Regulation (EC) No 139/2004 Merger Procedure, Decision on the implementation of remedies – Art. 6(1)(b) in conjunction with 6(2) – Assessment of viability, 30 October 2017.
[1283] *See* Case M.5440 – Lufthansa/Austrian Airlines, *supra* note 35.
[1284] *See* Case No. COMP/M.3940 – Lufthansa/Eurowings. Regulation (EC) No 139/2004 Merger Procedure, Article 6(2) NON-OPPOSITION, 22 December 2005.
[1285] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274.
[1286] *See* Case M.3280 – Air France/KLM, *supra* note 31.
[1287] *See* Truxal, *supra* note 10, at 34; OECD, *supra* note 530, paragraph 130.
[1288] *See* Vande Walle, *supra* note 1261, at 58.
[1289] *See* Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37.
[1290] *See* OECD, *supra* note 530, paragraph 132.
[1291] Germany committed that Lufthansa would divest up to 24 slots per day at the airports of both Frankfurt and Munich, as to which *see* State Aid SA.57153 – Germany – COVID-19 – Aid to Lufthansa, supra note 38, paragraph 71; European Commission, State aid: Commission approves €6 billion German measure to recapitalize Lufthansa (Press release, 25 June 2020), *available at* https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1179 (last visited November 10, 2021). In turn, France committed that Air France would divest up to 18 daily slots at Paris-Orly airport, as to which see State Aid SA.59913 – France – COVID-19 – Recapitalisation of Air France and the Air France-KLM Holding, supra note 38, paragraph 257; European Commission, State aid: Commission approves up to €4 billion French measure to recapitalize Air France (Press release, 6 April 2021), *available at* https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1581 (last visited November 10, 2021. The 18 slots divested by Air France have been picked up by Vueling, *see* European Commission, State aid: Commission approves award of slots at Paris-Orly airport to Vueling in context of Air France's recapitalization (Press release, 20 September 2021), *available at* https://ec.europa.eu/commission/presscorner/detail/en/ip_21_4805 (last visited November 12, 2021).
[1292] *See* OFT and CAA, *supra* note 72, at 54.

the efficiencies derived from the hub-and-spoke network are not disrupted, thus harming consumer interests.[1293]

For instance, the Commission has limited the number of slots Lufthansa had to divest in 2020 to a maximum of more than 3 departure slots and 3 arrival slots in any of the three one-hour peak periods at each of Fraport and Munich.[1294] At the time of writing, the specifics as to whom the slots were divested to had not been released yet. Similarly, in its 2004 Air France/KLM merger assessment, the Commission acknowledged the viability of KLM's hub-and-spoke network at Amsterdam Airport Schiphol, which meant that KLM would have to surrender a limited number of slots in specified peak hours.[1295] The commitments made by Air France consisted of making available up to 18 slots per day at Paris Orly airport to a competing carrier. The slots were eventually divested by Air France and made available to Vueling to start operations on new routes as of November 2021.[1296]

To address concerns over the creation of a dominant position of Air France-KLM on identified long-haul city pairs following their merger in 2004,[1297] including the Amsterdam-New York route, Air France-KLM committed to make slots available on the Amsterdam-New York route. Besides brief operations by a British Airways subsidiary for 3 months in 2009, there had been no applicants for the remedy slots between Amsterdam and New York until 2017, presumably because there were still slots available at the airport without having to apply for time-limited remedy slots through the Commission procedure. In 2017, when the annual capacity limit of 500,000 aircraft movements was met for the first time at Amsterdam Airport Schiphol, Norwegian applied for the remedy slots on the Amsterdam-New York route. KLM and Delta Airlines subsequently released the slots to Norwegian until the expiry of the commitments in 2025.[1298] The fact that the slots were only taken up in 2017 shows that when capacity constraints start to bite, that is to say when all slots are taken up by historic slots, airlines are exploring alternatives to access the market, particularly when attractive slot times are involved.[1299]

5.7.5 Competitive assessments of slot concentration at airport level vs. route level

Slot concentration can present itself in two forms. Firstly, it is possible that route level concentration exists because of, for example, reduced competition levels on a certain route to or from an airport. Secondly, it is possible that slots remain concentrated with one or two airlines at a particular airport.[1300]

The competition assessment of, *inter alia*, mergers and alliances in air transport markets is generally more complex than in many other economic sectors, because of the network nature of the industry. Each alliance or merger carry passengers on a multitude of different routes

[1293] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraph 202.
[1294] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 71.
[1295] *See* Case M.3280 – Air France/KLM, *supra* note 31.
[1296] *See* European Commission, State aid: Commission approves award of slots at Paris-Orly airport to Vueling in context of Air France's recapitalisation (20 September 2021), *available at* https://ec.europa.eu/commission/presscorner/detail/en/ip_21_4805 (last visited: November 12, 2021).
[1297] The Commission also had concerns over Air France-KLM's slot share at identified European city pairs. As such, Air France-KLM also committed to making available a number of slots for flights between Amsterdam and Paris, Lyon, Marseille, Toulouse, Bordeaux, Milan, Rome, Venice and Bologna. Other identified long-haul city pairs concerned Paris-Detroit, Amsterdam-Atlanta, Paris-Lagos and Amsterdam-Lagos. *See* Case M.3280 – Air France/KLM, *supra* note 31.
[1298] *See* Case M.3280 – Air France/KLM. Regulation (EC) No 139/2004 Merger Procedure, Decision on the implementation of the commitments – Waiver of the commitments, 6 February 2019.
[1299] *See* Van Houten and Burghouwt, *supra* note 22.
[1300] *See* Behrens et al., *supra* note 67, at 3.

which are interconnected and constitute a network.[1301] Airlines serve many different, direct and indirect, O&D markets between which competition levels vary immensely, thus making the overall competitive position of an airline difficult to determine.[1302]

Traditionally, the Commission has measured the level of competition in terms of market shares and competitive effects exerted in the market for air services based on a city-pair assessment. Under the city-pair assessment, the delineation of the relevant market in air transport starts with the identification of point A as the point of origin (O) and point B as the point of destination (D), also known as 'the O&D approach'. As such, each city-pair is considered a separate market, which was also upheld by the CJEU in the case of *Ahmed Saeed* of 1989[1303] and by several Commission notifications relating to slot commitments in airline mergers and alliances.[1304] Slot commitments are then imposed in relation to the routes on which competition is found to be restricted.[1305]

Alternatively, the airport-by-airport approach may be used.[1306] In the *Port of Genoa*[1307] and *Corsica Ferries II*[1308] cases, the CJEU held that activities and/or services at single ports may also constitute a relevant market by itself, based on the reasoning that if an operator wishes to offer transport services on a given maritime route, access to ports situated at either end of that route is essential to the provision of that service. Particularly where no substitutes serving the same geographic area are available. By analogy, the relevant market in the air transport industry is the market in air services, for which access to airport infrastructure is required.[1309]

[1301] *See* European Competition Authorities, *supra* note 1286, at 16.

[1302] *See* Sven Maertens, *A metric to assess the competitive position of airlines and airline groups in the intra-European air transport market*, 72 Research in Transportation Economics (2017), at 65; NERA Economic Consulting, *supra* note 5, at 102.

[1303] Case C-66/86 *Ahmed Saeed Flugreisen and Others v. Zentrale zur Bekämpfung unlauteren Wettbewerbs*, ECLI:EU:C:1989:140, paragraph 40.

[1304] A confirmation of 'the O&D approach' can be found in, among others, Case M.3280 – Air France/KLM, *supra* note 31; Case M.8672 – easyJet/certain Air Berlin assets, *supra* note 57 and Case T-162/10, *Niki Luftfahrt GmbH v. Commission*, 13 May 2015, ECLI:EU:T:2015:283. With respect to air cargo, 'the O&D approach' is deemed inappropriate, primarily since air cargo markets are "inherently unidirectional" as the demand at each end of the route may differ substantially, and so the markets must be assessed on a unidirectional basis. *See* Milligan, *supra* note 14, Case No. COMP/M.5403 – Lufthansa/BMI. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) NON-OPPOSITION, 14 May 2009, at 19; Varsamos, *supra* note 16; Case M.3280 – Air France/KLM, *supra* note 31.

[1305] *See* Case M.8869 – Ryanair/Laudamotion. Regulation (EC) No 139/2004 Merger Procedure, Article 6(1)(b) NON-OPPOSITION, 12 July 2018, paragraphs 96-97; Case M.6447 – IAG/BMI, supra note 1282, paragraph 31; Case M.3280 – Air France/KLM, *supra* note 31, paragraph 9; Case M.7333 – Alitalia/Etihad, *supra* note 32, paragraph 63; Case M.7541 – IAG/Aer Lingus, *supra* note 33, paragraph 14; Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37, paragraphs 17-19; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 41; European Competition Authorities, *supra* note 1286, at 15-16.

[1306] *See*, among others, SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 165; Case M.8869 – Ryanair/Laudamotion, *supra* note 1305, paragraph 116. In the Lufthansa/certain Air Berlin assets case, the Commission only carried out an airport-by-airport assessment, since the target assets were not used on any route at the time of the transaction since Air Berlin had permanently ceased its operations on all routes due to its insolvency, *see* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 58. Slot commitments at the airport level were also required by the Commission with regard to the proposed joint venture between KLM and Alitalia of 1999, where it was agreed that KLM and Alitalia would together surrender up to 16 slots per day at Amsterdam Airport Schiphol and up to 8 slots per day at Rome Fiumicino and Milan Malpensa, *see* Case No COMP/JV.19 – KLM/Alitalia. Regulation (EEC) No 4064/89 Merger Procedure, Article 6(1)(b) NON-OPPOSITION, 11 August 1999, paragraphs 69 and 76x.

[1307] Case C-179/90, *Merci convenzionali porto di Genova SpA v. Siderurgica Gabrielli SpA* [1991] ECLI:EU:C:1991:464, paragraph 5923.

[1308] Case C-18/93 *Corsica Ferries Italia Srl v Corpo dei Piloti del Porto di Genova* [1994] ECLI:EU:C:1994:195

[1309] *See* European Commission, Commission Decision of 26 July 2000 relating to a proceeding pursuant to Article 86(3) of the EC Treaty (*AENA*), OJ L 208, paragraphs 31-33; European Commission, Commission Decision of 10

In the words of the Commission, under the airport-by-airport approach, "every airport (or substitutable airports) is defined as a distinct market", enabling the Commission to assess competitive effects at a given airport "on the basis of the slot portfolio held by a carrier at the airport, without distinguishing between the specific routes served to or from that airport".[1310] Although not mentioned by the Commission, the relationship between the supplier of airport infrastructure and access to that infrastructure by its airline users is, besides the commercial considerations of individual airlines, also defined by other arrangements of public law, including the regulation of slots, airport charges, ground handling, safety and environmental requirements, et cetera.[1311]

According to the Commission, majority slot portfolios give airlines a "unique ability to reshuffle their slots in a way that gives them optimal timings".[1312] Other advantages include "operational flexibility and efficiency through swapping slots within their own operations, as well as bargaining power and volume discounts on the services provided by airport managers and ground handling companies".[1313] The former advantages act as a substantial barrier that any new entrant or smaller competitor would be unable to bridge as they do not have similar flexibility.[1314] At major US airports, it is common for the incumbent carrier to account for 75% or more of the slot holdings. At EU airports the proportions are generally smaller, however they often exceed 50%.[1315]

An assessment under the airport-by-airport approach includes an assessment of the substitutability of airports in view of their overlapping catchment areas from the point of view of air carriers, acting as customers of airport infrastructure services.[1316] The Commission appears to define an airport's catchment area as a radius of 100 km, but any assessment must be evidenced on a case-by-case basis.[1317]

The Commission may use one or both approaches, depending on the facts before it.[1318] The airport-by-airport approach is becoming more prevalent in airline merger, alliance, antitrust and State aid cases, as illustrated by the Commission's *modus operandi* in regard to *Lufthansa/Air Berlin*[1319] and recent State aid cases following the outbreak of COVID-19.[1320] The origins of the airport-by-airport approach can be traced back to the acquisition by British Airways of British Caledonian in the late 1980's, when the Commission, *inter alia,* imposed a

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February 1999 relating to a proceeding pursuant to Article 90 of the Treaty (Case No IV/35.703 - *Portuguese airports*), OJ L 69, paragraph 14.

[1310] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 168.

