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Flight-Sharing in the European Union: Are Passengers Aware of the Real Meaning of this Practice?

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Abstract

The practice of flight-sharing goes back a long way. It has traditionally been allowed both in the European Union and the United States. Recently, digital platforms that connect pilots and passengers have added it to the methods of communication previously used by pilots. This is a cutting-edge topic and authorities in the USA and the EU have reacted totally differently. We analyze here the legal issues related to this new business model under the European legal framework.

1. Introduction

The practice of sharing the expenses of a private flight goes back a long way. It is driven by the high cost of private aviation and has become a standard procedure for pilots who do not have sufficient resources or who wish to limit the amount of money they spend on leisure. The possibility of sharing expenses with one or more travellers is undoubtedly desirable. Moreover, what many private pilots are pursuing by increasing their flying hours, beyond mere leisure, is access to a commercial license.

The means by which pilots divulge their flight plans and contact people interested in joining them has changed over time. Thus, word of mouth and inviting family and friends to participate have given way to advertisements on 'physical' boards, initially located in air clubs or airports. Later, all these rudimentary diffusion mechanisms turned into messages published on virtual walls, such as Facebook or other social networks (Reddit and Craig List are particularly popular in the United States), and even on websites created explicitly for this purpose.

In legal and economic terms, it is not the medium through which the ad is published that has led to a change of approach. The shift from physical to digital advertising does not substantially alter the situation. The real revolution stems from the fact that third, for-profit parties are managing the platforms (through which flight information is disseminated).

This new business model raises big questions. Two essential aspects are worthy of note: on the one hand, the fear that users may confuse these types of services with commercial operations, whether conventional or commercial aviation, conducted by airlines, or on-demand aviation, which is less known but is also subject to operational requirements and much more demanding safety standards. There is also the issue of the unfair competition that can derive from this type of practice to professional operators, given that the platforms mentioned above can tempt pilots to turn a purely recreational activity into a profitable one.

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For all these reasons, some aviation authorities as well as the commercial on-demand aviation sector seem to be on the alert.

1.1. Regulatory framework

Pilots holding a private aviation license are only authorised to fly for leisure or non-remunerated sports purposes. Regulation (EU) No 1178/2011 refers to a private pilot as one who "holds a license prohibiting the piloting of an aircraft in operations for which remuneration is received, to the exclusion of instructional or examination activities as set out in this Part". However, these pilots are allowed to invite other passengers to board their flights and share the costs, i.e. the cost of fuel, airport charges, and even the aircraft rental fee, without this being regarded as remuneration. This practice, called shared-cost flights, flight-sharing or cost-sharing flights, or in French, 'coavionnage', goes back a long way and has been implemented in various ways, making it easier for pilots to connect with interested persons. However, as we have been hinting, controversies are mounting due to recent attempts to capitalise on them by means of specific digital platforms.

The European Union has established a legal framework that covers the technical requirements and administrative procedures of shared-cost flights. According to these rules, direct costs may be shared for private flights (determined by the type of license held by the pilot), provided the following conditions are met:

a) flights on non-complex aircraft and helicopters, static balloons and powered sailplanes, operating under Part-NCO (non-commercial operation with non-complex aircraft);

b) all occupants, including pilots, shall bear the flight's direct costs; and

c) the number of carried passengers shall be no more than six [Article 6.4.bis.a) of Commission Regulation (EU) No 965/2012, of 5th October 2012].

Article 3.2 of Regulation (EU) No 1178/2011 of 3rd November laying down the technical requirements and administrative procedures with respect to mobile civil aviation staff provides that "notwithstanding the powers of the holders of licenses defined in Annex I to this Regulation, holders of pilot licenses issued as provided for in Subpart B or C of Annex I to this Regulation may carry out the flights referred to in Article 6(4a) of Regulation (EU) No 965/2012. This shall not prejudice the fulfilment of additional requirements for the carriage of passengers or the conduct of commercial operations defined in Subparts B or C of Annex I to this Regulation". For clarification, Subpart B of that Regulation refers to light aircraft pilot licenses and Subpart C to private aircraft pilot licenses, glider pilot licenses, and balloon pilot licenses. However, as provided in the Article, all holders of such licenses, irrespective of how their powers are defined in the Regulation itself, may operate cost-shared flights referred to in Article 6.4a.a of Regulation (EU) No 965/2012.

The corresponding articles of Regulations (EU) No 965/2012 and 1178/2011 result from the amendments introduced by Commission Regulation (EU) No 379/2014 of 7 April. These rules, therefore, result from a recent legislative intervention, as the Community regulator is now aware of the existence of controversial business models based on the collaborative economy.
In the United States, private pilot license holders are also prohibited from transporting passengers or goods for remuneration. However, in the same way, the regulation provides for a number of exemptions, including the possibility of sharing planes on a

pro-rata basis, specifying that in such cases the pilot must contribute, and that expenses include the amounts for fuel, oil, airport charges and chartering charges (14 Federal Code Regulation §61.113.a). We will see next, however, that the Federal Aviation Administration makes a restrictive interpretation of the rules. Thus, despite a similar legal framework, the situation in the European Union is very different from that in the United States.

1.2. From bulletin boards to the Internet

To find potential passengers with whom to share expenses, pilots traditionally advertised their planned flights on local airport bulletin boards, in their newsletters, or in those of other institutions, such as sports clubs. The means used by pilots to share their flight plans with potential passengers have evolved hand in hand with the media.
As we already know, the practice of shared flying has become more prevalent in recent times due to the multiplication of specific websites and computer applications that make it easier for pilots to connect with enthusiasts interested in participating in such shared flights. That is, pilots publish the route they plan to take on a website or a mobile device application, and those interested may enter in contact with them and participate in the flight, assuming the pro-rata percentage of its cost.

Even though this new formula contributes to widely disseminating the pilots' flight posts, considerably increasing the possibility of connecting with passengers interested in travelling, it is this third entity, intervening between the pilot and the potential passengers, that is new. And it is this platform that carries out a lucrative activity.

However, the broad diffusion referred to can be a disadvantage insofar as such a post could be considered as a proposal made to the public 'that competes' with commercial operator services. Associations that defend the interests of business aviation operators perceive the new phenomenon in this way, and they are highly critical of these platforms.

Moreover, the authorities that supervise the aeronautical sector are mainly concerned about the fact that this kind of activity could cause confusion around safety standards, the public equating private aviation with well-reputed commercial aviation.

As a consequence, flight-sharing platforms are under the authorities' spotlight. Furthermore, two companies in the United States that facilitated this practice have stumbled upon legal impediments to develop their activity. As a result, for the time being, there are no further alternatives to develop this business model in the country.

In the European Union, not only are shared flight platforms legitimate, they are backed by the European Agency that has signed a Code of Conduct (called a Charter) with the leading operators. The objective is to ensure and encourage that the operations carried out under its protection are following safe parameters and are subject to a good practice guide directed towards pilots and passengers.

1.3. The digital platform business model

Several initiatives based on the legal framework mentioned above have been launched — with varying degrees of success — on the European market in order to put pilots and persons interested in flying into contact.

What differentiates them from traditional methods, such as billboard advertising or even the use of other virtual boards over social networks (such as Facebook, Reddit, and Craigslist), is not only the number of potential users reached, but above all, the fact that a mercantile company manages the tool. These companies earn money from each trip made thanks to this means, although some of them, we must add, also offer free services.

These different platforms announce the flight plans organised by private pilots. Flights can either be round flights, also called flights or sightseeing—they do not make a stop and they land at the airport of departure—or they can be round trips, in which the flights go from point A to point B, programming only the outgoing journey, or the outgoing and return trip.

In most cases, the platform provides software that includes the following features:

a) a mechanism allowing pilots to divulge their flight plan;
b) a tool that permits users to book their flight and make their payment;
c) and the means for both to express an opinion about the platform and to publish their reviews.

The platform charges a fee for all these services. Since the connection between the passenger and the user via the platform is a paid service, this fee is subject to the payment of Value Added Tax.

In short, shared flight platforms are a variant of the digital platforms that today are turning into a mechanism of disruption in many other markets.

The platforms on the market have various designs and different legal structures. Though we have given a basic description of their functions, their terms and conditions are not all configured in the same way.

Surprisingly, one of these platforms, according to its terms and conditions, presents itself as a simple 'ad seller', offering pilots the possibility of 'buying' these ads either on an individual basis or as a package for a lump-sum payment over the platform. Although the information disclosed through the platform addresses potential passengers, the platform's only user is apparently the pilot. They do not mention the private aviation activity developed by the pilots-purchasers of advertisements. Nevertheless, they do provide the pilot and passenger a code of conduct. They also include other commitments that are part of the Charter of the European Aviation Safety Agency.

Nevertheless, most platforms follow the model initially exposed above, in which the platform puts passengers and pilots into contact, helps them to exchange information and execute payments.

Wingly, for example, is the largest operator on the European market. The platform is operating in three countries (United Kingdom, France, and Germany) and, according to the data it provides, serves more than 150,000 users, including 10,000 pilots who have saved over 500,000 euros. Its offer covers over 60,000 flights, which can currently be booked on the platform. The company was founded by an engineer, a pilot, and a computer scientist (Bertrand, Emeric, and Lars) and has undergone two capital increases since it was founded. The first was in June 2016 and the second in March 2018, for an amount of 2 million euros.

One platform goes beyond connecting pilots with passengers interested in pre-scheduled flights. Users may select the flights that suit them according to their origins, destinations, dates, type of flight, seats required, and so forth, but not only: if potential passengers do not find what they are looking for, they can issue a 'proposal' in which they describe the type of flight they are looking for which is addressed to the pilot community. Pilots may thus offer the requested flight plan if they wish to do so.