[1311] *Ex ante* regulation has the aim to, at least in part, correct market failures and to move closer to outcomes in terms of price levels, service quality, investments, reliability and choice, similar to what one would expect in an effectively competitive market. *See* European Commission, *supra* note 236, at 6.

[1312] *See*, among others, Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37, paragraph 48, in which the alliance parties held approximately 57% of the slots at Fraport and 78% of New York Newark slots.

[1313] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 286.

[1314] *See* Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37, paragraph 49.

[1315] *See* Starkie, *supra* note 65, at 193.

[1316] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 59-60; SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 175.

[1317] *See* Varsamos, *supra* note 16, at 93. In the case of Brussels Airport and other cases surrounding airports, the relevant market was defiend as the market in services linked to access to airport infrastructure, such as the exploitation of runways, taaxiways, aprons and approach guidance. If there is no genuine alternative for the services provided, which was the case with Brussels Airport, this was the relevant market. *See* European Commission, Commission Decision of 28 June 1995 relating to a proceeding pursuant to Article 90(3) of the Treaty, OJ L 216.

[1318] *See* Watson Farley & Williams, EU Merger Control and Airlines: The Evolving Approach to Market Definition (8 January 2020), *available at* https://www.wfw.com/articles/eu-merger-control-and-airlines-the-evolving-approach-to-market-definition/ {last visited: August 15th, 2021).

[1319] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980.

[1320] *See* Watson Farley & Williams, *supra* note 1318.

ceiling on British Airways' slot portfolio at London Gatwick of 25% of total scheduled and non-scheduled slots for four years.[1321]

In *Lufthansa/Air Berlin*, the Commission opined that the city-pair approach would not fully address the effects of the transaction as it would "fail to capture the structural effects on competition".[1322] Since the State aid granted to Lufthansa in 2020 supports the operations of Lufthansa across the board, it may potentially affect competition on all routes originating and arriving at an airport at which Lufthansa holds slots, regardless of the specific competitive position of Lufthansa on any of those routes. Henceforth, the impact of the State aid measures cannot be analyzed on each of those separate routes. Instead, the airports at which Lufthansa offers air services are defined as relevant markets.[1323]

Using either one approach, majority slot shares can be accepted given their network benefits and provided that there are no barriers to entry and that the remaining actual and potential competition is sufficient to constrain the competitive behavior of the parties involved.[1324] In a 2012 decision involving KLM and NorthWest, the Commission accepted a combined market share of up to 90% on direct overlap routes.[1325] Indeed, as Starkie (2008)[1326] shows, higher slot shares held by large incumbent carriers may well be welfare enhancing. A slot may be more valuable to an airline with a large network, and large networks offer advantages for passenger in terms of increased connectivity, frequencies and quality of service.[1327]

5.7.6 Slots in the context of the 'essential facilities' doctrine

By virtue of the Slot Regulation, slots are essential for airlines' operations. Only airlines holding slots are entitled to get access to the airport infrastructure services and, consequently, to operate routes to or from those airports.[1328]

In 1998, the CJEU used the term "essential facilities" explicitly for the first time in its *Bronner* -decision.[1329] The term "essential facility" was used in *sealink/B&I*,[1330] where it was held that a seaport was an essential facility. By analogy, airports could be deemed essential facilities, as briefly touched upon in section 5.7.2 above and more extensively discussed in NERA (2004) and the Organisation for Economic Co-operation and Development (2011).[1331]

Nonetheless, slots have never been pinpointed by EU case law as essential facilities, implying that airlines as slot holders have a duty to share them with competitors.[1332] Further analysis as to whether slots can be deemed essential facilities is deemed out of scope of this dissertation.

[1321] *Id.*
[1322] *See* Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 44.
[1323] *See* SA.57153 – Germany – COVID-19 – Aid to Lufthansa, *supra* note 38, paragraph 171.
[1324] *See* Milligan, *supra* note 14, at 144.
[1325] *See* European Commission, Commission Notice concerning the Alliance between KLM Royal Dutch Airlines and Northwest Airlines, Inc. (Case COMP/D-2/36.111, 30 October 2002), OJ C 264 (2002); European Competition Authorities, *supra* note 1286, at 21.
[1326] *See* Starkie, *supra* note 65.
[1327] *See* Gillen and Morrison, *supra* note 114, at 189; Starkie, *supra* note 191, at 61-62. Starkie, *supra* note 254. .
[1328] *See* UK Competition and Markets Authority, *supra* note 448, at 9; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraphs 32 and 54.
[1329] Case C-7/97 *(Bronner), supra* note 83.
[1330] *See, inter alia,* European Commission, Commission Decision of 11 June 1992 relating to a proceeding under Article 86 of the EEC Treaty (IV/34.174 - *Sealink/B&I - Holyhead*: Interim measures), OJ L 378.
[1331] *See* OECD, *supra* note 530.
[1332] *See* Colangelo, *supra* note 10, at 49.

5.7.7 Concluding remarks

The lack of slots at (super-)congested airports constitutes the main barrier to entry in the air transport industry.[1333] The current slot rules strived to have *ex ante* effect in deterring growing slot shares of already dominant carriers for example through the introduction of the new entrant rule, as discussed in section 5.5 above.[1334] The above clarifications in this section demonstrate that there is also a relationship between the role of the general competition law regime in the EU, specifically Articles 101 and 102 TFEU and the Merger Regulation, and the special regime on slot allocation.[1335]

It is questionable whether Articles 101 and 102 TFEU apply to the conduct of airlines in relation to slots, particularly since there is not yet a market for slots at airports where secondary slot trading is not permitted. The mere holding of a large slot portfolio by airlines does not in itself confer a position of dominance, which is also abused, upon an airline under Article 102 TFEU. After all, a concentrated market is not necessarily the same as a market with low competition levels, and it does not per se lead to the abuse of market power.[1336]

Nonetheless, the Commission may make its approval of, *inter alia*, airline mergers and alliances subject to the divestiture of slots where slots remain concentrated with an incumbent carrier at the route or airport level. Since slots can ensure competitive advantage, the rationale behind slot commitments under the Merger Regulation is to ease market access at congested airports. As Mendes de Leon (2013)[1337] put it, "slots are multi-faceted instruments which serve as remedies for congested airports and in competition and alliances cases."[1338]

Although slot commitments may form a relative improvement with regard to enhancing airport access for competitive entry, they may not offer structural solutions. Slot commitments have had mixed success, as the slots that were made available under the commitments have not always attracted long-term competition.[1339] This somewhat modest contribution to the objective of attracting new competitors in a defined market for the operation of air services has led the Commission's approach to remedial commitments to evolve considerably over the years.[1340] For instance, the airport-by airport-approach has become more prevalent, as evidenced by Lufthansa's acquisition of Air Berlin and the Lufthansa State aid case, which may pave the way for future cases related to instances of slot concentration at the airport level. The growing use of an airport-by-airport market definition approach by the Commission makes the overall position of an airline at an airport an essential consideration in pre-merger/pre-acquisition planning.[1341]

[1333] Case T-177/04 (*easyJet v. Commission*), *supra* note 1232, paragraph 166, in which the General Court stated that: ". . . the main barrier to entry in the air transport sector is the lack of available slots at the large airports". For similar statements, *see* Case M.5440 – Lufthansa/Austrian Airlines, *supra* note 35, paragraph 354; Case AT.39595 – Continental/United/Lufthansa/Air Canada, *supra* note 37, paragraph 111; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 33.
[1334] *See* OFT and CAA, *supra* note 72, at 17.
[1335] *See* NERA Economic Consulting, *supra* note 5, at 249.
[1336] *See* Behrens et al., *supra* note 67, at 17.
[1337] *See* Mendes de Leon, *supra* note 48.
[1338] *Id.,* at 578.
[1339] *See* Balfour, *supra* note 92, at 1037.
[1340] *See* Vande Walle, *supra* note 1261, at 58.
[1341] *See* Watson Farley & Williams, *supra* note 1318.

5.8 Concluding remarks

This chapter explored whether multiple concepts related to slot coordination offer scope for finding solutions for the specific issues experienced at super-congested airports relating to this dissertation's research questions, primarily in the field of reflecting the public value associated with slots in coordination decisions and safeguarding airport access for the purposes of a competitive air transport market safeguarded by EU Regulation 1008/2008. The concepts discussed include the debate on who holds the legal title to a slot, the functionally and financially independent coordinator, the application of the new entrant rule, the implementation of a secondary market for slots and the relationship between the allocation of slots and competition law.

In my view, slots are allocated to airlines as entitlements to use available infrastructure, subject to conditions such as utilization thresholds or allocation criteria. Indeed, they represent relevant operational, economic, legal and social interests and functions.[1342] *Inter alia,* according to the Commission, slots are "critical inputs" for any entrant wishing to operate or expand services.[1343] Although airlines, airports and governments alike have claimed they should be regarded as the legal owners of slots,[1344] they cannot, in my view, be identified as property rights.

At super-congested airports in particular, slots are valuable concepts to society at large as they safeguard public functions such as connectivity and airport access, as discussed in Chapter 2, sections 2.3 and 2.4. Accordingly, Chapter 6 recommends that the coordinator should ensure that scarce slots are declared, allocated and used in a way that is reflective of these public functions. Solving the debate on slot ownership by clarifying that slots are essentially public goods could contribute to making this recommendation work.

Furthermore, a future slot regime should be cognizant of the shifted role of the coordinator from performing merely technical functions to that of a policymaker, so to say. At super-congested airports, slot allocation ultimately comes down to making decisions which airlines can and cannot operate to and from an airport.[1345] With slot scarcity levels and the risk of judicial reviews of allocation decisions rising, coordinators play an increasingly important role in the correct application of the slot allocation rules. After all, airlines are all in the same 'game' for the last available slot pair and the coordinator continuously has to make trade-offs between competing slot requests. Though the coordinator has been delegated public functions, by no means was the slot coordinator intended to perform the task of policy making. Arguably, the coordinator has been handed a role it was never intended to perform.[1346]

In a constrained environment where the overall number of slots is largely fixed and there is no outlook for capacity increases, the possibilities for airlines to start or expand services requires incumbent airlines to exit or downscale their services at a particular airport.[1347] Given the high value of slots at super-congested airports, it is unlikely that airlines will simply hand back the slots they hold to the coordinator, even in times of economic downturn. Instead, they may capitalize the slots they hold to pay off creditors in case of a bankruptcy or insolvency, or they may engage in slot transfers or lease agreements, as discussed in sections 5.3 and 5.6 above. Hence, airport access becomes foreclosed in its entirety to airlines wanting to expand or

[1342] *See* European Commission, *supra* note 54, paragraph 11.
[1343] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraph 27.
[1344] *See* Abeyratne, *supra* note 55, at 36; Mott MacDonald, *supra* note 63, at 2-2.
[1345] *See* ICAO, *supra* note 256.
[1346] *See* Finger et al., *supra* note 18, at 9.
[1347] *See* Mott MacDonald(II), *supra* note 113, at 111.

start operations at super-congested airports with no slots freely available, or at peak times at other congested airports.

The lack of airport access, combined with the fact that many of the world's airports have a high proportion of their slot capacity, often exceeding 50%, utilized by a single airline or a group of airlines, has led to concerns from competition authorities and governments that such high levels of slot concentration by a few airlines will adversely impact competition and has inclined policy makers and regulatory bodies towards taking pro-active competition measures, including giving preference to new entrants as discussed in section 5.5, implementing secondary slot trading and leasing addressed in section 5.6, and requirements to divest slots, see section 5.7.

The new entrant rule can be helpful if there are still slots available in the pool. However, the lack of access to a sufficient number of slots at a commercially interesting date and time sees new entrants unable to translate these slots into viable alternatives to incumbent airlines, as was also concluded on the basis of the specificities of the current new entrant rule discussed in section 5.5. Moreover, caution should be exercised to accept unrestricted secondary slot trading and leasing since it may reinforce already existing dominant positions, as to which see section 5.6.4.[1348]

Proposed airline mergers and alliances are often accompanied by conditions requiring slot divestiture at the route or airport level, as to which see also section 5.7.4. However, it is questionable whether slot commitments offer structural solutions. Furthermore, a multitude of EU airports is expected to remain congested, or become even more congested, in the future as elucidated in Chapter 2, putting further pressure on the possibilities for airport access by new entrants.

The Commission has labeled the availability of slots "an essential condition for the creation of a stable regular service and thus effective new entry into the routes concerned",[1349] in line with the provisions of the internal air transport market laid down in EU Regulation 1008/2008. Although the EU Commission and the CJEU have established a link between the Slot Regulation and the general competition rules in the EU, it is not clear-cut whether Articles 101 and 102 TFEU can be made to apply to the conduct of airlines in relation to slots, particularly since there is not yet a market for slots. While practice, as sanctioned in judicial decisions, especially in the UK, confirms that slot trading takes place, and is allowed to take place, the Slot Regulation does not explicitly allow slot trading. This state of affairs affects the qualification of a 'slot market'.

Chapter 6 of this dissertation provides concluding remarks and recommendations as to how a future slot regime for super-congested airports can account for the socio-economic and airport access challenges faced by super-congested airports. Among others, the specific concepts discussed in Chapter 5 will be paired with recommendations, with the aim of providing answers to the research questions posed in Chapter 1 of this dissertation.

[1348] *See* Starkie, *supra* note 65, at 193.
[1349] *See* Case M.3770 – Lufthansa/Swiss, *supra* note 274, paragraph 27.

6 CHAPTER SIX

General Conclusions and Recommendations

6.1 Structure of this chapter

6.1.1 The principal research questions

The two central research questions of this dissertation were the following:

1) To what extent can the global and specific legal regimes pertaining to airport slot coordination be used as an instrument to influence coordination decisions at super-congested airports?

2) What concepts or measures related to slot coordination can be identified to flex the current slot regime to better reflect the socio-economic value of a slot in coordination decisions at super-congested airports?

The first question will primarily be addressed in sections 6.2 and 6.3 below through interpretative, comparative and case study analysis, whereas the second question will primarily be addressed in recommendations section 6.4. Eight sub-research questions were identified to help provide an answer to this dissertation's main research questions, all of which are addressed and answered in the sections below.

Chapter 6 briefly addresses the main conclusions in the research on each of the matters relating to the sub-questions before presenting the overarching general conclusions of the dissertation. It will also provide recommendations based on these overarching conclusions as provided in sections 6.2 and 6.3.

In doing so, notable developments which comprised four main aspects relevant for this dissertation, as identified in Chapter 1 and further contextualized throughout Chapters 2, 3, 4 and 5, are accounted for:

1) Rising slot scarcity levels and the emergence of super-congested airports;
2) Airport planning and the promotion of environmental protection;
3) The apparent mismatch between the functions of slot coordination and market conditions anno 2021;
4) Slots as a multifunctional concept.
    a. As remedial commitments to alleviate competition concerns
    b. As safeguards for market access
    c. As collateral in insolvency and bankruptcy cases
    d. As instruments to attain policy objectives

Besides the four main aspects of slot coordination at super-congested airports listed above, the lessons learned from a series of concepts and measures related to slot coordination, which have been subject to discussion throughout Chapters 1-5 of this dissertation, are also taken into account in the formulation of general conclusions and recommendations.

6.1.2 Overview of the main findings

The main findings presented in Chapters 1-5 of this dissertation are as follows:

- At most airports where demand for air transport services exceeds supply, slot coordination is applied to define a set of rules and priorities to be followed for the declaration, allocation and use of airport capacity (*see* Chapter 2, section 2.1.3).

- The coordination of slots increasingly involves broader policy questions as to how scarce airport capacity at (super-)congested airports can be used to its most optimal level, taking into account concerns related to available infrastructure, the environment, route development and airport access (*see* Chapter 1, section 1.2.5 and Chapter 2, sections 2.3 and 2.4).

- Issuing the capacity declaration determines the supply-side of the coordination process, *id est* how many slots will be made available to airlines. All subsequent steps involve demand-side questions, *id est* whom the available slots will be allocated to (*see* Chapter 2, sections 2.2.2 and 2.2.3).

- In principle, slots are entitlements, not possessions, which are allocated to airlines at no cost and subject to conditions such as utilization thresholds (*see* Chapter 5, section 5.2). The financial default of airlines has raised a number of delicate issues linked to the debate on slot title (*see* Chapter 1, section 1.2.4 and Chapter 5, section 5.3).

- At the time when the Chicago Convention on International Aviation of 1944 [hereinafter: the Chicago Convention (1944), or 'the Convention'] was drafted, the problem of airport congestion did not exist. Hence, the Convention and its 19 Annexes do not include explicit provisions on slot coordination. The principal provisions of the Convention which affect slot coordination are Articles 1 (sovereignty), 2 (territory), 5 (right of non-scheduled flight), 6 (scheduled air services), 11 (applicability of air regulations), 15 (airport and similar charges), 44 (objectives) and 68 (designation of routes and airports) of the Convention (*see* Chapter 1, section 1.1 and Chapter 3, section 3.1.4).

- Although the International Civil Aviation Organization [hereinafter: ICAO] has not adopted binding rules on slot coordination, ICAO acknowledges that an increasing number of airports will be confronted with excess demand for slots. Therefore, it has provided and continues to provide guidance to States on slot coordination (*see* C*hapter* 3, section 3.1.6).

- Before an airline can make use of an airport for the operation of international air services, it must first ensure that it acquired two constituents: traffic rights and airport slots (*see* Chapter 3, sections 3.3.1 and 3.3.2). Despite the separation between traffic rights and airport slots, experience has shown that States hold diverging views when it comes to the exercise of traffic rights and slot availability in relation to the 'equality of

opportunity' clause in air services agreements [hereinafter: ASAs], particularly at super-congested airports (*see* Chapter 3, sections 3.3.3 and 3.3.4).

- Although not legally binding *per se*, the Worldwide Airport Slot Guidelines [hereinafter: WASG] are published in order to provide the global air transport community with a single set of standards as a best practice guide for the management of airport slots (*see* Chapter 3, section 3.4.1). States or regional jurisdictions that have adopted national or regional regulations on slots may draw on the guidelines set forth by the WASG (*see, inter alia,* Chapter 4, section 4.2). Yet, the variance in measures adopted by States around the world to address slot coordination at (super-)congested airports are illustrative of the non-binding nature of the WASG guidelines (*see* Chapter 4, section 4.6).

- In States and regional jurisdictions where the WASG apply, the allocation of slots is the responsibility of the independent slot coordinator, who ensures slot allocation takes place through a system of fair, non-discriminatory and transparent rules, with little to no economic considerations playing a role in the declaration, allocation and use of airport capacity (*see* Chapter 5, section 5.4 and section 5.6.1).

- Despite the direct applicability of EU Regulation 95/93, as amended [hereinafter: the Slot Regulation], European Union [hereinafter: EU] Member States are free to adopt national measures on slot coordination, including national laws, local guidelines and local procedures, provided they do not interfere with the proper functioning of the common organization of the market (*see* Chapter 4, section 4.3.5).

- Nonetheless, the fact that slots cannot be earmarked or reserved for a certain use in the EU, apart from services covered by Public Service Obligations [hereinafter: PSO's] (*see* Chapter 4, section 4.3.3), two-year usage restrictions for new entrant slots (*see* Chapter 5, section 5.5.2) and slot commitments (*see* Chapter 5, section 5.7), may constitute a potential barrier to national laws, local guidelines and local procedures as potential instruments to effectively influence allocation decisions (*see* Chapter 4, section 4.3.4).

- Slots are available for allocation from the slot pool or potentially through the alternative means of secondary slot trading (*see* Chapter 5, section 5.6) or slot commitments (*see* Chapter 1, section 1.2.2 and Chapter 5, section 5.7) and are attached to the capacity of one particular airport, but are not attached to any specific route, aircraft or flight number (*see* Chapter 2, section 2.1.2).

- The fact that airlines effectively 'compete' for the same scarce slots at super-congested airports does not identify such behavior as 'competition' within the meaning of the competition rules, as the slot pool at a specific airport does not qualify as a 'relevant market' for air transport services on which competition takes place (*see* Chapter 5, section 5.7).

Chapter 2 extensively elaborated on the connotation of airport slots in contemporary air transport and this dissertation does not aim to repeat what has already been discussed. In excess of what has been discussed in Chapter 2, section 6.1.3 below elucidates the need for a flexing of the slot regime at super-congested airports in light of the evolving market realities observed, building on the multiple findings and observations provided in Chapters 3, 4 and 5.

6.1.3 The need for a flexing of the slot regime

Fueled by deregulation and, more so, liberalization measures,[1350] the freedom to enter and exit airports combined with a growing world population, rising disposable incomes, urbanization and globalization is increasingly moderated by continuing capacity constraints in terms of the availability of slots that limit or preclude entry at the airport level (*see* Chapter 2, section 2.3.1). Illustrative of the growing slot scarcity levels is that the number of Level 3 slot coordinated airports worldwide also continues to increase: 136 in 2000, 155 in 2010 and 197 in 2021.[1351]

Slot scarcity at airports represents the inability of an airline to obtain the slot they want in order to operate a specific route (*see* Chapter 2, section 2.3.). More importantly, half of global air traffic is concentrated at just 4% of the largest 100 airports.[1352] At this newly emerged category of super-congested Level 3 airports, a deepening of slot scarcity levels is observed, to such an extent that these airports have little to no slots available for coordination (*see* Chapter 2, section 2.4.2).

Growing excess demand for slots will be among the set of developments that will affect the global air transport industry most in the decades ahead. The lack of slots has thus become a prominent feature of congested, and especially super-congested airports, where all slots are covered by incumbents' historic rights, and is expected to become an even more critical issue for airlines, airports and coordinators alike in the near future (*see* Chapter 2, section 2.3).

The congestion levels faced by super-congested airports such as London Heathrow (*see, inter alia*, Chapter 5, sections 5.6.2 and 5.6.4), Tokyo Narita International Airport (*see* Chapter 3, section 3.2.4), Mexico City Benito Juárez Airport (*see* Chapter 4, section 4.6.2.1) and Amsterdam Airport Schiphol (*see, inter alia*, Chapter 4, section 4.4.3.3 and Chapter 5, section 5.7.4) already provide a first outlook at the consequences of extreme scarcity. Although these airports share their slot scarcity levels, each airport is constrained for a different reason and will have different needs and coordination parameters for the management of slots (*see* Chapter 2, section 2.2.2).

Although the slot regime set forth by the WASG, and by extension the EU Slot Regulation (*see* Chapter 4, section 4.1.2), very much welcomes competitive entry in spirit, in practice competitors of incumbent airlines, that is, airlines holding a substantial portfolio of historic slots, are regularly not able to enter a market due to their inability to acquire airport slots. Slot availability rather than the possession of traffic rights now has the greatest potential for causing allocative inefficiencies and hamper airport access, as slots are an essential input for airlines wanting to compete (*see* Chapter 3, section 3.5 and Chapter 5, section 5.7.6).

Yet, the slot regime provided for by the WASG and as implemented in, among others, the EU Slot Regulation (*see* Chapter 4, section 4.1.2) still reflects the pre-liberalization situation which has evolved into a more liberalized and congested world (*see* Chapter 2, section 2.3). The slot regime does not provide any guidance to slot coordinators as to how to allocate slots according to their socio-economic value. The 2021 edition of the WASG pursues the following prime objective of slot coordination:

[1350] *See* Chapter 1, n.10, for an explanation of both terms, including differences as between them.
[1351] *See* IATA, *supra* note 261.
[1352] *See* Gelhausen et al., *supra* note 271, at 6; Graham and Guyer, *supra* note 191, at 178.

> "The prime objective of airport slot coordination is to ensure the most efficient declaration, allocation and use of available airport capacity in order to optimize *benefits to consumers,* taking into account the interests of airports and airlines." [italics added][1353]

In the author's view, it is questionable if the WASG guidelines for the declaration, allocation and use of slots at super-congested airports are an adequate reflection of consumer needs and overall socio-economic value (*see* Chapter 2, section 2.1.3). In fact, the current rules were never written to provide a solution to the fundamental problem of a lack of airport capacity (*see* Chapter 2, section 2.3.2), and have seen only marginal changes (*see* Chapter 3, section 3.4.4 and Chapter 4, section 4.1.4).

Hence, slot coordination as we know it may not constitute the right means to manage scarce infrastructure and evokes questions as to the qualifications of the current slot regime to govern the declaration, allocation and use of slots at airports where significant slot scarcity is of a long-term or permanent nature. Based on the reasoning above, the author deems it unlikely that the current slot regime is fit for purpose in ensuring the efficient use of increasingly scarce capacity from a socio-economic perspective (*see* Chapter 2, section 2.3.2).