The misgivings of both the authorities and the professional associations clearly seem to be all the more justified, to the extent that the model bears a closer resemblance to the on-demand type of business carried out by operators, where they adjust their offer to customer requirements. This occurs when users are asked what they desire and their request is met.

An important aspect that should be noted, as we will see later, is that in most cases, the platform remains a third party: it assumes no responsibility regarding the way in which the pilot calculates the costs, and therefore, offers no guarantee that the pilot, when offering each aircraft seat on the platform, abides by the rule of cost recovery without making a profit. Naturally, the possibility of asking for a specific flight, together with the difficulties in making sure that the pilot effectively obtains no profit from the operation is a fertile ground for private aviation pilots to become 'Uber' drivers. In short, they could dangerously transform what until now was nothing more than a leisure activity into a commercial activity. The first step has thus been taken towards usurping the terrain of on-demand professional aviation via pilots who qualify only for the recreational performance of the activity.

1.4. Related Figures

It is worth mentioning that in practice, the model described coexists with other platforms that facilitate connections for the same purpose but do not have a lucrative finality. This is the case, for example, of 'wingshare', which presents itself as a free platform and a non-profit website aimed at facilitating contacts between private pilots and potential passengers wishing to share their journeys.

In this case, we are again exposed to the romantic idea of sharing costs with no other hidden purpose, as when the bulletin boards were launched. Though now, the dissemination provided by the current global network of computers is greater and the number of potential stakeholders has ostensibly multiplied.

On the other hand, certain platforms are of course used by some commercial operators to sell their services: what we call on-demand carriers, including air taxis. In these cases, the pilots who ensure the flying are required to hold a commercial airplane license, and the operators who own these platforms must have an operating license. Thus, not only do these platforms not arouse any criticism, but the professional associations are promoting them themselves. The question is: are consumer-passengers able to differentiate between all these modalities?

2. Flight-sharing in the European Union

2.1. The contrast between the position of the European Aviation Safety Agency and that of the FAA

In Europe, the European Aviation Safety Agency has endorsed the practice of flight-sharing via websites or mobile device platforms. This position could almost be described as the opposite of that of the American Agency.

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The European Aviation Safety Agency and three online platforms (COAVMI, Wingly, and Flyt Club) signed a Charter during the General and Sports Aviation Fair 'Aero Friedrishafen 2017', held in Germany between 5th and 7th April. The text should be regarded as a Code of Conduct, based on the considerations that follow.

The signing of this 'Charter' promoted by the Agency to reinforce the safety of general aviation operations carried out by light aviation symbolises the platforms' commitment to adhere to its principles. Additional platforms were incorporated a little later, taking advantage of this measure. The Agency's website includes a link to these platforms, which represents a clear, public endorsement by the European Authorities who are thus promoting the legality of this activity.

This situation is in stark contrast with North America's market approach. In this region, there is an open controversy around the legitimacy of these practices. For the time being, the Federal Aviation Administration has curtailed private pilots' use of these platforms, by requiring them to hold a commercial pilot license to be able to 'offer' their flight plans through them. We never cease to be amazed at Europe's open position, contrary to what has traditionally been happening in the aeronautical market and other markets.

The proposed Statute consists of 8 articles that encourage both pilots and passengers, as well as the platforms themselves to comply with specific measures, such as:

1) to inform passengers of the different safety standards required in non-commercial general aviation operations, in contrast to commercial operation standards;

2) actively promote a code of conduct for passengers and pilots;

3) provide passengers with checklists, guides, and tutorials explaining the best safety practices;

4) provide passengers with adequate and meaningful information on the type of aircraft to be flown and on the pilot's experience and qualifications;

5) to provide an online forum to promote the exchange of information on best practices for the pilot community in general aviation;

6) collect flight, aircraft and pilot profile data and share them with the European Agency and the competent national authorities;

7) meet annually with the European Agency and with the competent national authorities to review the implementation of this statute;

8) implement the elements detailed in the annexes to this statute; and

9) publish these statutes on the website platform.

The annexes announced in Article 8 provide templates of the information that should be made known to passengers and of the codes of conduct applying to passengers and pilots.

I wish to emphasise here that this is a soft-law mechanism: it thus depends entirely on the platforms' voluntary adhesion. No mechanisms have been put in place to enforce them.

The advantages of choosing this type of instrument are the following: first, the flexibility in terms of the objectives to which it can respond; second, the speed at which it can be adopted, allowing an almost immediate response to the market's rapid movements; and finally, the operators' 'willingness' to comply, since they have taken a very active part in its drafting.

However, we should remember that the measures' effectiveness depends precisely on the attitude of those called upon to comply with them. The Agency has not been granted any capacity to react in cases of non-compliance, even though the absence of coercive force should naturally not lead us to believe that they are legally irrelevant.

In any event, it is worth mentioning that the Agency traditionally uses soft law mechanisms because it is widespread for the technical rules contained in Directives or Regulations, and is normally accompanied by Guidance Material. But the usual formula used is different from the one used by the Agency.

This legislative technique is not the formula generally agreed with the operators, such as the one used here: a Decision signed by the Agency's Executive Director is normally used.

2.2. The role of European States in shared flight regulations

2.2.1. The particular case of France

In France, the Directorate General for Civil Aviation, on the basis of the powers conferred on States by Article 14 of Regulation (EC) No 216/2008 to respond immediately to a safety problem relating to a product, a person or an organisation subject to the provisions of the Regulation, issued the Decision of 22nd August 2016 *"portant consigne opérationnelle relative aux opérations de coavionnage organisées au travers d'une plateforme Internet ou tout autre moyen de publicité et prise en application de l'article 14 du règlement (CE) n°216/2008"* ("with regard to operational instructions relating to flight sharing operations organised through an Internet platform or any other means of advertising and taken in application of article 14 of Regulation (EC) n°216/2008"). Even though Regulation (EC) No 216/2008 is no longer in force, this measure remains fully effective because a similar measure is provided for in article 70 of Regulation (EU) No 1139/2018, which has replaced it. In this article, under the name of safeguard provisions, the Member States are obliged to immediately notify the Agency, the Commission and the other Member States of the measures taken and the reasons that justify them.

The decision of the Directorate-General for Civil Aviation provided that in the case of co-aircraft operations where the pilot had contacted, via Internet platforms, passengers who would share the costs, the flight would be subject to the following conditions: it cannot go beyond a distance of 40 km from the confines of the take-off airport, and it cannot exceed the duration of 30 minutes. Furthermore, article 3 of the Decision provides for the obligation of these platforms to inform passengers that the safety rules defined in article 2 of the Decision are not the same as those applicable to public transport operations.

However, the Council of State, through a Resolution adopted on 22nd June 2017, annulled this decision in order to allow the French Directorate-General for Civil Aviation to be able to add restrictions to a practice that is expressly permitted by Article 6.4bis. In accordance with Regulation (EU) No 965/2012, it must prove that an additional risk of accident is created by the fact that the organisation through which the

flight is planned transfers to pilots a greater pressure than that which the pilots would have had on flights organised by means other than Internet platforms, or with persons whom they knew previously.

The practice of 'coavionnage' was expressly admitted in France since the Resolution of 31st July 1981, and since there are no additional dangers linked to this activity by the fact that potential passengers have contacted the pilot via an electronic platform, the measure adopted by the Directorate General for Civil Aviation is considered to be unjustified. The main argument for its repeal is, therefore, the absence of an additional risk requiring the adoption of the measure. Specifically, the parties who challenged the Resolution provided studies on accident rates over the 1991-1996 and 2005-2010 periods. These figures demonstrated that the air accident ratio had not increased, despite the Internet already existing in the latter period.

The Council of State decided to annul the decision and to recognise the appellant the right to be reimbursed the penalty.

In our opinion, the national authority may have exceeded its powers when restricting flight conditions without proving the existence of additional risks. Notwithstanding, the annulment of the entire decision could have been avoided, rendering one of its provisions, which seemed to be particularly useful, applicable: the information obligation imposed on platforms. Does this obligation not coincide with the purpose of the Agency, which contemplated a similar measure in the Charter signed with the operators? The national measure, imposed by the French authority, could be considered particularly effective. Indeed, in contrast to the pseudo-obligation regulated by the agency, to contemplate a domestic punitive provision would have allowed imposing penalties on anyone who did not comply with it.

2.2.2. The regime in the United Kingdom

In the United Kingdom, the flight-sharing regime is regulated by art. 13 of the Air Navigation Order, a provision developed by General Exemption no. 1234. Nevertheless, given that this rule, although allowing this practice, is not precisely in line with the terms of Regulation (EU) No. 965/2012, the General Exemption E 4740, published on 1st August 2018, which complies with the strict terms of the Community regulation and repeals the previous one, was subsequently issued.

In addition, the Civil Aviation Authority has published "*CAP 1590, Cost sharing flights: guidance and information*", replacing the previous one contained in IN-2015/029, which specifies in more detail the requirements to be met by shared-cost flights.

On the one hand, the British Regulation determines that it is issued under the power conferred on the United Kingdom Civil Aviation Authority by art. 266 of the Air Navigation Order and that it only applies to flights not subject to Regulation (EU) No 965/2012, and with respect to flights taking place in the flight information regions of London or Scotland (arts. 2.a and 2.b).

On the other hand, the guide clarifies that European rules do not prevent the promotion and advertising of shared-cost flights and expressly refers to the possibility of advertising over online platforms.

The guide recommends that promotions should include information for passengers about the differences in safety standards required for light general aviation flights and commercial operations and that passengers should be made aware that the pilot

may cancel the flight at any time and for any reason. The guide also mentions that the pilot must contribute to the cost, even though the European standard does not specify what percentage should be borne by the pilot.

It also clarifies that aircraft registered in a third State may be subject to this Regulation if they operate in an EASA Member State, although they may also be linked, in such a case, by the rules of the State of registration.

Finally, the guide establishes that when Regulation (EU) No 965/2012 refers to individuals in the context of shared flights (individual, private), it is referring to pilots. The operator itself can hold the status of pilot, but it is clear that as such, it must be a natural person, not an organisation, nor a company, nor any other institution.

2.2.3. Regulatory situation: Spain and the other Member States

As we have already pointed out, the recognition of the practice of flight-sharing in Article 6.4 bis.a of Regulation (EU) No 965/2012 and Article 3.2 of Regulation (EC) No 1178/2011, which do not impose special restrictions on these flights, constitutes the basic and minimum framework imposed on the various Member States of the European Union.

In addition to this brief framework laid down in the Community Regulations, the European Aviation Safety Agency is committed to shared flight platforms through the Statute to which we have already referred, which, as is well known, is a non-binding instrument.

We have also commented the national regulatory basis that, as far as we know, exists so far in this domain. We will now consider whether it would be possible for the Member States to establish some additional regulation, which would not contradict the one already in force.

In our opinion, the position adopted by the Agency, which is in line with the trend known as permissionless innovation, is that it should be possible for the Member States to introduce additional regulations that do not contradict those already in force. This does not prevent, in the terms described below, the States from intervening in regulations. On the one hand, they can impose special conditions on the flights resulting from pilot-passenger connections over these platforms, provided that specific requirements are met. Furthermore, they can regulate the behaviour of the digital platforms that facilitate connections between passengers and pilots (these are entrepreneurs who manage an intermediation business).

Regarding the possibility of imposing flight restrictions, State legislators have to comply with the conditions laid down in Article 70 of Regulation (EU) No 1139/2018, since their intervention would only be justified if there was a serious risk to aviation security and European legislation did not provide the necessary instruments. In these cases, the State could tackle the problem by adopting measures proportionate to its seriousness. Whether the Member State concerned would have to notify the Commission, the Agency and the other Member States immediately, through the repository established under Article 74, of the measures taken, their duration and the reasons for their adoption, and the procedure for amending the rules in force would be launched.

The measures adopted by a State must only be taken to resolve an urgent safety problem. This only could justify State intervention in a matter of the competence of the European Union. The State's option of banning the practice is naturally ruled

out, because, as we have been signifying, the States cannot even restrict the terms endorsed by the Community regulations.

However, we do not see any drawbacks to the fact that the States, by means of domestic legislative instruments, that is to say, rules with binding effectiveness, could adopt the principles already recommended by the Statutes, incorporating through this technical means the possibility of making them enforceable in a coercive manner. Moreover, we believe that far from being worthy of reproach, the fact of rendering the measures binding —c onsidered desirable by both parties — should be applauded by all.

Many of these measures are aimed at increasing operational safety, reinforcing the standards applicable to pilot and passenger behaviours, such as the decisions to be taken if weather conditions are not appropriate for the flight or the proposed checklists, among others.

The other set of measures that States could adopt concerning digital platforms could be measures imposed on these subjects because of their status of intermediaries operating over the Internet. The Code of Conduct already provides for platforms to be committed to promoting the flow of information. Data is collected for the purpose of carrying out studies and drawing conclusions in the field of air safety. All these pieces of information explain to passengers the conditions under which the flight will take place, so that passengers can make a genuinely conscious decision to fly.

Focusing on the latter, this prior information that the platform must provide to the user-passenger is so essential, it should be upgraded to the category of mandatory rule. Only when potential passengers know the specific data can it be considered that they are freely deciding whether they wish to assume the risks involved in these types of flights. Therefore, States should take this precaution in order to complete and improve the regime enshrined by the European Agency. We will come back to this later when we analyse passengers' right to information.

In addition to these two proposed series of measures, digital platforms can be subject to other types of rules imposed on them by national or supranational authorities. Worthy of note, regulators have today their sight set on the proliferation of the collaborative economy encouraged by this type of platform. Furthermore, work groups are currently studying this reality to provide regulators with an appropriate legal regime.

3. Relationships established in the context of a shared-cost flight

3.1. The digital platform and its relationship with users

Unlike the relationship between the pilot and the passenger, between whom, as we shall see, no legal relationship can be deemed to exist, the relationship between the platform and the pilot, on the one hand, and that between the platform and the user, on the other, is undoubtedly of a legal nature in which each party assumes specific commitments.

To begin with, we can consider that the platform is making a genuine commercial offer directed both to pilots and to potential flight passengers. Before subscribing to the system by filling out a form in which they are required to provide a series of personal data, users must accept the general conditions that will govern their relationship with the platform. Each party's rights and obligations are specified under these conditions, with slight differences according to the variants present on the market.

The platforms provide information on the legal framework that applies to the practice of shared flying, as well as on the codes of conduct to be respected by both, pilots and potential passengers. This information can be provided either in the same document or in a separate document.

The platform's users are usually the future passengers, but the person who signs the contract with the platform is not always the person who shares the flight experience. Even though it is usual for the same person to occupy both positions (user and passenger), there may be instances in which these two persons do not coincide.

This dichotomy may arise when the user makes a booking for another person. Some platforms contemplate the possibility that the flight is a gift. It also occurs when someone is contracting on behalf of a minor. Minors can evidently not contract because they lack the legal capacity to do so, but their legal representatives may do so on their behalf. What some platforms do establish in their conditions is the prohibition for minors to travel without an accompanying adult. Minors aged over 13 years are allowed to fly without an accompanying adult as long as they have the authorisation of their legal representatives. Similarly, this situation may also arise because some platforms allow a user to reserve several seats, that is, to contract on behalf of another or others. In such cases, it is established that the user registered on the platform commits to transferring the other passengers' personal data to the pilot.

Most platforms present themselves as providers of intermediation services. We reached this conclusion after having analysed the general conditions of the platforms that are currently in operation.

Thus, the most widespread configuration is the one in which the service provided by the platform is an intermediary service between the pilot and the potential passenger; the service not only includes supporting contacts between them, but also auxiliary services, such as one or more means of payment and, on occasion, an insurance with additional free coverage, to which we will refer to later, and other optional insurances. These conditions emphasise the non-commercial nature of the flight that the pilot proposes to execute. They also establish the flight's booking and payment conditions (the platform services and the flight cost).

In the case of COAVMI, a platform managed by a company incorporated under the laws of France, the service fee, which is charged for each booked passenger seat, has a fixed component of 4 pounds (although the French platform expressed the cost of the service in pounds), plus 10 percent of the price of the seat, and is subject to the payment of Value Added Tax, which is 20 percent in France (art. 13 of the conditions). The price per seat, which is determined regardless of the number of passengers, must be set by the pilot. That is, once someone indicates the total price of the flight, he/she can calculate the price per passenger by dividing the initial amount by the number of seats in the aircraft. This price per passenger will remain unchanged, regardless of the number of passengers who finally book the flight (arts. 7 and 12 of the conditions).

Wingly follows a similar system. First it informs users that the cost of the flight is calculated by the pilot, who can include the fuel, the rent of the aircraft, the cost of landing and parking, and that the latter commits to carrying out this operation without ultimately reporting any gain (art. 2.5.2). They warn that further additional previously announced costs may be included, such as consumables, cleaning, and a voluntary subscription insurance offered by the website (expressly mentioning cancellation insurance, assistance, or purchase guarantee and others). That figure will be increased by the amount of the fee charged by Wingly, plus 20 percent VAT,

art. 2.5.4. Although the amount of the fee is not specified, in this case, in the general conditions, it is reported that it will be subject to the passenger's acceptance before the booking procedure begins.

Wingly channels all payments through the means offered on the platform; COAVMI offers a free alternative service, allowing direct contacts between the pilot and the passengers through the data they share with the platform (provided that they have accepted the option that allows the platform to assign their data) and enabling them to agree on the flight conditions. In this case, the payment will be made outside the platform (art. 13.6). However, it prohibits pilots from sharing their mailing addresses, telephone numbers, and even their family names in the post they publish (art. 7).

In some cases, the use of the platform gives users an advantage over other means of contact (social networks, bulletin boards, word of mouth). The payment gateway increases the transaction's security. Moreover, the pilot and the passengers may benefit from an additional insurance cover if offered.

As far as payment is concerned, generally, once the passenger is registered on the platform, he/she can make a reservation by paying the amount determined by the pilot through the means of payment offered, i.e. credit cards and PayPal. This payment will only be returned to the passenger if the flight does not take place. Once the flight has been executed, which is verified according to the procedure that each platform has designed for this purpose, the agreed amount minus the amount of the platform fee is transferred to the pilot. Therefore, even if the passenger pays when making the reservation, the money is not transferred to the pilot until it has been verified that the flight has taken place. If the flight does not take place, the money is returned. If the flight is executed, the pilot receives the guaranteed charge.

As for the additional insurance, Wingly and Vuelea have an agreement with Allianz and SGGA Suisse Insurance Group, respectively, whose additional coverage is added to the one that the pilot must have subscribed to in compliance with the regulations in force. In any event, it is made clear that this insurance only comes into play if the insured sum of the compulsory insurance cannot cover the entire liability.