Furthermore, quality-of-life factors increasingly influence the economic development of air transport, including slot coordination. The negative environmental externalities of air transport, notably in the form of aircraft noise exposure and emissions of pollutants affecting local air quality and emissions of carbon dioxide and other greenhouse gases are affecting air transport' societal license to continue to grow its activities and unlock more slots to enhance market access for expanded or new services allocation (*see* Chapter 2, section 2.3).

Environmental concerns go hand in hand with a societal debate regarding how the airport capacity can be used optimally to the benefit of the socio-economic welfare of States and regions. One reasoning in the public debate is that if airport capacity is used for those flights that deliver most socio-economic value, there is no or less need for airport expansion. A growing socio-political focus on limiting the negative externalities of air transport may culminate into discussions as to how a flight's environmental footprint could be reflected in the declaration, allocation and use of airport capacity.

In conclusion, a little over seventy-five years after the signing of the Convention in 1944, a very different geopolitical, social and economic landscape with different angles on the development of air transport has appeared.[1354] As further elaborated upon in sections 6.2 and 6.3 below, the current global and specific legal regimes for airport access analyzed in Chapters 4 and 5 respectively offer limited scope to influence coordination decisions from, *inter alia,* a socio-economic perspective. Besides the need to meet evolving market realities, the WASG guidelines have more impact on the air transport industry than they did at the time they were conceived as capacity falls short of demand at an increasing number of airports.

A paradigm shift may be required in order for the slot regime to shy away from its seemingly growth-oriented focus in order to bring it more in line with market conditions anno 2021 and balance the legitimate interests of all stakeholders for the benefit of consumers, regions and the environment. In other words: the time may have come for socio-economic considerations[1355] to play a role in the regulatory regime in place for slot coordination at super-congested airports.

[1353] ACI, IATA and WWACG, *Worldwide Airport Slot Guidelines (WASG) Edition 1* (2020), *supra* note 8, at 1.2.1.
[1354] *See*, among others, Mendes de Leon and Buissing, *supra* note 318.
[1355] Socio-economic considerations are, for the purposes of this dissertation, understood to mean the balancing of the positive and negative externalities of air transport, which includes topics as sustainability in a broad sense, including aircraft noise exposure, air quality, employment levels, the business climate and competitive relations.

6.2 General conclusions as to flexing the slot regime based on the global regime for slot coordination

6.2.1 The Chicago Convention (1944)

The Chicago Convention (1944) and its 19 Annexes do not provide a global framework for the economic regulation of air transport, including slot coordination, save for an indirect link provided by Article 15 of the Convention as referred to below. At the time when the Convention was conceived, the problem of airport congestion did not exist, and the drafters were primarily concerned with questions related to safety, including technical aspects of air transport (*see* Chapter 3, section 3.1).

The Convention does, however, include basic concepts regarding access to airports that may be linked to slot coordination. The Convention affects slot coordination via Article 1 in conjunction with Articles 2, 5, 6, 11, 15, 44 and 68 of the Convention (*see* Chapter 3, section 3.1.4). The main body of Chapter 3 studied the aforementioned provisions relevant for the analysis carried out in this dissertation from the perspective of access to airports in terms of traffic rights and, more specifically, airport slots. An airline holding traffic rights is not guaranteed the necessary airport slots, because slots are allocated separately, that is, under a different legal regime and at a later stage (*see* Chapter 3, section 3.3).

Nonetheless, slot coordination forms part of a broader process, including the exchange of traffic rights on the basis of Article 6 of the Convention, and the imposition of airport charges pursuant to Article 15 of the Convention (*see* Chapter 3, section 3.3.1). Henceforth, although slot coordination may not be regulated directly under the Convention, access to airports is. Article 15 of the Convention deals with the use of airports, which is generally interpreted as encompassing the use of slots (*see* Chapter 3, section 3.1.5). Accordingly, the sovereign rights of States to adopt national rules on slot coordination pursuant to Article 1 of the Convention can be made subject to Articles 6 and 15 of the Convention.

6.2.2 ICAO guidance on slot coordination

ICAO has not yet adopted Standards and Recommended Practices [hereinafter: SARPs] in the field of slots supplementing the Convention, whereas there are no other rules from ICAO on slot coordination. Although ICAO has produced guidance documents on slot coordination, often with reference to the WASG, these do not equate to binding and uniform rules or procedures on slot coordination for States and industry stakeholders to use.

Policy guidance relevant to slot coordination developed by ICAO includes the 2001 ICAO Circular 283-AT/119 on Regulatory Implications of the Allocation of Flight Departure and Arrival Slots at International Airports, a Manual on the Regulation of International Air Transport, the reports to ATConf/5 and ATConf/6, and the ICAO model clause for optional use by States in their ASAs. ICAO emphasizes that its contracting States should adhere to the legal framework for slot coordination, comprising of the Convention, obligations under ASAs as well as regional and national rules for the coordination of slots (*see* Chapter 3, sections 3.1.6 and 3.2.3).

6.2.3 Provisions of the Worldwide Airport Slot Guidelines

In the absence of ICAO rules on the matter, the WASG provide the global air transport community with a single set of guidelines as a best practice guide for the management of airport slots at coordinated airports. The WASG guidelines attempt to mitigate concerns over national treatment and non-discrimination by requiring the coordinator to allocate slots to airlines in a "neutral, transparent and non-discriminatory way" (*see* Chapter 3, section 3.4.1). The WASG also describe quite clearly the details and rules of how the process of slot coordination should

work, allowing for a more or less universal approach by slot coordinators around the world (*see* Chapter 4, section 4.2.3).

Yet, although the wider cross industry participation as per the 2020 edition of the WASG may result in a more balanced set of guidelines going forward, there is also a risk of watered-down guidelines from negotiated outcomes (*see* Chapter 3, section 3.4.2). Clear guidance may henceforth be better formulated by the local regulator rather than relying on the industry.[1356]

The WASG are not legally binding *per se*. Indeed, the WASG recognize in its Preface that national regulations on slot coordination may take precedence over the WASG guidelines. Since air transport may also be subject to local regulations depending on local circumstances that are different from and/or additional to the principles incorporated in the WASG, slot coordination may work differently to varying extents in different parts of the world, as the overview of the process of slot coordination in selected jurisdictions illustrates in section 6.3 below.

6.2.4 Concluding remarks

Since slot coordination takes place within the territory of State in which the congested airport is located, oftentimes with the intervention of an independent coordinator (*see* Chapter 5, section 5.4), the process for the coordination of airport capacity in terms of slots is subject to the principle of complete and exclusive aerial sovereignty vested in Articles 1 and 2 of the Convention (*see* Chapter 3, section 3.1.4.2). Hence, based on Articles 1 and 2 of the Convention, *in principle* States have the freedom to adopt national rules on slot coordination, including rules aimed at influencing coordination decisions.

Nonetheless, slot coordination can be considered part of the process concerning access to airports, States that have ratified the Convention must ensure that their rules on slot coordination are compliant with the principles of national treatment and non-discrimination vested in Article 11 respectively Article 15 of the Convention. It follows that, although States may apply and enforce slot coordination rules against all foreign and national aircraft in its territory, States are not allowed to discriminate as to the nationality of any airline (*see* Chapter 3, section 3.1.4.3). Consequently, local airlines must be treated in the same way as non-local airlines when local, national and regional slot coordination rules are applied and enforced with the aim of influencing coordination decisions.

Global guidelines in the field of slot coordination are provided by ICAO and the WASG (*see* Chapter 3, sections 3.1.7 and 3.4). The ICAO guidance documents on slot coordination mentioned in section 6.2.2 above merely provide an overview of the process of slot coordination and do not target ways or instruments to flex the slot regime. Save for local guidelines and procedures, explicit references to tailor-made policy approaches to slot coordination affecting the declaration, primary allocation and use of slots have also not been made by the WASG. Yet, the WASG do not 'stand in the way' of States or regional jurisdictions wanting to adopt national or regional rules on slot coordination other than the guidelines provided for in the WASG, irrespective of the objectives States or regions would like to achieve, *exempli gratia* a flexing of the slot regime.

[1356] *See* ACL International, *supra* note 711.

6.3 General conclusions as to flexing of slot regime based on the specific regimes for slot coordination

6.3.1 The application and implementation of the global slot regime in domestic jurisdictions

The main body of Chapter 4 studied the specific regimes for slot coordination in selected jurisdictions, including the EU, the United Kingdom [hereinafter: UK], the United States [hereinafter: US], China, Mexico and Australia, with a prime focus on the EU Slot Regulation. The research conducted in Chapter 4 shows that States or regional authorities that have adopted domestic regulations on slots often draw on the principles enshrined in the WASG, making the global air transport industry largely subject to the same regulations. In some instances, the WASG guidelines have been incorporated into national or regional law (*see* Chapter 4, section 4.1.2) making the provisions directly enforceable by the State or jurisdiction concerned.

6.3.2 Slot coordination in the EU

The EU Slot Regulation provides legally binding rules for slot coordination, although slot coordination is not regulated exclusively at EU level (*see* Chapter 4, section 4.3). Depending on the local situation, the Slot Regulation may require further specification in national laws of the EU Member States through the adoption of national laws, local operational rules pursuant to Article 19(1) of EU Regulation 1008/2008 or local guidelines proposed by the coordination committee (*see* Chapter 4, sections 4.3.1, 4.3.2 and 4.3.3.1).

It is imperative that the non-discrimination and national treatment principles as embodied in the Convention and by the general principles governing the freedom to provide air services as spelled out in the Court of Justice of the EU's [hereinafter: CJEU] case law are complied with by national authorities. Any national laws, operational restrictions or local guidelines may not discriminate on grounds of nationality or identity of the air carrier, or as between destinations inside the EU (*see* Chapter 4, section 4.1.5).

The prohibition of non-discrimination should also be observed by the coordinator when making allocation decisions or when adopting local procedures affecting allocation decisions. Consequently, when making allocation decisions, comparable slot requests may not be treated differently, and different slot requests may not be treated alike unless such decisions can be objectively justified. Any national measures must furthermore be warranted by mandatory requirements in the public interest (*see* Chapter 4, section 4.1.5).

To the extent that national laws, operational restrictions, local guidelines and/or local procedures are not in conflict with EU law (*see* Chapter 4, section 4.3.5.2), EU Member States and coordinators can thus adopt such measures to influence allocation decisions. However, in practice, the leeway Member States and coordinators have to effectively influence allocation decisions is very limited, because the legally binding allocation priorities set forth by the Slot Regulation need to be complied with, which by and large resemble the priorities laid down in the WASG (*see* Chapter 4, sections 4.2.2 and 4.2.3.1). Although local procedures comprising additional criteria may be able to influence allocation decisions at the margin, they are no game changer (*see* Chapter 4, section 4.3.4).

Moreover, apart from services covered by PSO's (*see* Chapter 4, section 4.4.4), two-year usage restrictions for new entrant slots (*see* Chapter 5, section 5.5.2) and slot commitments (*see* Chapter 5, section 5.7), slots cannot be earmarked or reserved for a certain use under the Slot Regulation. However, even where Member States and coordinators can effectively influence allocation decisions for the attainment of certain policy considerations, airlines are still free to swap slots in line with their own commercial strategies immediately after the slots are allocated

to them (*see* Chapter 2, section 2.1.2). Hence, as long as airlines are given this flexibility and unless a provision enabling the coordinator to monitor slot use for compliance with the conditions imposed on their allocation, the effective influence of Member States and coordinators on allocation decisions appears to be short-lived.

6.3.3 Slot coordination in the US

The US proposed a myriad of techniques to flex the slot regime with the aim of enhancing market access and improve slot mobility, including lotteries and the initiation of plans by the Federal Aviation Administration [hereinafter: FAA] and the US Department of Transportation in 2007 and 2008 to auction slots (*see* Chapter 4, section 4.5.4). Moreover, a separation between domestic and international flights was made under the High Density Rule with the aim of always having slots available for airlines designated under ASAs by other contracting States (*see* Chapter 4, section 4.5.3). It follows that 'international slots', as well as slots for 'essential air services' and general aviation have been earmarked and exempt from the secondary trading system (*see* Chapter 4, section 4.5.3).

6.3.4 Slot coordination in the selected jurisdictions of China, Mexico and Australia

Similar to the US, the Civil Aviation Administration of China [hereinafter: CAAC] also places slots for domestic and international flights into separate pools in order to safeguard slots for remote regions and to encourage airlines flying internationally to improve their route networks. Furthermore, and as opposed to the WASG and the Slot Regulation, slots are route and aircraft-type specific, unless prior authorization by the CAAC to alter the usage of the slot has been obtained. The order of allocation criteria follows a pre-determined formula, according to which airlines with high operating efficiencies will win high scores (*see* Chapter 4, section 4.6.3.2).