Adopting a radically different approach in its legal configuration, although serving the same purposes, the Hungarian platform Flytaxi has designed a contract in which it "sells" advertisement packages to the pilot. The pilot can purchase each ad for 500 forints, while a minimum of 10 ads is offered for sale in a package. They offer promotional packages of 12 ads for 5000 forints, 24 ads for 10000 forints and 35 ads for 15000 forints. Once these packages are acquired, the pilot makes use of the tools provided by the platform, allowing to contact potential passengers and to share the expenses with them. The price of each ad or ad package includes the necessary steps for its publication. However, this platform does not refer to the pilot's pseudo-obligation of transport, nor to the condition of passenger that users may acquire. There seems to be no visible vestige or sign of the possible execution of transport, which is why the pilot makes contact with the user.

Not all platforms adopt the same stance regarding their role as enforcement officers. Some platforms attempt to disassociate themselves completely from the pilot's activity. This is particularly notable in the case of the Hungarian platform we have just mentioned, which is considered as a mere 'vendor of advertising space'. Others include a warning that they supervise the validity of the pilots' licenses (art. 6 COAVMI) and their compliance with compulsory insurance requirements on the one hand, and, on the other, that they could verify the real cost of the flight by requesting pilot receipts (art. 12 COAVMI). Generally, they all encourage the execution of the flight in

compliance with the codes of conduct of the European Aviation Safety Agency, with which they have also undertaken to transfer data for the purpose of statistics and safety studies.

Regarding the platforms' liability as intermediaries, whatever option they take, they are usually exempted from any liability arising from the pilot's incorrect or defective execution of the flight, as well as from the information published by the parties through the platforms, although they sometimes reserve the right to delete the information they consider offensive. It is also common to exclude their liability for technical problems in their condition of digital platforms that are, may hinder or impede the service.

In short, the service provided by the platforms consists of intermediating potential passengers and pilots, offering them search engines that allow them to find the options that best suit their wishes and allowing them to execute the payment through means of payment that are available on the platform, as well as offering them other complementary services, where appropriate.

3.2. The pilot and the passenger

The relationship established between the pilot and the potential passenger cannot be classified as a transport contract since the performance of the 'supposed committed service', that is, the flight according to the announced plan, is left to the discretion of one of the subjects. An annex of the Code of Conduct proposed by the European Agency expressly states that "*the pilot can refuse to board a passenger at any time, for any reason (safety or operational) and without any justification*".

This is a key flight-sharing characteristic: the absolute absence of pilots' obligations to fly. They can decide not only not to take the flight, which could be understood as entirely justified for meteorological reasons, but they could also simply refuse to board passengers for any reason they consider appropriate and without the need to explain their decision.

Along with the flight's total 'voluntariness', we must mention the lack of the profit motive. Indeed, the activity also bears the distinctive feature of the prohibition of remuneration, as opposed to the practice of vehicle and driver hire (Uber and other similar companies).

Therefore, initially, the relationship between pilot and passenger lacks any legal relevance, despite the fact that the digital platform business is possible, thanks to their contributions and experience evaluations. Moreover, the subscription to the system leads to the initiation of various legal relationships. The fact that there is no legal link between them does not prevent legal consequences in the event of transport taking place, for example if any damage is caused to passengers or their luggage.

We observe a peculiar contract between pilot and passenger when one looks at the cost-sharing agreement if the flight takes place. Thus, according to BBPlane's terms and conditions, a contract between the potential passenger and the pilot exists: they call it *"a division of flight expenses contract"*:

"Da ciò discende che i contrattivi relativi alla condivisione delle spese di volo sono conclusi exclusively tra l'Utente - Consumatore ed il Pilota - Condivisore" ("From there it follows that the contracts relating to the sharing of flight expenses are concluded exclusively between the User-Consumer and the Pilot-Sharer") reducing the platform's role to mere intermediary. Users pay to make advance bookings, so if the

flight does not take place, the platform, which has a legal relationship with the users, shall refund the money.

4. The user's right to information

Particularly noteworthy is the content of the information that flight-sharing platforms must provide to passengers before they decide to take one of these flights. We reproduce it here literally because of its importance:

"You are about to book a cost-shared flight on a light aircraft. You should be aware of the fact that safety rules for cost-shared flights are not as strict as they are for commercial air transport flights. This means that there is more risk involved in taking a cost-shared flight than buying a ticket from a commercial airline operator, where much stricter safety rules apply and where the aircraft, pilots and the operator are subject to continuous checks and strict oversight rules from the authority. As opposed to commercial airline passenger flights, the risk levels involved in General Aviation flights can be compared with risk levels found in road transportation".

This information, similar to what we call 'pre-contractual information', is what users should know before confirming their wish to board the flight.

In the light of the obligations assumed by the parties in this special intermediation carried out by the platform, it is advisable to clarify some aspects of this 'pre-contractual information'.

First, we should not lose sight of the fact that confirming the booking on the platform does not lead to any obligation on the pilot's part to perform the flight, neither a right for the passenger to obtain the service. This is the cost-sharing flight's main characteristic, as we pointed out earlier. It is true that the user establishes a legal relationship with the platform, and that generally, the payment allows the user/ potential passenger to obtain data to contact the pilot and to board the proposed flight. But we already know that the pilot may decide, at any time, not to fly, cancel the flight, or to refuse to board the passenger. In such cases, the passenger is entitled to a full refund of the payment made.

We believe that the 'pre-contractual information' provided to the passenger should indicate that the flight could be cancelled at any time or, even if it does take place, that the pilot may decide, for whatever reason, not to board the passenger. It should also warn about the different safety standards that apply to private and commercial flights.

To our mind, these two notifications are essential to make platform users aware of the differences between the service they are hiring and that of any commercial air transport offer, whether regular or charter.

And secondly, what we have been calling pre-contractual information is not established as a strictly legal obligation for the platform, since, as we know, it is merely a recommendation made by the European Aviation Safety Agency. No consequences are foreseen if a platform offers its services without warning potential passengers of the safety conditions under which pilots operate or of the differences that these aeronautical activities have with the usual commercial offers to which air transport users are accustomed.

As we have already pointed out, the European Aviation Safety Agency has opted for a

soft-law mechanism, a Code of Conduct, which is a pseudo-normative instrument. For this reason, the sanctions set out in art. 84 of the new Basic Civil Aviation Regulation (hereinafter, Regulation (EU) No 2018/1139) cannot be deployed: they are only activated in cases in which the Agency has issued a certificate or a declaration and where there is an intentional or negligent breach by the beneficiary of the same.

However, nothing prevents domestic laws from setting out the obligation of platforms to provide such information to users and configuring sanctions in the event of non-compliance. And we would recommend this. The States' intervention should guarantee that the consumer receives this information at least before proceeding to contract with the platform. Furthermore, the content of this information should extend the fragment proposed by EASA to warn the user that it is possible to cancel the flight at any time because the pilot has no obligation in this regard.

If this was to be done, that is, if, for example, the obligation for digital platforms to provide this information was to be established in Spain, the framework laid down by the European Agency would be supplemented by a binding rule that could be made effectively enforceable thanks to the catalogue of infringements and sanctions of Law 21/2003, of 7 July, on Air Safety.

5. The pilot: obligations and responsibilities

5.1. The pilot's responsibility towards passengers

As we know, pilots have no obligation to execute the transport service. But if they do agree to carry it out, they are liable for any damage that its defective execution may cause both to passengers and their luggage, as well as to third parties and their goods.

Usually, the digital platform is exonerated from any obligation and/or liability concerning the flight.

Worthy of note, the Montreal Convention, applicable not only to international transport, but also to domestic transport, enshrines a unified regime for regulating air carrier liability by express reference to Regulation (EC) No 2027/97, which is applicable only to remunerated transport, or to free transport carried out by an air transport company.

The question is whether flight-sharing is regarded as remunerated transport. Could the payment made by the platform user be considered a true remuneration? The answer seems to be that it isn't considered as such, because the amount that the passenger has to pay should only cover the costs incurred by the pilot, and, by all means, to prevent him from being able to obtain an extra remuneration. The pilot's action is unrelated to commercial activity. The Convention drafters clearly direct their regulations to those who carry out transport professionally, exploiting an economic activity. This is precisely what Regulation (EU) No 965/2012 seeks to avoid when it sets down the exception allowing private pilots to recover the cost of the leisure flights they carry out.

As stated above, the exclusion from the Conventions' application, together with the absence of a contractual link between the pilot and passengers, leads the private pilots' liability regime for shared-cost flights to be redirected to the general non-contractual liability regime applicable under domestic law.

Naturally, we are only referring to liability for damages to passengers and their lug-

gage. Liability for delays cannot be established for this type of transport. In addition, the pilot assumes no liability, neither for the cancellation nor for the refusal to board a passenger, so Regulation (EC) No 261/2004 is ruled out.

The problem with referring to a generic liability regime is that the regulation to be applied does not take the sector's distinctive features into account. The passenger will not dispose of the particular protective measures provided for in that regime (such as advance payments, for example), and insofar as the different domestic framework will be applied, the characteristic uniformity of the regulation of commercial air transport is lost. This drawback may be an additional inconvenience where shared-cost flights cross a border.

On the other hand, an added problem is the total a priori non-determination of the possible compensations. This means that the latter will end up being fixed by the judge, as the judge is granted a much broader leeway to apply generic liability systems. This may lead to the imposition of highly variable compensations, which, for insurance calculation purposes is certainly not advisable. The latter, moreover, as we shall see later, is not consistent with the applicable compulsory insurance regime.

To conclude, despite the confusing legal framework, what does appear to be clear is that the platform does not assume any liability for damage caused to passengers or their luggage resulting from the flight's defective execution. All the terms and conditions examined incorporate this exemption, which, moreover, is implicit in the type of service they provide. As you would expect, the greater the amount of information given to the user and the more precise it is, the fewer doubts would arise a posteriori.