In Mexico, national law introduces a special regime for slot allocation at so-called 'saturated' airports. Part of this special regime is an increase of the use-it-or-lose-it rule to 85%, as well as a slot auctioning system for slots withdrawn in observance of the 85% threshold. Slots can furthermore not be allocated or transferred to air carriers that accumulate more than 35% of total slot holdings in the same timeslot (*see* Chapter 4, sections 4.6.2.1 and 4.6.2.2).

Although the national rules on slot coordination in Australia have been developed with reference to the WASG guidelines for slot coordination, it also provides for additional rules, including policy responses in relation to aircraft size and the ringfencing of slots for regional services across New South Wales (*see* Chapter 4, sections 4.6.4.2, 4.6.4.3 and 4.6.4.4).

6.3.5 Concluding remarks

It can be concluded that, outside the EU, States have more leeway to influence coordination decisions because of the absence of any international and/or regional binding rules for slot coordination. The WASG is not currently followed across the world with States such as the US, China, Mexico and Australia operating different regimes (*see* Chapter 4, sections 4.5 and 4.6). These States have flexed the slot regime set forth by the WASG to attain certain policy objectives, which could potentially serve as examples for a future and flexed slot regime for super-congested airports. Nonetheless, the attempts made by the aforementioned four States, as well as the EU as a regional jurisdiction, epitomize the shared global quest for a slot regime that alleviates the specific challenges faced by super-congested airports around the world.

Drawing on the general conclusions provided in sections 6.2 and 6.3 on the extent to which the global and specific legal regimes pertaining to airport slot coordination can be used as an instrument to influence coordination decisions at super-congested airports, Section 6.4 below

identifies measures to flex the slot regime by means of a reflection of the socio-economic value of a slot in the declaration, allocation and use of airport capacity.

6.4 Recommendations

6.4.1 Preliminary remarks

The declaration of capacity and the resulting allocation of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition and regulation, including re-regulation. Since the key principles guiding the WASG and the Slot Regulation have been laid down decades ago (*see* Chapter 1, section 1.1 and Chapter 4, section 4.1.1), it is questionable whether they are equipped for reconciliation with the multi-faceted role of slots in contemporary society.

Combined with the severity of political, geographic and institutional constraints in matching airport capacity supply with demand as illustrated throughout Chapter 2, a purely supply-side approach does not seem realistic. Hence, the coordination of slots increasingly involves broader policy questions as to how capacity is used to its most optimal level, taking into account both operational and environmental concerns, as well as the compatibility of liberal airport access provisions with high slot scarcity levels, imposing insuperable entry barriers.

The below sections turn attention to recommendations to flex the slot regime with the aim of better reflecting the socio-economic value of a slot in coordination decisions at super-congested airports. The following topics are addressed and supplied with recommendations:

1) Optimal declaration, allocation and use of slots as prime objective
2) Enhancing the use of existing capacity
3) The inclusion of airport-specific strategic objectives
4) Measures to ease airport access
5) The role of States vis-à-vis the role of the slot coordinator and air transport industry stakeholders in a 'flexed' slot regime

6.4.2 Recommendations as to an optimal declaration, allocation and use of slots as prime objective of slot coordination

At super-congested airports in particular, slots are valuable resources to society at large as they safeguard public functions such as connectivity and airport access (*see* Chapter 2, sections 2.3 and 2.4). Accordingly, the coordinator should ensure that scarce slots are declared, allocated and used in a way that is reflective of these public functions.

Solving the debate on slot title by clarifying that slots are essentially public goods which are allocated as entitlements could contribute to making the above recommendation work (*see* Chapter 5, section 5.2.5). The US FAA explains that slots are operating privileges subject to government control (*see* Chapter 5, section 5.2.3). This explanation may well serve as an example for how the legal title to slots could be defined in, *inter alia*, the WASG and other national or regional laws on slot coordination. After all, States are ultimately responsible for the designation of airports within their territories per Article 68 of the Convention, both from the perspective of designating airports under ASAs as well as the designation of airports as slot coordinated. An independent coordinator should, nonetheless, be appointed to allocate slots to airlines as entitlements to use the available infrastructure, as to which see section 6.2.6 below.

Paragraph 1.1.1 of the WASG lists the "efficient use of airport infrastructure" as the prime function of slot coordination. However, this phrase should not be understood as purely

operational efficiency in terms of maximizing airport throughput. Instead, the prime objective of slot coordination included in the WASG should be extended to state that slot coordination strives for a better balance between the legitimate interests of all stakeholders involved, *inter alia,* regulators, airports, incumbent and new entrant airlines, local residents and citizens.

Central to the coordination process should be a declaration, allocation and use of slots in the most optimal way appropriate to specific airport characteristics, and ultimately to the benefit of society. Such an amended prime objective of slot coordination also addresses the existing heterogeneity of airport infrastructure, which reduces the likelihood of finding general capacity declaration or slot allocation principles matching the particular situation of each and every airport (*see* Chapter 2, section 2.2.2). To account for the qualitative and quantitative differences between 'regular' Level 3 airports and 'super-congested' airports, the addition of a new Level 4 category of airports could be explored. After all, where excess demand is greatest, there exists greater potential for an inefficient coordination of slots (*see* Chapter 2, section 2.4.3).

6.4.3 Recommendations as to enhancing the use of existing capacity

Capacity increases require capital intensive solutions with significant implementation times, and are often subject to heated political debates (*see* Chapter 2, sections 2.3 and 2.4). Hence, demand-side solutions that are based on the optimum declaration, allocation and use of existing capacity are needed to offer immediate relief to super-congested airports. In order to get the most out of existing airport capacity, following the example of the super-congested airport of London Heathrow (see Chapter 4, section 4.3.3.1) and depending on the specifications of airport capacity limits in legislation, it may be helpful to allocate more slots than specified in the capacity declaration where coordinators would be able to predict that a certain share of slots would not be used ('overbooking').

Also, the current and seemingly growth-oriented slot rules provide limited scope for structural solutions to accommodate (temporary) reductions in capacity caused by contingencies, nor does it provide for procedures to return to normal operations thereafter, if applicable. Declared capacity should presumably be at least equal to the declared capacity in the previous year, since the slot regime set forth by the WASG does not deal with long-term reductions of capacity anywhere in the document (*see* Chapter 2, section 2.2.2). Hence, the slot rules appear to be only reflective of 'the way up', *id est* the provision of more capacity.

If anything, the COVID-19 pandemic occurring in 2020/2021 has shown that the resilience of the Slot Regulation to quickly and effectively respond to the needs of the market under extraordinary circumstances such as a significant drop in demand for air services should be improved. *Inter alia*, the WASB and the European Commission [hereinafter: the Commission] have quickly implemented regime changes by exempting airlines from the *use-it-or-lose-it* rule because of the drastic reduction in flights, since the WASG and the Slot Regulation do not provide adequate structural solutions for capacity reductions (*see* Chapter 2, section 2.2.3). Besides solutions targeting temporary reductions in demand, guidance for permanent reductions in slot supply could be helpful for airports faced with permanent capacity reductions, *exempli gratia* because of environmental limitations such as night closures. Future proofing any legislation for events such as significant political events and other special events is also important.[1357]

[1357] *See* ACL International, *supra* note 711.

6.4.4 *Recommendations as to the inclusion of airport-specific strategic objectives in the allocation and use of slots*

At the world's most congested airports servicing global political, cultural and social centers, it is highly likely that a balance needs to be sought between conflicting objectives in terms of which slot requests can and will be accommodated, and which will not. To account for today's challenges, coordinators should be enabled to apply airport-specific strategic criteria related to, *inter alia*, sustainability, airport access and route development, as part of the secondary, and perhaps also the primary, criteria for slot allocation.

Currently, in States where the WASG guidelines are applied, slots are flexible concepts which can be flexibly changed by airlines according to their business plan. Hence, slots can be used on any route of their choice (*see* Chapter 2, section 2.1.2 and Chapter 5, section 5.7.1). The introduction of slot earmarking in a general sense,[1358] a practice where slots are essentially 'labelled' by the coordinator for a certain use, would enable coordinators to monitor and potentially enforce the 'proper' use of slots if slots are used contrary to any conditions imposed upon initial allocation. Accordingly, earmarking would help ensure that slots, as valuable resources for society at large as mentioned above, are used in line with the conditions imposed upon initial allocation, including their effective operation by the airlines to whom the slots were allocated. Slot earmarking would also enable competition authorities to better monitor competitive impacts on specific routes (*see* Chapter 5, section 5.7.5).

Moreover, it should be possible to reserve slots, also known as 'ringfencing', in case there are compelling reasons, appropriate to the specific functions of an airport to society, to do so. For instance, at super-congested airports, and as airports become more congested in general, it is likely that operators of non-scheduled operations will not be able to obtain *ad hoc* slots to operate. Examples include general aviation, business aviation and full freighter operators, for whom it is difficult to build history over slots due to the irregular nature of their operations.

The above situation may be addressed by allowing coordinators to reserve slots for these segments following the example of the current slot reservation possibilities for, *inter alia*, PSO's in the EU (*see* Chapter 4, section 4.3.3) and the ringfencing of regional slots in Australia and domestic slots in the US (*see* Chapter 4, sections 4.5.4 and 4.6.4.3), provided that a reservation of slots for these segments results in an efficient use of the capacity of the specific airport from a productive and/or allocative, in terms of added socio-economic value, perspective. Whether or not a reservation targets productive and/or allocative efficiency depends on the specific airport functions.[1359] UK-based coordinator Airport Coordination Limited [hereinafter: ACL] has previously advocated the introduction of separate slot pools for non-historic operations to give greater flexibility to allocate slots at short notice, without risking these slots to become historic.[1360] Alternatively, the introduction of separate slot pools – as applied by the US and China to effectuate a separation between international and domestic flights (*see* Chapter 4, sections 4.5.3 and 4.6.3.2) could be considered, provided such a separation can be substantiated from the viewpoint of added socio-economic value.[1361]

[1358] On top of current slot earmarking practices in the three instances of PSO's, priority allocation for new entrants and slot commitments, as mentioned above.

[1359] In the context of the present dissertation, allocative efficiency means that slots are used for those destinations which are most highly valued by society. Productive efficiency means that the total number of slots at each airport is maximized, and that each slot is being used to move the maximum amount of passengers possible.

[1360] *See* ACL International, *supra* note 711.

[1361] The Commission appears to have already acknowledged the potential existence of multiple pools through its statement that ". . . [t]he Slot Regulation also provides for the setting up of "pools". . ." [parentheses added]. *See,*

Thought could also be given to the question pertaining to the justification of the protection of domestic slots or slots used for short-haul routes in light of the availability of alternative transport modes, as well as to their place in the allocation order. In 2001, the Commission already appeared to be 'ahead of its time' with its proposed amendment to introduce additional slot allocation criteria that would give lower priority to slot requests for intra-EU routes where other satisfactory modes of transport, such as high-speed rail, exist.[1362]

6.4.5 Recommendations as to measures to ease airport access

The relationship between implied barriers to airport access and slots primarily exist via the notion that slots create a barrier to entry under the current administrative slot system, of which grandfather rights form the basis. Slots are valuable resources to society at large for which 'competition' among airlines is fierce, in particular at super-congested airports. This section provides recommendations for amendments to the new entrant rule and secondary slot trading.

The allocation process set forth by the WASG and the Slot Regulation holds that a portion of slots is set aside for new entrants to stimulate competitive entry. In practice, however, it is questionable whether the new entrant rule is fit for the pro-competitive purpose it was designed to achieve (*see* Chapter 5, section 5.5).

Among others, the long-standing practice of placing *change-to-historic* requests via the concept of 'grandfather rights', ahead of new entrant requests in the primary allocation order (*see* Chapter 2, section 2.2.3), offers incumbent airlines an additional competitive advantage over new entrants, since it attains priority for incumbent airlines to optimize their slot portfolios and to adjust them as market developments evolve. The flexibility offered by large slot portfolios has also been confirmed by the Commission in its assessment of mergers and alliances cases (*see* Chapter 5, section 5.7.5).

The WASG already amended the slot allocation priority rules in a way that changes-to-historic requests and new entrant requests will have equal priority. The EU should follow suit by reversing the allocation priorities. Dispensing precedence to new entrants over change-to-historic requests would offer new entrants enhanced opportunities to obtain access to the slots they are most interested in at airports that still have capacity left. Moreover, the existing limit of 5% of total slot holdings for new entrants should be increased, and the 'airport system qualifier' of 4% should be removed in order to reflect that airports within an airport system may serve entirely different markets and functions. It should also be possible to differentiate thresholds between, *inter alia,* intra-EU and extra-EU routes, or international and domestic routes.

In light of the continued consolidation among airlines, joint ventures, codeshares and alliances, it should also be considered to draw up a new entrant rule so as to prevent circumvention of the present new entrant rule (*see* Chapter 5, section 5.5.2). A 2012 legislative resolution by the European Parliament to amend the Slot Regulation already included a limitation for airline groups to attain new entrant status if an airline (group) holds more than 10% of the total number of slots allocated on the day in question in a given airport, or if it has transferred slots obtained by it as a new entrant in order to reacquire that status (*see* Chapter 5, section 5.5.3).

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among others, Case M.8672 – easyJet/certain Air Berlin assets, *supra* note 57, paragraph 32; Case M.8633 – Lufthansa/certain Air Berlin assets, *supra* note 980, paragraph 38.

[1362] *See* European Commission, *supra* note 54, paragraph 16.

However, the new entrant rule depends on the ready availability of slots in the pool in order to function (*see* Chapter 5, section 5.5.3) It thus appears questionable whether, for instance, upgrading the priority assigned to new entrant requests by placing them ahead of change-to-historic requests, or on an equal footing, or increasing any threshold, will be helpful from an airport access perspective at super-congested airports with no available slots to accord new entrant priority to in their allocation to airlines.

At super-congested airports where the effects of a strict application of the new entrant rule would frustrate other objectives of the slot rules, such as the most optimal use of scarce airport capacity, the application of a broader set of rules governing new entrants could be considered. Depending on the competitive dynamics of each airport, coordinators should have the possibility to opt out on the new entrant rule and endorse local solutions instead.

The author suggests that further analysis is carried out to examine whether a new entrant rule at route level could be a feasible and effective solution. For instance, the application of the new entrant rule designed to vary by route could be explored in order to more closely reflect the frequencies required for a route to be competitive. Privileges could be given to airlines operating key new destinations to widen passengers' travel options, or to frequency increases on objectively pre-determined under-served routes, rather than continuously increasing competition on existing routes.

Chapter 5, section 5.6.3 explored the legality of slot leases and slot transfers as alternative sources of slots at airports where no slots are readily available from the pool. However, it was concluded that, under a mechanism of secondary slot trading, there may be a poor correlation between the amount of profit an airline is able to make and the amount of social surplus. Hence, allocation decisions may become based on an airlines' willingness to pay and the divesting carrier's view of how it can best protect its competitive position at an airport, rather than an independent assessment undertaken by the coordinator of the fairest allocation outcome to ensure the most optimal distribution of slots at the airport concerned and the best outcome for consumer choice, and eventually the public interest.

Based on the research undertaken in this dissertation (*see* Chapter 5, section 5.6), it is suggested to let States decide for themselves whether or not they wish to permit a secondary slot market – subject to clear rules and conditions to prevent the identified risks associated with the practice – to fit within their local market circumstances in terms of airport access and airport functions.

6.4.6 *Recommendations as to the role of States vis-à-vis the role of the slot coordinator and air transport industry stakeholders in a 'flexed' slot regime*

At super-congested airports with thousands of slots on the no-slot waitlist, the coordinator may feel compelled to oversee capacity utilization and take into account a broader set of conflicting government objectives, such as the airport's route network or the reduction of carbon emissions and noise pollution. However, coordinators often lack the human and/or financial resources for a full overview of the relationship between government policy, airline network strategies and the needs of airports.[1363]

Allocation decisions will be increasingly difficult to be made, especially when the majority or all of the airlines have acquired the underlying traffic rights to operate international air services to and from the airport it concerns (*see* Chapter 3, section 3.3). The current administrative rules do not prescribe solutions for severe capacity shortfalls, and are therefore not helping coordinators in their decision-making process. As a result, the role of the

[1363] *See* Finger et al., *supra* note 18, at 7.

coordinator has shifted from a merely technical role in which all slots are allocated as close as possible to their requested timings submitted by airlines, to more of a policymaking one. In essence, the coordinator appears to have been handed a role it was never intended to perform (*see* Chapter 5, sections 5.4 and 5.8).

A future slot regime should be cognizant of the shifted role of the coordinator from performing merely technical functions to that of a policymaker, so to say. *First,* the independent coordinator needs to be accorded a vital degree of flexibility and discretion when it comes to the interpretation of the slot regime and subsequent allocation decisions in order to respond to ever-changing market realities (*see* Chapter 5, section 5.4.3). The objectives of the WASG involve interpretation and should provide a great deal of latitude to the coordinator to make allocation decisions depending on the local situation.

Second, given the risk of increased judicial review of allocation decisions (*see* Chapter 2, section 2.2.4), States should take measures to protect coordinators with regard to claims for damages relating to their functions performed under the applicable slot regime. *Third,* States could contemplate to appoint an advisory board to the slot coordinator, consisting of independent academic and/or industry experts in the field of air transport, to assist the coordinator in making the most optimal allocation decisions from the perspective of overall socio-economic value.

Given the role of the government with respect to the designation of airports (*see* Chapter 2, section 2.2.1) and in defining the functions of an airport, for example through the use and applications of Traffic Distribution Rules [hereinafter: TDR's] and PSO's (*see* Chapter 4, sections 4.4.2, 4.4.3 and 4.4.3), the coordinator should, however, also *take into account,* though should not be forced to apply, relevant public interest objectives as defined by government authorities. Any form of industry or government guidance should not be binding upon the coordinator to preserve its independent function. UK-based coordinator ACL (2019) appropriately advised that any government guidance should not be overly prescriptive to alleviate concerns related to an erosion of the independency requirement and, subsequently, the air transport industry's trust in fair allocation if no reservations on coordinator discretion are made.[1364]

6.4.7 General recommendations

Since the slot situation at one end of a route may impact the slot situation at the other end (*see* Chapter 2, section 2.1.2), internationally established deadlines are paramount. Moreover, given that air transport is global in nature, harmonized slot coordination standards at both the origin and destination airports appear helpful to optimize an airport's efficient use of resources.

In the author's view, global compatibility does not imply that the same rules for the coordination of slots must apply around the world. A coherent global approach to slot coordination, and more generally airport access under ASA's, does not exist and airlines navigate all the variations in place today (*see* Chapter 3, section 3.2 and the various sections of Chapter 4).

Although there are clear benefits in terms of scheduling consistency if the coordination process is applied consistently across all coordinated airports, there should be freedom to diverge from any such global guidelines in order to optimize the capacity of each airport considering the specific local issues and patterns of air transport activity, particularly at super-congested airports. ACL (2020) says it diverges from the WASG where it finds that an

[1364] *See* ACL, *supra* note 118, at 3.

alternative approach achieves more efficiency. Indeed, the WASG comprise generic, worldwide guidelines and may lack the specificity to manage local issues.[1365]

Provided that any criteria used to declare, allocate or use slots in a general sense, are equally applicable to the aircraft of all contracting States, it appears that the national treatment principle is not breached. Differential treatment can only be supported on the equation "giving equal treatment to equal situations" using relevant and objective criteria, or put differently, where it concerns "unequal situations" and provided these differences in situations can be adequately proportioned (*see* Chapter 3, section 3.1.5).

In sum, national laws and local guidelines and procedures are justified to reflect local market conditions, for instance due to variances in size, functions to society, the nature of the capacity constraints and prevailing competitive conditions (*see* Chapter 2, sections 2.3 and 2.4). Hence, States would benefit from global guidelines for super-congested airports, to the extent that these do not impede on the sovereign rights of States to introduce tailor-made solutions, as applied via the independent coordinator as to which see section 6.4.6 above.

In the well-founded words of ACL (2020), "as with any interpretation (of the slot regime set forth by the WASG) this can differ depending on what that person (or jurisdiction, for that matter) is trying to achieve" (*parentheses added*).[1366]

[1365] *See* ACL International, *supra* note 711.
[1366] *Id.*

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SUMMARY

This dissertation is designed to explore the compatibility of the global and specific legal regimes governing airport slot allocation with the particular socio-economic challenges that international organizations, governments and air transport industry stakeholders are experiencing today. A multitude of socio-economic objectives are identified in this dissertation, including but not limited to the environment in terms of noise and carbon reduction policies, growing airport access issues and general debates on airport functions to society. The number of so-called 'super-congested' airports in terms of the full slot capacity being historically 'occupied' by incumbent carriers are on the rise and will be carefully studied from a policy and legal point of view.

Considering the focus of this dissertation as explained in the above paragraph, the central research questions of this dissertation are posed as follows:

1) To what extent can the global and specific legal regimes pertaining to airport slot coordination be used as an instrument to influence coordination decisions at super-congested airports?

2) What concepts or measures related to slot coordination can be identified to flex the current slot regime to better reflect the socio-economic value of a slot in coordination decisions at super-congested airports?

Chapter 1 sets out the context, scope, aim and structure of the dissertation. Notable developments relevant for this dissertation are listed and further contextualized in Chapters 2-6. Chapter 2 provides definitions and illustrates how and by whom airport capacity is currently declared and subsequently allocated in the form of airport slots to the parties that use them: airlines. The capacity declaration determines the supply-side of the coordination process, *id est* how many slots will be made available to airlines and is therefore critical for the coordination process to commence. All subsequent steps involve demand-side questions, *id est* whom the available slots will be allocated to.

In essence, airport slots are planning tools for the rationing of capacity at airports where available capacity falls short of air travel demand. Since the availability of slots is directly connected to the capacity of an airport at a particular date and time, a slot is by definition a scarce resource. The extent of slot scarcity depends on the congestion level of an airport. The qualification of an airport as slot coordinated or 'Level 3' under the Worldwide Airport Slot Guidelines [hereinafter: WASG], an industry best practice guide for the allocation of slots, has been used as a first proxy of a high congestion level at the relevant airport, although qualification as a slot coordinated airport does not necessarily equal super-congestion.

Fueled by air transport deregulation and liberalization measures, competition between airlines intensified and demand for air transport services has grown considerably since the 1980's, bringing increased saturation at airports in terms of available slots. Excess demand for slots has substantial implications for airlines, coordinators and airports alike, as well as for society as a whole. A lack of access to slots constitutes a barrier to an airlines' ability to compete for passengers and/or cargo on routes between an airport and the destinations served from that airport, especially at the world's busiest airports. In many air transport markets, slot availability has replaced traffic rights as the main barrier to entry in the air transport industry.

Moreover, a growing socio-political focus on limiting air transport's negative externalities may culminate into discussions as to how a flight's environmental footprint could be reflected in the declaration, allocation and use of airport capacity. Besides operational requirements, therefore, an increasing number of airports add to the complexity of the parameter framework via the introduction of environmental restrictions, including limitations for night flying or caps on aircraft movements to combat aviation emissions and aircraft noise exposure, further exacerbating the capacity crunch.

Combined with the severity of political, geographic and institutional constraints in matching airport capacity supply with demand, a purely supply-side solution seems rather impossible. Nevertheless, capacity-wise the WASG continues to underline that coordination should be seen as an "interim solution", until the longer-term solution of airport capacity expansion has been implemented. This dissertation considers this expansion-oriented approach to be outdated, particularly at super-congested airports where slot scarcity is of a long-term or permanent nature, and where persistent impediments to airport access are experienced as a result.

Also, the demand-side of the coordination process has received widespread criticism from leading academics, competition authorities and industry professionals. Criticism is directed mainly towards the tenability of the principle of historic precedence, on the basis of which airlines are allocated slots on the basis of their previous use. Airlines wishing to start or expand their services at a congested airport may be hindered or prevented from doing so, as available slots are an essential input for airlines wanting to compete.

This dissertation's findings demonstrate that the role of slots has changed from a purely productive instrument used to cope with congestion to a multi-faceted concept serving various purposes. The allocation of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition. This dissertation considers it questionable whether the guidelines set forth by the WASG are equipped for reconciliation with the multi-faceted and increasingly public role of slots in contemporary society.

Chapter 3 aims to provide a thorough understanding of the global framework in the context of access to airports. It clarifies that, although slot allocation may not be regulated directly under the Chicago Convention on International Aviation of 1944 [hereinafter: the Convention], access to airports is. Article 15 of the Convention on the use of airports is generally interpreted as encompassing the use of slots. It follows that slot allocation can be considered part of the process concerning access to airports, thus it must be performed in a non-discriminatory manner and subject to the national treatment principle. Consequently, States must adhere to these principles in their rules and procedures on slot allocation.