5.2. The pilot's responsibility towards third parties

One should remember that, in the event of a loss, the pilot will have to respond not only to the passengers but also to any third party for material or personal damage potentially caused by a flight incident or accident.

If such a liability arises with an aircraft registered in Spain, and the event giving rise to the damage occurs on Spanish territory, as we mentioned concerning passengers, the regime of art. 1902 et seq. of the Civil Code should be applied, which, as we know, establishes a system of liability for negligence.

However, if an aircraft with a foreign registration is involved and the event occurs in Spain, then the Convention on Damage Caused to Third Parties on the Surface by Foreign Aircraft, signed in Rome on 7th October 1952 and ratified by Spain would apply. This convention establishes a quasi-objective liability regime that sets a maximum amount of compensation per claim, according to a scale that depends on the aircraft's weight. Unlike the Montreal Convention, in the Rome Convention, the operator's 'commercial' component is not required, so those private pilots are included in the subjective scope delimited by the Rome Convention.

5.3. Compulsory insurance and additional cover

Liability insurance issues are closely related to liability regulation but should not be confused with it.

Remarkably, the applicable insurance standard is Regulation (EC) No 785/2004, which lays down the minimum insurance requirements applicable to air carriers and

aircraft operators with respect to passengers, baggage, cargo and third parties. While the rule targets commercial operators, its scope excludes specific types of aircraft only, such as extremely small ones [model aircraft with a maximum take-off mass of less than 20 kg] and certain risks that are not considered mandatory for aircraft, including gliders with a maximum take-off mass of less than 500 kg, and ultralight aircraft, such as war and terrorism risks. In all other cases, including, therefore, aircraft operated by private pilots, compulsory insurance must be taken out to cover damage to passengers and third parties. Coverages for luggage and cargo, which are also included in the Regulation, are, however, only compulsory for commercial operations (art. 6).

Such compulsory insurance must be taken out by the air operator, bearing in mind that in this Regulation, 'air operator' means any person or entity which, while not being an air carrier, may have the use or operation of the aircraft at their practical and continuous disposal. Furthermore, the natural or legal person in whose name the aircraft is registered is considered to be the operator, unless that person can prove that the operator is another person, as will be the case, for example, when entering into a lease contract with private pilots.

In addition, it must cover at least one insured sum, which is a fixed amount for passengers (250,000 Special Drawing Rights per passenger) and a variable amount that is marked on the scale contained in art. 7, depending on the weight of the aircraft (from 750,000 Special Drawing Rights to 700,000,000 Special Drawing Rights).

It should be noted, therefore, that this compulsory insurance does not cover the pilot. Nor does it cover damage to luggage, things transported, or the aircraft itself. This matter must be considered in cases where the vehicle is rented, as the pilot will be liable to the owner for any damage he/she may suffer.

Article 4.2 states precisely that the operator must underwrite the insurance: as we already know, the operator is the private pilot, regardless of whether the operated aircraft is at his/her disposal in ownership or through a financial leasing contract, or joint a franchise services, or any other agreement of the same type.

On the other hand, the minimum insurance figures for each passenger should be calculated in accordance with commercial aviation regulations, so that the payable insured sum correlates with the amounts imposed by the Montreal Convention for the first liability layer. In the case of flights carried out by private pilots, however, as we know, such a rule is not applicable, although it would not be surprising, bearing in mind that the insurance is also in line with these figures, if the judges who were to rule on one of these cases chose to apply the same rules. In any event, as we said, the system in force is the generic system of extra-contractual liability, so it would be justified if it were expressly regulated to correct the inconsistencies mentioned above.

Apart from the insurance that each pilot would have taken out, which must at least reach the mandatory cover indicated, some platforms, as a means to promote flights through them, provide additional coverage that would only come into play if the insurance taken out by the pilot were insufficient. This additional insurance is provided automatically and free of charge to the passenger (i.e. without the need for an express subscription) and increases the sum insured to 1 million euros (per claim). For example, Wingly provides this coverage for all flights taking place throughout Europe and in Mediterranean coastal countries, excluding Algeria, Libya, Sudan, North Sinai Province in Egypt, and Lebanon.

However, it should be noted that insurance policies often incorporate some exclusions that, in many cases, are related to irregular flight performance. Thus, Wingly and COAVMI, for example, warn that the pilot's obtention of profits (surplus after covering expenses) or the transformation of the flight into a professional flight may cause the insurance company to be exonerated from the payment of compensation understanding that the flight was outside the contracted coverage.

5.4. Loss of pilot's license

Since the pilot obtains benefits, it could be detrimental to passengers, insofar as it may exclude the coverage of the civil liability insurance. It may also imply a direct sanction for pilots if they are deprived of their license.

Thus, the Code of Conduct that applies to pilots' behaviour includes a clause in which it reminds them that they will not be able to make a profit from flight-sharing. If they make a profit, the operation would be regarded as commercial, and that would imply applying the rules laid down in European legislation on the exploitation of this activity.

We have pointed out on several occasions that since the Code of Conduct drawn up by the Agency is a soft-law instrument, non-compliance with it does not carry any penalties. However, some of the measures provided for in the Code merely reiterate obligations laid down in official rules. Therefore, if pilots make a profit, sanctions could be applied directly against them.

In fact, in accordance with Regulation (EU) No 1178/2011, and according to rule FCL.070 on "Revocation, *suspension, and limitation of licences, ratings and certificates*", licences may be limited, suspended or revoked by the competent authority when the pilot does not meet the requirements of this Part, Medical Part or the applicable operational requirements, in accordance with the conditions and procedures established in Part ARA. In the event of revocation or suspension, the pilot shall immediately return the license or certificate to the appropriate authority.

The same may apply when pilots do not respect the limits specified in the licensing regulations, such as the type of aircraft or the number of passengers travelling with them.

6. Conclusions

As far as the United States is concerned, we must wait and see how the Federal Aviation Administration resolves the thorny issue of flight-sharing platforms. It has an obligation not only to give its opinion but also to state its explicit position in a guide that explains the types of flights in which private pilots can share the costs and which communication methods they may use to organise them. This should have been done within 90 days from the enactment of the Reauthorisation Act, so the deadline has been already surpassed.

We know that they have been traditionally opposed to private pilots being able to disclose their flight plans to attract fellow passengers with whom to share their expenses. It seems difficult, however, that in the world we live in, they prohibit using social networks to this end. The latter would mean putting doors to the countryside.

That the Federal Aviation Administration give free rein to platforms that are proliferating on the market, as has been done in Europe, is a different matter, one which seems far off. It would not only be a question of disseminating to a certain extent

the offer of the planned flight, but also of supporting the companies that are doing business from this diffusion which seems to be understood by the Federal Aviation Administration as increasing the risks of misuse.

Insofar as these platforms encourage private flights, these applications can undoubtedly contribute to the development of general aviation. This can be said without prejudice to the fact that in this article, we have focused on the aspects which, to our mind, deserve to be more comprehensively regulated, or which, at the very least, should be tackled by means of different legislative techniques.

Thus, observing how the market is evolving and after analysing the offers put forward by flight-sharing platforms, given that the formulas used by current operators are not all the same, we believe that it is crucial that users are sufficiently informed in order not to confuse them. Notably, it has nothing in common with contracting a transport service on demand through a digital platform, which is provided by a professional operator, who exploits a commercial activity consisting of offering customised air transport. And bearing in mind that electronic applications are also used by on-demand operators, the main concern should be to avoid confusion. Booking a flight via flight-sharing is actually totally different: the contractual relationship is with the platform, and the private pilot has no obligation to execute the flight, nor to transport the passenger (the pilot can deny boarding and can cancel the flight without any justification).

For this reason, as we have previously recommended, it would be advisable for user information obligations to include not only the safety aspects, but also a description of the type of service they are contracting.

In other words, the pre-contractual information that should be provided to the potential passenger should be extended to clarify that the pilot has no obligation to perform the service. Such an advance warning should not be merely an option for the platform. And in any event, they should include the differences between the safety standards of commercial aviation operations and those of private aviation, as envisaged by the European Aviation Safety Agency.

Nevertheless, if no such legal obligation exists, as signalled earlier, it will be difficult to prosecute the platforms which, by means of confusing information, trick potential passengers/users by making them believe that they are providing an on-demand service for air transport. In this sense, professional operators see in them a threat and unfair competition.

Needless to say, to the extent that such flight-sharing digital platforms are operating on the market, they are subject to the rules of unfair competition (Law 3/1991, of 10th January, on unfair competition), of advertising (Law 34/1988, of 11th November, General Advertising) and of consumer protection (Royal Legislative Decree 1/2007, of 16th November, approving the revised text of the General Law for the Defence of Consumers and Users and other complementary laws). So long as the industry's aeronautical regulations are not binding, the generic mechanisms provided for in these laws will be the only instruments with which to pursue those who confuse consumers through their advertising.

It has to be said, on the other hand, that although both European and American current flight-sharing regulations expressly require that the pilot contribute to the expenses to the same extent as the passengers, it is less clear whether the pilot is required to contribute to the expenses in the same proportion as the passengers. This point is made because most platforms are completely detached from the operation's

cost calculation, leaving the pilot entirely responsible.

In our opinion, this regulatory non-determination combined with the exoneration that is incorporated in most platforms, could contribute to pilots being tempted to profit from these flights. It is unclear whether allowing users to suggest a destination they cannot find constitutes a legitimate practice. It could be dangerous for two reasons. First, the practice could cause a distortion in the sector: it would represent unfair competition for those who conduct transport activities under the umbrella of commercial licenses. Second, harm could also be caused to passengers, as insurance companies tend to exonerate themselves in cases they consider exceed the contracted coverage, as in the case of leisure flights when they become a lucrative activity.