The International Civil Aviation Organization [hereinafter: ICAO] has not yet adopted Standards and/or Recommended Practices in the field of slots, and there are no other binding and/or uniform rules from ICAO on slot allocation. Nonetheless, ICAO has, produced guidance documents on slot allocation, often with reference to the WASG. In relation to traffic rights exchanged on the basis of Articles 5 and 6 of the Convention, slots are a technical modality to be allocated by the coordinator following the exchange of traffic rights in air services agreements. An airline holding traffic rights is not guaranteed the necessary airport slots, because slots are allocated separately, that is, under a different legal regime and at a later stage.

In the absence of ICAO rules on the matter, guidelines for the allocation of slots at congested airports were first developed by airlines and dedicated 'slot coordinators' almost half a century ago via the issuance of what are now known as the WASG. In States where the WASG apply, whether directly as guidelines or because they are implemented in regional or national laws, the exclusive responsibility for the allocation of slots is vested with the independent slot coordinator, who ensures slot allocation takes place through a system of fair, non-discriminatory and transparent rules so as to ensure optimal utilization of airport capacity.

Slots are available for allocation from the slot pool or potentially through the alternative means of, *inter alia,* secondary slot trading or remedy slots. They are attached to the capacity of one particular airport but are generally not attached to any specific route. Hence, slots are flexible concepts which can be used by airlines in a wide range of downstream markets, *id est* on any route of the airlines' choice, save for pre-defined exemptions.

Although not legally binding *per se,* States that have adopted domestic regulations on slots often draw on the guidelines enshrined in the WASG, making the global air transport industry largely subject to the same regulations. However, as demonstrated by Chapter 2, the structure of the air transport market has advanced fundamentally since the key guidelines for the allocation of slots at congested airports were first developed. Yet, as capacity falls short of demand at more and more airports, the principles of the Convention and the WASG have more impact than they did at the time they were conceived.

Chapter 4 explains that States may also have their own legislation on slots. In some instances, WASG principles have been incorporated into national or regional law, making the provisions directly enforceable by the State or region concerned. The variance in regulatory policies of the selected jurisdictions of the European Union, the United States, the United Kingdom, China, Mexico and Australia with respect to slot allocation at (super-)congested airports have resulted in different approaches pertaining to slot scarcity and are illustrative of the non-binding nature of the WASG guidelines.

Neither the general regime for slot allocation which has been explored in Chapter 3, nor the special regimes for slot allocation discussed in Chapter 4, offer structural solutions to remedy the specific challenges faced by super-congested airports. Yet, the continuous attempts made by States around the world to revise existing rules and practices for slot allocation epitomize the shared global quest for a slot regime that alleviates the specific challenges faced by super-congested airports.

Chapter 5 analyzes multiple concepts that could assist in drafting structural solutions for the specific issues experienced at super-congested airports relating to this dissertation's research questions, primarily in the field of reflecting the full socio-economic potential associated with slots in coordination decisions. Among these concepts are the debate on who holds the legal title to a slot, the functional and financial independence of the coordinator, the application and use of the new entrant rule and secondary slot trading, as well as the relationship between slot allocation and competition law. The lessons learned from Chapters 1-5 are displayed in in Chapter 6 and formulated in general conclusions.

One of the overarching conclusions of this dissertation is that the declaration of capacity and the resulting allocation of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition and regulation, including re-regulation. However, the heterogeneity of airport infrastructure reduces the likelihood of finding general capacity declarations or slot allocation principles matching the

particular situation of each and every airport. Airports are complex systems and each will have very different needs and coordination parameters that are liable to affect the allocation of slots. This means that a 'one size fits all' approach to slot coordination is not possible, and the coordinator needs to take into account the individual needs of each airport.

Furthermore, a degree of coordinator discretion and flexibility when making allocation decisions is deemed to support the fundamental requirement of coordinator independence to account for the variance in local situations. In turn, this room for discretion and flexibility will enable the coordinator to respond to ever-changing market realities, specifically as local situations differ and may therefore require different solutions.

To this end, a host of measures to flex the slot regime are recommended in Chapter 6 to help solve the principal tensions that exist between ensuring the stability and continuity of international air services on the one hand, and the incorporation of socio-economic objectives and easing market access on the other hand, which come together in the nexus of scarce airport capacity. The following topics are addressed and supplied with recommendations: the optimal declaration, allocation and use of slots, enhancing the use of existing capacity, the inclusion of airport-specific strategic objectives, measures to ease airport access, and the role of States vis-à-vis the role of the slot coordinator and air transport industry stakeholders in a 'flexed' slot regime.

An overarching recommendation holds that a future slot regime should be cognizant of the shifted role of the coordinator from performing merely technical functions to resembling the role of a policymaker. At super-congested airports, slot coordination ultimately comes down to making decisions which airlines can and cannot operate to and from an airport. With slot scarcity levels and the risk of judicial reviews of coordination decisions rising, coordinators play an increasingly important role in the correct application of the slot allocation rules. After all, airlines are all in the same 'game' for the last available slot pair and the coordinator continuously has to make trade-offs between applicants of equal status. Though the coordinator has been delegated public functions, by no means was the slot coordinator intended to perform the task of policy making. Arguably, at super-congested airports, the coordinator has inevitably been assigned a role it was never intended to perform.

Since the slot situation at one end of a route may impact the slot situation at the other end, internationally established deadlines and rules are paramount. In the author's view, however, global compatibility does not imply that the same rules for the allocation of slots must apply around the world. A coherent global approach to slot coordination, and more generally airport access under air services agreements, does not exist whereas airlines navigate all the variations in place today. Although there are clear benefits in terms of scheduling consistency if the coordination process is applied consistently across all coordinated airports, there should be freedom to diverge from any such global guidelines in order to optimize the capacity of each airport considering the specific local issues and patterns of air transport activity, particularly at super-congested airports.

Hence, this dissertation finds that local coordination solutions through a 'flexing' of the global and specific slot regimes are justified to reflect local market conditions, for instance due to variances in airport size, functions to society, the nature of the capacity constraints and prevailing competitive conditions, provided that these differences in situations can be adequately proportioned to the degree of 'flexing' sought.

SAMENVATTING (DUTCH SUMMARY)

Een *'flexing'* van het slotregime. *Luchthavenslotcoördinatie in het licht van veranderende marktomstandigheden: een regulatoir perspectief.*

Slotcoördinatie kan worden omschreven als een mechanisme voor het vaststellen en vervolgens het verdelen van schaarse luchthavencapaciteit in de vorm van slots. Dit proefschrift verkent de verenigbaarheid van de wereldwijde en specifieke juridische regimes voor slotcoördinatie met de sociaal-economische marktrealiteiten van vandaag de dag.

Een veelheid aan sociaal-economische doelstellingen worden geïdentificeerd in dit proefschrift. Hieronder vallen milieudoelstellingen in de zin van geluidshinder en emissies, de toenemende slotschaarste op luchthavens en het debat over de functies van luchtvaart – en meer specifiek, luchthavens – voor de samenleving in algemene zin. Het aantal luchthavens wat te kampen heeft met extreme schaarste, dat wil zeggen luchthavens waarop de volledige beschikbare slotcapaciteit 'op historische basis' vergeven is aan 'zittende' luchtvaartmaatschappijen is groeiende. Deze zogenoemde '*super-congested airports'* zullen aandachtig worden bestudeerd vanuit beleids- en juridisch oogpunt.

De twee primaire onderzoeksvragen van dit proefschrift zijn als volgt:

1) In hoeverre kunnen de wereldwijde en specifieke juridische regimes voor slotcoördinatie worden ingezet als instrument om besluitvorming rondom de declaratie, toewijzing en het gebruik van slots te beïnvloeden?

2) Welke concepten of maatregelen met betrekking tot de declaratie, allocatie en het gebruik van slots kunnen worden geïdentificeerd om het slotregime dermate flexibel in te richten dat het volledige sociaal-economische potentieel van een slot gereflecteerd wordt in de declaratie, allocatie en het gebruik van slots op '*super-congested airports'*?

De context, reikwijdte, doelstellingen en structuur van dit proefschrift worden besproken in Hoofdstuk 1. Voor dit proefschrift relevante ontwikkelingen worden eveneens uitgelicht in Hoofdstuk 1 en verder gecontextualiseerd in de Hoofdstukken 2 t/m 6.

Hoofdstuk 2 omvat definities en illustreert door wie en op welke wijze slots momenteel worden gedeclareerd en vervolgens worden gealloceerd aan en gebruikt door luchtvaartmaatschappijen. Kort gezegd vormt het afgeven van de capaciteitsdeclaratie, meestal door de luchthaven, de 'aanbodkant' van het coördinatieproces, namelijk hoeveel slots er ter beschikking kunnen worden gesteld aan luchtvaartmaatschappijen. Daarmee is de capaciteitsdeclaratie cruciaal voor het kunnen aanvangen van het allocatieproces, ook wel bekend als de 'vraagkant' van het coördinatieproces, waarin wordt bepaald aan welke luchtvaartmaatschappij de beschikbare slots zullen worden toegewezen door de slotcoördinator.

Slots kunnen in essentie gezien worden als zogenoemde 'planningsinstrumenten' voor de verdeling van schaarse luchthavencapaciteit. Omdat de beschikbaarheid van slots direct gekoppeld is aan de capaciteit van een luchthaven op een bepaalde datum en tijd, is een slot per definitie een schaars goed. De mate van slotschaarste is afhankelijk van het congestieniveau op een luchthaven. De kwalificatie van een luchthaven als zijnde 'slotgecoördineerd' of '*Level 3*' onder de Worldwide Airport Slot Guidelines [hierna: WASG] is een eerste graadmeter voor

een hoog congestieniveau, hoewel een slotgecoördineerde luchthaven niet noodzakelijkerwijs '*super-congested*' hoeft te zijn.

Sinds de opkomst van de commerciële luchtvaart in het begin van de 20e eeuw zijn internationale organisaties, overheden, slotcoördinatoren, luchtvaartmaatschappijen en luchthavens geconfronteerd met aldoor veranderende marktomstandigheden. Gevoed door deregulerings- en liberaliseringsinitiatieven van het luchtverkeer is de concurrentie tussen luchtvaartmaatschappijen onderling en de vraag naar luchtverkeer in het algemeen aanzienlijk toegenomen sinds de jaren '80, evenals de slotschaarste. Dit heeft grote gevolgen voor zowel de diverse belanghebbenden uit de luchtvaartsector als voor de samenleving in brede zin. Een gebrek aan beschikbare slots belemmert luchtvaartmaatschappijen in hun concurrentievermogen voor passagiers en/of vracht, vooral wanneer het een route betreft van of naar een *super-congested airport*.

Tegelijkertijd mondt de groeiende sociaal-economische en politieke focus op het beperken van de negatieve externaliteiten van de luchtvaart uit in maatschappelijke discussies over hoe, onder andere, de ecologische voetafdruk van een vlucht kan worden gereflecteerd in de declaratie, allocatie en het gebruik van slots. Het aantal luchthavens wat, naast de bestaande operationele beperkingen, milieubeperkingen opneemt in de capaciteitsdeclaratie is groeiende. Hieronder kunnen beperkingen voor de uitvoering van nachtvluchten worden geschaard, alsmede limieten op het aantal vliegtuigbewegingen dat binnen een bepaalde tijdseenheid mag worden uitgevoerd. Hoewel begrijpelijk vanuit sociaal-economisch perspectief, zetten deze beperkingen de reeds bestaande slotschaarste verder onder druk.

Gecombineerd met de ernst van de politieke, geografische en institutionele beperkingen rondom de uitbreiding van luchthavencapaciteit om vraag en aanbod beter op elkaar af te kunnen stemmen, lijkt een puur vanuit de aanbodkant ingegeven oplossing onwaarschijnlijk. Desondanks benadrukt de WASG anno 2021 nog steeds dat slotcoördinatie gezien moet worden als een interim-oplossing, totdat de meer lange termijn oplossing in de zin van capaciteitsuitbreidingen op luchthavens gerealiseerd is. Dit proefschrift beschouwt deze op expansie gerichte benadering van de WASG als achterhaald, vooral op *super-congested airports* waar slotschaarste van langdurige of zelfs permanente aard is, en die als gevolg daarvan persistente toetredingsdrempels kennen voor nieuwe luchtvaartmaatschappijen of luchtvaartmaatschappijen die het bestaande route- en/of frequentieaanbod willen uitbreiden.

De vraagkant van het coördinatieproces, ook bekend als het allocatieproces, kan op veel kritiek rekenen uit de hoek van academici, mededingingsautoriteiten, maar ook van belanghebbenden uit de luchtvaartsector zoals luchthavens en zogenoemde '*low-cost carriers*'. De kritiek richt zich met name op het principe van 'historische rechten', oftewel het uitgangspunt op basis waarvan luchtvaartmaatschappijen slots toegewezen krijgen op basis van eerder gebruik. Met name 'zittende' luchtvaartmaatschappijen profiteren van deze regeling. Immers: de beschikbaarheid van slots is essentieel voor luchtvaartmaatschappijen om de concurrentieslag met andere luchtvaartmaatschappijen aan te kunnen gaan.

Hoofdstuk 3 verschaft de lezer een grondig begrip van het mondiale juridische kader voor de toegang tot luchthavens. Hoewel slotcoördinatie niet rechtstreeks wordt geregeld onder het Verdrag van Chicago inzake de internationale burgerluchtvaart van 1944 [hierna: het Verdrag], wordt de toegang tot luchthavens in algemene zin wel geregeld onder het Verdrag. Artikel 15 van het Verdrag wordt doorgaans zo uitgelegd dat ook slotcoördinatie hieronder verstaan dient te worden. Hieruit volgt dat slotcoördinatie kan worden beschouwd als onderdeel van het proces met betrekking tot de toegang tot luchthavens. Staten dienen er

aldus zorg voor te dragen dat slotcoördinatie wordt uitgevoerd met inachtneming van de beginselen van non-discriminatie en nationale behandeling, zoals eveneens vastgelegd in het Verdrag. Overigens worden verkeersrechten zoals onderhandeld door Staten onder Artikel 5 en 6 van het Verdrag en slots afzonderlijk van elkaar toegewezen, dat wil zeggen onder een ander juridisch regime en in aparte stadia. Dit proefschrift concludeert dat slots verkeersrechten hebben vervangen als belangrijkste toetredingsdrempel tot luchthavens.

De Internationale Burgerluchtvaartorganisatie heeft, afgezien van de van toepassing zijnde algemene verdragsbepalingen, tot op heden geen bindende en/of uniforme regels specifiek voor slotcoördinatie opgesteld. In afwezigheid van ICAO-regels voor slotcoördinatie hebben luchtvaartmaatschappijen en slotcoördinatoren vanaf de jaren ’70 gezamenlijk richtlijnen voor de toewijzing van slots op luchthavens ontwikkeld. Deze richtlijnen staan vandaag de dag bekend als de WASG. In Staten waar de WASG toegepast worden, hetzij als richtlijnen, hetzij omdat ze zijn geïmplementeerd in nationale en/of regionale regelgeving, berust de exclusieve bevoegdheid voor de toewijzing van slots bij de onafhankelijke slotcoördinator. Deze zorgt ervoor dat de toewijzing plaatsvindt via een systeem van eerlijke, niet-discriminerende en transparante regels teneinde een optimale benutting van de luchthavencapaciteit te waarborgen.

Slots worden gealloceerd uit de slotpool, of mogelijk via alternatieve mechanismen zoals secundaire slothandel of via beschikbare herstelsancties in mededingingsrechtelijke zin, ook wel bekend als ‘slot remedies’. Slots zijn gekoppeld aan de capaciteit van een specifieke luchthaven, maar zijn over het algemeen niet gekoppeld aan een specifieke route. Met andere woorden: slots vormen een flexibel concept welke naar keuze van de betreffende luchtvaartmaatschappij kunnen worden ingezet op een breed scala aan routes, met uitzondering van vooraf gedefinieerde vrijstellingen.

Hoewel de WASG op zichzelf staand niet juridisch bindend zijn, hebben Staten wereldwijd nationale regelgeving aangenomen die veelal voortborduurt op de in de WASG vastgelegde richtlijnen. Daarmee is de luchtvaartsector wereldwijd grotendeels onderworpen aan dezelfde tijdlijnen en uitgangspunten. Echter, zoals duidelijk naar voren komt in Hoofdstuk 2 van dit proefschrift, heeft de wereldwijde luchtvaartmarkt significante ontwikkelingen doorgemaakt sinds de huidige uitgangspunten voor slotcoördinatie voor het eerst werden ontwikkeld. Omdat de beschikbaarheid van slots achterblijft bij de vraag op een toenemend aantal *super-congested airports* hebben de principes uit het Verdrag, de WASG en, waar van toepassing, regionale regels zoals die in de EU, nu meer impact dan toen ze voor het eerst het levenslicht zagen.

Hoofdstuk 4 licht toe dat sommige Staten de WASG richtlijnen hebben geïmplementeerd in het nationale of regionale rechtsstelsel, waardoor ze juridisch afdwingbaar zijn in de betrokken Staat of regio. In andere gevallen is gekozen voor een afwijkend systeem. De variatie in regulatoire benaderingen van slotschaarste door respectievelijk de Europese Unie, het Verenigd Koninkrijk, China, Mexico en Australië toont aan dat Staten verschillende manieren zien om slotschaarste aan te pakken. Eveneens zijn de uiteenlopende benaderingen illustratief voor het niet-bindende karakter van de WASG.

Een conclusie uit dit proefschrift is dat noch het mondiale juridisch kader voor slotcoördinatie zoals besproken in Hoofdstuk 3, noch de specifieke regimes voor slotcoördinatie zoals toegelicht in Hoofdstuk 4, structurele oplossingen biedt om de specifieke uitdagingen waarmee *super-congested airports* te kampen hebben te ondervangen. Desondanks tonen de voortdurende pogingen van Staten om de bestaande regels en praktijken voor slotcoördinatie

te herzien aan dat er op mondiaal niveau wel degelijk behoefte is aan een slotregime waarmee recht kan worden gedaan aan de specifieke uitdagingen op *super-congested airports*.

Hoofdstuk 5 analyseert meerdere concepten die kunnen helpen bij het opstellen van structurele oplossingen gerelateerd aan de onderzoeksvragen uit dit proefschrift, voornamelijk op het gebied van een reflectie van het sociaal-economisch potentieel van een slot in het coördinatieproces. Tot deze concepten behoort het debat omtrent de juridische (eigendoms)kwalificatie van een slot, de functionele en financiële onafhankelijkheid van de slotcoördinator, de toepassing en het gebruik van regels voor nieuwe toetreders, secundaire slothandel en de relatie tussen slotcoördinatie en het mededingingsrecht.

Hoofdstuk 6 formuleert de lessen die kunnen worden getrokken uit de Hoofdstukken 1 t/m 5 tot algemene conclusies en aanbevelingen om het spanningsveld tussen het waarborgen van de stabiliteit en continuïteit van het internationale luchtvervoer enerzijds en de reflectie van het sociaal-economisch potentieel van een slot in het coördinatieproces en het verlagen van toetredingsdrempels anderzijds. De volgende onderwerpen komen aan bod: een optimale declaratie, allocatie en gebruik van slots, een betere benutting van beschikbare capaciteit, het opnemen van luchthavenspecifieke strategische doelstellingen, maatregelen om de toegang tot luchthavens te vergemakkelijken, alsmede de rol van Staten *vis-à-vis* de rol van de slotcoördinator en andere belanghebbenden uit de luchtvaartsector in een *'flexed'* slotregime.

Een belangrijke overkoepelende conclusie uit dit proefschrift is dat de declaratie van slots en vervolgens de allocatie en het gebruik van diezelfde slots vele aspecten en overwegingen met zich meebrengt. De rol van slots is veranderd van een puur technisch-operationeel middel naar een concept dat vele facetten kent. Deze facetten, welke onder andere van operationele, commerciële en milieuaard zijn, behoeven erkenning, regulering en wellicht her-regulering in de vorm van een gewijzigd slotregime.

Echter verkleint de heterogeniteit van luchthaveninfrastructuur alsmede de uiteenlopende publieke functies de kans op het vinden van algemene uitgangspunten voor slotcoördinatie die passend zijn voor de specifieke situatie op elke luchthaven. Luchthavens zijn complexe systemen met uiteenlopende behoeften en capaciteitssituaties die van invloed kunnen zijn op de toewijzing van slots. Daarmee lijkt een *'one-size-fits-all'* benadering van slotcoördinatie, ondanks de bijbehorende voordelen in het licht van stabiliteit en continuïteit van het internationale luchtvervoer, een utopie. In plaats daarvan zou de slotcoördinator rekening moeten houden met de lokale situatie in termen van sociaal-economische behoeften en luchthavenfuncties. Immers: verschillende situaties vergen verschillende oplossingen. Een zekere mate van discretie en flexibiliteit van de coördinator, die bovendien voortvloeit uit het onafhankelijkheidsvereiste van de coördinator, is hierbij onontbeerlijk.

Een overkoepelende aanbeveling ziet op de erkenning van de verschoven rol van de slotcoördinator van puur uitvoerend naar een meer beleidsmakende rol. Op *super-congested airports* komt slotcoördinatie uiteindelijk neer op het maken van beslissingen welke luchtvaartmaatschappijen wel en niet van en naar een luchthaven kunnen vliegen. Luchtvaartmaatschappijen maken immers allemaal deel uit van dezelfde 'wedstrijd' voor het laatst beschikbare slotpaar op een luchthaven, en de slotcoördinator moet voortdurend afwegingen maken tussen operationeel vergelijkbare aanvragen. Nu de slotschaarste toeneemt en beslissingen inzake slotcoördinatie in toenemende mate aan rechterlijke toetsing worden onderworpen, spelen slotcoördinatoren een steeds belangrijkere rol bij de correcte interpretatie en toepassing van de slotregels.

Aangezien de slotsituatie op een luchthaven aan het ene uiteinde van een route gevolgen kan hebben voor de slotsituatie op een luchthaven aan het andere uiteinde van een route, zijn internationaal vastgestelde termijnen en richtlijnen van groot belang. Echter, naar de mening van de auteur behelst mondiale compatibiliteit niet zonder meer dat overal ter wereld exact dezelfde regels voor slotcoördinatie op *super-congested airports* moeten gelden. Een wereldwijd coherente benadering van slotcoördinatie, alsmede van toegang tot luchthavens in algemene zin onder het Verdrag, bestaat niet. De luchtvaartsector, en specifiek luchtvaartmaatschappijen, navigeert zich sinds de inwerkingtreding van het Verdrag een weg door het oerwoud aan diverse juridische bilaterale, plurilaterale en multilaterale verhoudingen. Hoewel er duidelijk voordelen zijn van een consistent slotregime op mondiaal niveau, moet er ruimte zijn en blijven om af te wijken van dergelijke wereldwijde uitgangspunten om recht te doen aan de individuele capaciteitssituatie van *super-congested airports* om deze zodoende te kunnen optimaliseren, mits gerechtvaardigd en adequaat geproportioneerd ten opzichte van de mate van *'flexing'* die wordt voorzien.

CURRICULUM VITAE

Lisanne van Houten was born on 2 October 1992 in Houten, The Netherlands. She holds an LL.B from Utrecht University (of which part of the coursework has been undertaken at Delft University of Technology) and an LL.M in Air and Space Law from Leiden University, *cum laude*. During her studies, Lisanne participated in various conferences and events, including the Leiden Sarin International Air Law Moot Court Competition.

After graduating from Leiden University in 2017, Lisanne has maintained close ties with the International Institute of Air and Space Law as a guest lecturer in air law and via the organization of in-house events and as a supervisor to legal interns. She started working on her dissertation as an external PhD under the supervision of promotor Prof. Dr. P.M.J. Mendes de Leon and co-promotor Prof. L. Pierallini. During her appointment, Lisanne was employed on a full-time basis as a corporate strategist with Royal Schiphol Group – the owner and operator of Amsterdam Airport Schiphol, Rotterdam The Hague Airport, Eindhoven Airport and Lelystad Airport. While with Royal Schiphol Group, Lisanne represented the airports' capacity management and slot policy-related affairs on the international stage, including to ACI World, ACI Europe and European institutions. She also undertook a 6-month secondment to ACI Europe in Brussels.

A few months prior to defending this dissertation, Lisanne left Royal Schiphol Group after four years to join the Amsterdam office of law firm Allen & Overy LLP, where she contributes to extending the firm's international aviation practice.