In any event, to our mind, what truly impels private pilots to make a profit by offering private flights is the regime proposed in the American Bill S.250, which considers that a personal operator is one who, holding a private flight license, can transport passengers and things in exchange for remuneration in aircraft with no more than eight seats. We will have to wait and see whether the US Congress will give the green light to this rule.

Finally, the system of liability towards third parties and towards the passengers themselves of private pilots who operate shared cost flights, should also be clarified. The compulsory insurance requirements to which they are subject should also be clearly regulated. As we have already pointed out, if the insurance regulations imposed on them are the same as those imposed on aircraft operators, it makes little sense for them to be excluded from the application of the Montreal Convention, and so the extension of their regime to this activity could be considered by means of referrals in national or supranational regulations.

UASs as an Aviation Security Threat

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Abstract

This paper examines the security implications and threats to aviation security brought about by advanced technologies and the increasing use of Unmanned Aircraft Systems (UASs), often called "drones", by providing a brief overview of a number of cases where UASs have been used to threaten aviation security and a discussion of how vulnerabilities in the system and security breaches may result in the UASs being the target of a cyber-attack or used as weapons.

Aviation Security Challenges

The use of sophisticated systems and new technological developments in the aviation industry such as inter alia, checking in and passport control systems, cargo handling, reservation systems, hazardous materials transportation management, in-flight entertainment and connectivity systems, electronic flight bags, devices used by cabin crew, air traffic management systems (ATM) and aeroplane information management, are undoubtedly positive developments. Another technological advancement that is increasingly being used both professionally and recreationally is that of drones, alias unmanned aerial systems (UASs) as they are referred to and which include a ground control station.[1] In the aviation industry drones are used for wildlife hazard management and also for aircraft maintenance to inspect lightning strike or fuselage damage which reduces costs and time.[2] During the Covid-19 pandemic drones have been used to deliver medical supplies. Such sophisticated technology provides many advantages and increases potential, however, it also increases vulnerabilities and the possible exploitation of such technologies and consequently the web of potential attacks. Recent aviation security breaches illustrate that criminals, terrorists and others with malicious intent are employing new strategies and methods of operation such as innovative devices and improvised explosive devices in breaching aviation security.

Drones

Drones were originally used for military purposes but are now widely used for recreation and sport as well as for professional, commercial or non-commercial, purposes in border control, surveillance and security, infrastructure, transport, insurance, media, telecommunication, aerial photography, agriculture, mining, humanitarian aid and disaster relief. The many advantages of using drones such as the cost, availability, piloted remotely, the relative ease to fly and to adapt the drone etc., and the advanced technologies such as wireless communication, GNSS, satellite communications, RADAR/LiDar, and the more innovative technologies such as high automation, artificial intelligence and robotics makes the use of drones even more favourable[3]. A Market Research Report states that the global commercial drone market size was valued at USD 1.20 billion in 2018, at US$ 1,590,9 million in 2019 and predicts that it

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will reach USD 6.30 billion by 2026.[4] It is predicted that the UAS market will continue its exponential growth and that the industry will be worth US$92 billion by 2030.[5]

The evident increase in sales and the use of drones has also resulted in an increase in drones being used for malicious purposes by terrorists and criminals.

Criminal use

There are many reported cases of drones flying over sensitive restricted areas such as military camps and nuclear plants, being used to damage infrastructure, for espionage and for stealing intellectual property. Criminals widely use small, commercial drones purchased online or directly from stores for their illegal activities such as filming Automated Teller Machines to obtain security pin codes, smuggling drugs, delivering drugs and mobile telephones to prison inmates and the filming of children's playgrounds by paedophiles.[6]

The illegal use of drones is widespread, but of greater concern is the use of drones by terrorists who make the most of the advantages such as the availability, adaptability and relatively low cost of using commercial drones.

Commercial Drones: Security Threats

A report by the Combating Terrorism Center at the United States Military Academy at West Point[7] highlights the increasing security threat of terrorists using UAS and to weaponize drones by using them to fly a drone to a target, mounting a weapon on it, using it to deliver an explosive or to disperse chemical, biological or nuclear material. The report also states that there are at least four terrorist groups that are conducting research into that area and that terrorists have already used commercially available drones for security attacks, including reportedly dropping two small bombs from what is believed to have been a modified, commercially available drone in 2016; a 2013 thwarted plan to use remote-control helicopters to disperse sarin and mustard gas on unspecified targets; the deployment of a number of weaponised commercial drones on which were carrying improvised explosive device believed to be disguised as a battery on at least three occasions in one month in 2016.[8]

Threats to Aviation Security

Drones unintentionally flying off path or deliberately flown within prohibited areas over and around airports have resulted in airports temporarily closing the airspace, flight delays and cancellations, all at a tremendous cost for airports as well as airlines and passengers who are affected. In February 2019 Dubai International Airport in the UAE was closed for about 30 minutes for unauthorised drone activity. In 2015 a similar incident occurred and this resulted in the airspace being closed for 55 minutes with a reported cost to the Dubai economy of $1m for each minute that passed. In 2016 there were three separate cases which resulted in the closure of the airspace around Dubai International Airport, many flight diversions and delays. Subsequently, in 2017, a new resolution was passed imposing a penalty of up to Dhs20,000 ($5,445) for the unauthorised use of drones.[9] In just one month, that of December 2019, Heathrow, Birmingham, Gatwick, Stansted and Luton airports reported cases where drones intruded into the high-security airspace around airports. At London's Heathrow airport flights were held for approximately an hour after a drone was spotted. The drone which was flying near the runway at Gatwick airport resulted in the cancellation of flights between 19-21 December and an estimated 140 000 passengers were stranded or delayed over two days. Pilots of a Southwest Airlines flight and a United Airlines reported seeing two drones flying at aproxi-

mately 3,500 feet (1,000 meters) above Teterboro, New Jersey about 15 kilometres from Newark International Airport, the eleventh busiest airport in the USA. One pilot stated that one of the drones came as close as 30 feet (9m) from his aircraft. This led to the delaying of 170 flights which were scheduled to land in Newark and the diversion of many other flights.[10]

Flying drones in restricted airspace clearly jeopardizes the safety of the passengers, the crew and the aircraft as well as people on the ground in the event of the drone falling or being brought down by measures such geofencing and other technological advancements in place to protect the secure airspace. Such illegal intrusions are criminal offences carrying a range of penalties in accordance with the seriousness of the criminal act and they vary from country to country.

There is a need for increasing the powers given to the police to deal with rogue drones, more stringent legislation regulating the competencies required to fly drones, enhanced requirements for registration of drones, stricter penalties, developing and deploying advanced and sophisticated counter measures as well as training and being better prepared to deal with breaches.

Despite the counter measures in place to strictly prohibit drone activity in restricted areas there are many cases of unauthorised and illegal drone activity and reports of drones being employed to deliberately target airports and/or aircraft.

Drone Attacks Targeting Aviation

On 28 February 2021, the Arab Coalition confirmed that it had intercepted and destroyed a ballistic missile attack launched by the terrorist Houthi militia targeting Riyadh, the capital of Saudi Arabia. This was the fourth attack within 24 hours after three missiles which were launched targeting civilian areas were intercepted and destroyed.[11] In addition, it reported that it had also destroyed six drones packed with explosives targeting cities and civilians in Saudi Arabia, one targeted Khamis Mushait, Saudi Arabia, one targeted Jizan and at least four targeting cities in the southern region.[12]

An example illustrating the use of drones by terrorists to specifically target civilian airports is the attack on Abha International Airport in the Asir province of Saudi Arabia which occurred on 10 February 2021. A flyadeal Airbus A320 aircraft was seriously damaged in the drone attack when a fire broke out and the aircraft suffered a large hole in the aircraft fuselage. No one was injured in the attack and the fire was brought under control, with no further damage.[13] Rebels in Yemen claimed responsibility for the attack and said that four bomb-laden drones were used in the attack. The Saudi military reported that they shot down two of the UAS, referred to as "suicide drones".[14]

UASs and Cyber Attacks

The highly sophisticated technology and systems used in UASs also means that there is an increase in security weaknesses and UASs are potentially vulnerable against cyber-attacks. A cyber-attack is defined in the Merriam Webster dictionary as ‘an attempt to gain illegal access to a computer or computer system for the purpose of causing damage or harm’.

Some of the more common methods employed to implement a cyber-attack are:[15]

malware, which refers to malicious software, including spyware, ransomware, virus-

es, and worms which are used to breach a network through a vulnerability, normally when a user clicks a dangerous link or email attachment which then installs that software. Another very common method used is that of phishing, namely, sending fraudulent communications, usually emails, that appear to come from a legitimate source asking for sensitive information in order to steal sensitive data like credit card and login information or to install malware on the victim's machine. A man-in-the-middle attack is also termed as an eavesdropping attack. The attackers insert themselves into a two-party communication and can then filter and steal data. Some of the most common targets are unsecured WiFi networks used to intercept communication in order to obtain sensitive and classified information. A Denial of Service (DoS) attack occurs when a system, server, or network is flooded with traffic and drains the system resources. As a result, the system withholds service for the users and is unable to fulfil legitimate requests. GPS Jamming occurs when a signal is produced which interferes with the GPS signals, causing the GPS receiver to malfunction and GPS spoofing occurs when an inaccurate signal is produced which can cause an unmanned aircraft to change its position.

The method to be used in a cyber-attack depends on who is carrying out the attacks and the intention or the purpose of the attack. In all attacks, vulnerabilities are identified and exploited and the attacks can result in varying degrees of damage, destruction, loss of equipment and loss of lives. The common denominator however, of all these different cyber threat methods is that they are all designed to take advantage of the weaknesses and security gaps in the systems.

UAS Vulnerabilities and Cyber Threats

In a report entitled 'How to Analyze the Cyber Threat from Drones: Background, Analysis Frameworks and Analysis Tools'[16], the authors discuss four sophisticated attacks on easily available commercial UAS's, two which have targeted the UAS and two cases using a drone as tools to gain proximity to a target and deliver malware.

Two of the attacks described targeted the UAS. In the first case where a drone was hijacked remotely, four researchers from the Massachusetts Institute of Technology used network-mapping tools on a DJI Phantom 3 Standard to capture outgoing packets from the drone's three main sub-systems, namely, the drone, its camera, and its controller. They then gained root access by exploiting poor device password security and by accessing the drone's file system they could modify files which then allowed them to modify the flight path or to crash the drone. Camera access allowed images or video to be deleted or changed. They could also bypass software-imposed restrictions and enter Federal Communications Commission prohibited airspace. The second case made use of GPS Spoofing. Four researchers from the University of Texas, Austin, gained control over a public-use drone by using a spoofing device, namely, transmitting a deceptive GPS signal. In this method, a spoofing device first receives legitimate signals from GPS satellites, then then spoofer produces counterfeit signals resulting in the drone receiver transmitting a phantom position and velocity signals, thus giving the spoofer control over the device to manipulate the flight path or crash the drone.

In two cases the UAS was used as a tool for an attack. In the first case a drone Botmaster was used. This method uses poorly configured wireless network security and poor trust configurations on mobile devices to join networks and access devices locally using a mobile attack drone. Three researchers from Stevens Institute of Technology proposed a method whereby one drone is used firstly to build and then to control a hidden internet-facing botnet and the drone then makes three flights. The first flight is used for surveying and collecting information on the WiFi networks

within the area of attack, the second flight then gains access to vulnerable networks and in the third flight the drone joins all the networks which have been compromised and then enlists local hosts into a botnet. In the second case a drone-injected worm was used. Four researchers from Israeli and Canadian universities using a security flaw in the communications protocol that connects light bulbs, injected a worm into a drone and took control of smart lightbulbs in an office building. After issuing a factory reset command, the drone's software updated the devices' firmware and they controlled the bulbs. By making them go on off, they transmitted an "SOS" in Morse code.

Research[17] conducted aimed at exploiting vulnerabilities in UAS resulted in controlling the flight path of the drone and its hijacking, landing or crashing the unmanned aircraft at the attacker's will, gaining access to file systems or media files and eavesdropping. The authors submit that the most common goals are hijacking and crashing or landing the UAS and that results show that spoofing is the most common method used for hijacking and the DoS attack for crashing or landing the drone.

Vulnerabilities Air Traffic Management (ATM)

The air traffic management system is a complex system 'providing air traffic management through the collaborative integration of humans, information, technology, facilities and services, supported by air and ground- and/or space-based communications, navigation and surveillance' (ICAO Doc 4444 PANS-ATM), and as such, has vulnerabilities which presents a cyber security challenge. The two ongoing initiatives to modernise and harmonise Air Traffic Control Systems, namely, the Next Generation Air Transportation System or NextGen and the Single European Sky ATM Research or SESAR, are positive and necessary developments, but at the same time, they may also be open to unforeseen vulnerabilities and subjected to cyber-attacks. All stakeholders need to work together to adopt a holistic, coordinated approach at all levels to address cyber security and ensure that the air traffic management systems are cyber-resilient.

Defences

There is much research focusing on examining UAS vulnerabilities in order to identify weaknesses and test existing defensive and preventive measures to avoid and mitigate damage caused by cyber-attacks. Studies[18] such as the following highlight firstly, the need to identify the increasing threats of an attack which illegally subverts an UAS or causes damages beyond repair, and secondly, the need to continuously develop novel defensive methods to secure the technology used and the systems employed in UASs: Sedjelmaci et al. proposed a system to protect a UAS against threats which target data integrity and network availability by using a cyber-detection mechanism to detect deteriorating attacks as the attacks are occurring. A networked defensive swarm which is a UAS swarm which can self-organize its formation when it detects an intruder and chases the malicious UAS is a defensive system to intercept and escort a malicious aircraft off the flight zone proposed by Brust et al; a defence against a network channel or physical hardware hijacking of a commercial UAS is to exploit an additional encrypted communication channel, an authentication algorithm, and perform DoS attack through Raspberry Pi to maintain UAS control in hijacking situation, is suggested by Yoon et al. Gao et al. proposed that for search and attack missions in a hostile environment, a novel algorithm be used for a team of UASs to provide an online solution.

Despite the many defences and preventative measures in place, sophisticated technological advances will always present vulnerabilities. Commercial drones are readily

available, affordable and adaptable and with basic equipment and easily obtainable skills and knowledge, UASs will remain an attractive tool to be used by criminals, terrorists and others with malicious intent.

The European Union EASA has published guidelines[19] to organise defences against improper use of drones, while industry is developing standards for Direct Remote Identification (DRI) and geo-awareness[20], as well as for drone detection systems.[21] Some of these defences would require information delivered by an UAS Traffic Management (UTM) Service Provider (SP) and for this reason, ISO is developing standards for safety, security and quality of UTM SPs.[22]

Conclusion

As illustrated, UASs are a serious threat to aviation security and have been used, are being used and will continue to be used as weapons and as cyber targets or cyber weapons. Vulnerabilities in technology and systems create the medium for security breaches enabling those with malicious intent to exploit the vulnerabilities, attack the systems and achieve their goals. It is imperative that all stakeholders including law makers, policymakers, cybersecurity experts, other government and law enforcement agencies, those in the private sector, and researchers work together to identify robust options for defending against malicious actors to develop a clear UAS cyber strategy having effective detective, protective and preventive countermeasures to the very serious security threat posed by UASs. These efforts are already well underway in the European Union, which could be an example for the rest of the world.

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[21] https://www.eurocae.net/news/posts/2021/march/ed-286-osed-for-counter-uas-in-controlled-airspace/

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Who Will Decide on Your Aviation Dispute? Jurisdiction in Aviation Dispute Resolution from a Turkish Law Perspective

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Simge Esendal **
İlke Işın Süer **

Introduction

We are in an era where international transportation is predominantly carried out by aircrafts. This results in numerous international flights taking place each day. The expansion of the aviation industry brings with it many issues; including an increased number of aviation disputes. These disputes are more likely passenger claims arising from injuries, losses or damaged deliveries of cargo or even on-board criminal offences; but at the same time a large number of aviation disputes are in connection with aircraft sale or lease agreements, as well as security interests established over the same for their financings. In any case, such aviation conflicts usually constitute complex multi-party disputes by triggering various jurisdictional questions.

Two immediate questions that come to mind in this regard are with respect to the law applicable to the merits of the case, and the competent court/tribunal having jurisdiction to resolve the dispute. Needless to say, predictability as to the answers of such questions gain special importance considering the size and complexity of large business transactions such as aircraft financing involving high values. Blue Sky One Ltd & Ors v Mahan Air & Anor[1] can be taken as an example in this regard. In this case, the High Court of England and Wales reviewed the validity of a mortgage established over an aircraft under the UK law. The court held that the applicable law with respect to the validity of a mortgage over an aircraft would be the law of the country where the aircraft was situated at the time the mortgage was established (*lex situs)* – Dutch law in this case – and it deemed the UK mortgage invalid under Dutch law, which resulted in the loss of the mortgagee having a value of more than US$40 million.

Foreseeability as to jurisdiction is equally important since the law of the country where the court is situated (*lex fori*) may sometimes be the determining law for various aspects of a dispute; such as the adjudication procedure and the characterization of the cause of action (e.g. whether the cause of action is a contract or a tort). Moreover, uncertainty as to jurisdiction may lead to forum-shopping in favor of certain courts that are the most likely to render a more favorable decision for the applicant. For example, it is noted that after the tragic accident of the Germanwings aircraft flying from Barcelona to Dusseldorf on March 24th 2015, many heirs of the deceased passengers filed a claim for damages in the USA due to high amounts of damages usually granted by the USA courts.[2] Forum-shopping may give rise to unfair results for the respondents, lack of efficiency and lack of uniformity between the judgments regarding the same dispute.[3] In order to avoid such problems and to establish a uniform practice among the states and to facilitate necessary business transactions in the aviation industry, matters of applicable law and jurisdictional issues are often regulated in international conventions.

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Indeed, Turkey is a party to many international conventions in the field of aviation, some of which, including an applicable law or jurisdiction clause, are the Convention on International Interests in Mobile Equipment,[4] the Convention for the Unification of Certain Rules for International Carriage by Air[5] and the Convention on Offences and Certain Other Acts Committed on Board Aircraft.[6] Since these conventions were duly put into effect in Turkey, they constitute a part of Turkish law. Thereby, Turkish law is aligned with the uniform global practice in the field of aviation.

This article purports to provide an insight into the jurisdiction rules under Turkish law, in particular pertaining to the resolution of international aviation disputes arising from rights *in rem* over an aircraft.

The Force of International Conventions under Turkish law

Before analyzing the rules of jurisdiction in aviation dispute resolution under Turkish law, we should first briefly explain where the international conventions stand in the hierarchy of norms under Turkish law. Article 90/5 of the Turkish Constitution provides that the international conventions duly put into effect have the force of law. No appeal to the Constitutional Court shall be made with regard to these conventions, on the grounds that they are unconstitutional. In the case of a conflict between international conventions duly put into effect concerning fundamental rights and freedoms and the domestic laws, due to differences in provisions on the same matter, the provisions of international conventions shall prevail. This provision differentiates between the regular international conventions and the international conventions concerning fundamental rights and freedoms. In the case of the latter one, such conventions prevail, if there is a conflict with the provision of the domestic law on the same matter. Whereas, when a regular international convention conflicts with domestic law, this conflict will be resolved as in the conflicts between two domestic laws, i.e. by applying whichever is regulating that specific subject matter (*lex specialis*).

One international convention duly put into effect and having the force of law in Turkey regarding certain rights *in rem* over an aircraft, is the Convention on International Interests in Mobile Equipment (the "**Convention**")[7] and the Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment (the "**Aircraft Protocol**") (the Convention and the Aircraft Protocol together will be hereinafter referred to as the "**Cape Town Convention**"). Collateral securities, such as an interest over aircraft equipment, secure the receivables and ultimately the right of property of the secured party.[8] The right of property is among the fundamental rights and freedoms as set out in Article 35 of the Turkish Constitution and Article 1 of the European Convention on Human Rights. Therefore, the Cape Town Convention shall be considered as an international convention on the fundamental rights and freedoms for the purpose of Article 90/5 of the Turkish Constitution and shall prevail over the domestic law regulating the same subject matter. In fact, Article 68/A of the Turkish Civil Aviation Law No.2920[9] stipulates that when there is a conflict between the domestic law and the Cape Town Convention, the latter shall prevail. This is also in line with Article 1/2 of the International Private and Procedural Law No.5718[10] (the "**IPPL**") of Turkey, stipulating that the provisions of international conventions to which Turkey is a party are reserved. In line with the foregoing explanations, when there is an international dispute arising from a right *in rem* over an aircraft, the Turkish court shall first review the Cape Town Convention to decide if it has jurisdiction to hear the case. The court may review the rules of jurisdiction under the IPPL only if the disputed matter does not fall within the scope of the Cape Town Convention.

Accordingly, this article will initially analyze the rules of jurisdiction under the Cape Town Convention by giving reference to one particular Turkish court precedent, to exemplify how the Cape Town Convention is applied by the Turkish courts. The article will then provide insight into the rules of jurisdiction under the IPPL since they are applicable to international disputes arising from rights *in rem* over an aircraft other than those governed under the Cape Town Convention. The scope of the analysis in this study does not include the jurisdiction in insolvency proceedings due to the distinctive and technical nature of the insolvency proceedings and as we believe this topic requires an in-depth analysis together with the applicable insolvency rules under a separate study. The last section of the article will briefly highlight the main jurisdictional issues of international arbitration under Turkish law and the arbitrability of aviation disputes arising from rights *in rem* over an aircraft.

Jurisdiction under the Cape Town Convention

The Cape Town Convention was concluded with the objective to create an international interest in certain mobile equipment, including airframes and aircraft, and to ensure that such interests are protected globally in light of the need to facilitate the financing of the acquisition and use of such mobile equipment.

The articles of the Cape Town Convention on jurisdictional issues are rather limited and therefore appear to have been drafted and inserted only in order to ensure the effectiveness of the provisions and protection of the Convention. Articles 42 – 44 of the Convention and Article XXI of the Aircraft Protocol, which contain an adaptation of the provision of Article 43 of the Convention to the particulars of the aircraft sector, include the Cape Town Convention's provisions on jurisdictional issues.

Article 42 of the Convention on the choice of forum is based on the principles of party's autonomy and predictability and provides that the parties of a given transaction under the Convention are free to make a choice of forum in favor of the courts of a party state, whether or not such chosen forum has any connection with the parties or the transaction. Article 42 further provides for a default rule that the choice of forum by the parties will be deemed to constitute exclusive jurisdiction to avoid any inconsistencies. As to form requirements, the Convention stipulates that any such agreement of the parties with respect to the choice of jurisdictions must be in writing or otherwise concluded in accordance with the formal requirement of the law of the chosen forum. As such, questions as to the material validity of the choice of forum by the parties will be resolved in accordance with the substantive law of the forum.[11]

Article 42 of the Convention is subject to the provision of Article 43 of the Convention which grants a special forum with respect to emergency interim relief orders as set out in Article 13 of the Convention. The rationale behind the provision of Article 43 of the Convention is to ensure the effectiveness of the protections stipulated in the Convention by granting concurrent jurisdiction (alongside the courts of the forum chosen by the parties, if any) to the courts of the state in which the relevant object is situated in order to address the risk that the relevant object is located outside the territory of the relevant forum (whether chosen by the parties or not).

For the purposes of Article 43 of the Convention, Article XXI of the Aircraft Protocol further grants (concurrent) jurisdiction, for orders under Article 13 of the Convention in connection with helicopters and airframes pertaining to aircraft, to the courts of such party state that is the state of registry of such helicopter or aircraft. Accordingly, Article XXI of the Aircraft Protocol extends the provision of Article 43 in consideration of the aircraft sector by providing for an additional forum for

claims regarding speedy judicial relief where the relevant object is a helicopter or an airframe pertaining to an aircraft.

The decision of the Istanbul Regional Court (the "Court")[12] dated July 12th 2017 dealing with an appeal against a judgment of the court of first instance, accepting an application for an interim relief in form of repossession of the aircraft by the lessor of the aircraft due to the default of the lessee under a financial lease agreement, illustrates the application of Article 43 of the Convention by Turkish courts. In its decision the Court upheld the decision of the lower court granting the relief sought by the lessor, rejecting the argument of the lessee that the financial lease agreement in question provided for the jurisdiction of English courts. In its reasoning the Court explained that article 43 of the Convention grants concurrent jurisdiction to the courts of the State in which the relevant aircraft is located and that the relevant interim relief has been granted in conformity with the provisions of the Convention and applicable domestic law. In approving the decision of the lower court, the Court further highlighted the supremacy of the Convention in case of any inconsistency between the provisions of the Convention and domestic law as per Article 68/A of the Turkish Civil Aviation Law No. 2920, which has been introduced following the ratification of the the Cape Town Convention and as part of Turkey's attempt to bring its domestic laws in conformity therewith.

Jurisdiction under the IPPL

As stated in the foregoing sections, if the disputed matter regarding a right *in rem* over an aircraft does not fall within the scope of the Convention and the Aircraft Protocol, then the Turkish court will review the IPPL to decide on its jurisdiction.

There is no exclusive jurisdiction rule under the IPPL applicable to the rights *in rem* over an aircraft. Therefore, the general jurisdiction rule in Article 40 shall apply. Accordingly, international jurisdiction of the Turkish courts shall be determined by the national jurisdiction rules. The national jurisdiction rules are governed by the Code of Civil Procedure No. 6100 (the "**CCP**"). There is again no exclusive jurisdiction rule under the CCP applicable to the rights *in rem* over an aircraft. Therefore, parties are free to make a choice of forum in favor of a certain Turkish court in accordance with Article 17 and Article 18 of the CCP. Article 17 only allows merchants and public legal entities to enter into agreement to make a choice of forum. Turkish courts assess whether the parties to the dispute can be classified as a merchant or a public legal entity in accordance with Turkish law. Unless otherwise agreed by the parties, the jurisdiction of this Turkish court is exclusive. Article 18 does not allow parties to make a choice of forum regarding the matters which are subject to exclusive jurisdiction of a certain court as per the CCP or which are not within the free disposal of the parties. As indicated above, there are no exclusive jurisdiction rules applicable to the rights *in rem* over an aircraft under the CCP, and under Turkish Law, parties can freely dispose their rights *in rem*. Therefore, the parties can make a choice of forum in favor of a Turkish court to resolve any dispute arising from a right *in rem* over an aircraft, provided that this choice of forum will be in writing and it will satisfy other formal requirements specified under Article 18/2 of the CCP.

If the parties did not make a choice of forum, then the general jurisdiction rule under Article 6 of the CCP shall apply. Accordingly, the court of the respondent's place of domicile on the date when the lawsuit is initiated will have jurisdiction over the case. Turkish courts determine the respondent's place of domicile as per the Turkish Civil Code No.4721. For example, according to Article 51 of the Turkish Civil Code, the place of domicile of a legal entity is the place where this entity

operates its business, unless as otherwise regulated under its charter. If the respondent has no place of domicile in Turkey, the court of the respondent's habitual residence has jurisdiction to hear the case as per Article 9 of the CCP. Article 9 of the CCP further provides that, without prejudice to the foregoing, a lawsuit regarding a right in rem can also be initiated before the court of the place where the subject matter asset is situated. If the dispute arising from a right in rem over an aircraft is
related to a transaction executed by a branch of a legal entity, the court of the place where that branch is situated shall also have jurisdiction to adjudicate such a dispute. One should note that, although Article 10 of the CCP regulates jurisdiction for the disputes arising from a contract, this rule is applicable only in terms of promissory transactions (i.e. a transaction that assigns the applicant a mere right to claim, which is only binding upon the parties to the transaction and cannot be asserted against third parties). Disputes arising from a right *in rem* (arising from a disposal transaction and that can be asserted against third parties) over an aircraft, therefore, are not subject to the jurisdiction rule under Article 10 of the CCP.

The foregoing are the rules that will be followed by a Turkish court in order to assess whether it has jurisdiction over the subject matter dispute. However, what happens if the parties had already made a choice of forum in favor of a foreign court in order to resolve the dispute arising from a right *in rem* over an aircraft? If one of the parties, in breach of this choice of forum, files a lawsuit before a Turkish court to resolve such a dispute, will the Turkish court deem this choice of forum valid and decide that it does not have jurisdiction over the case? In such case, the Turkish court will assess the validity of such a choice of forum in accordance with Article 47 of the IPPL. Article 47 stipulates that except in cases where a certain court has exclusive jurisdiction as per the IPPL, the parties can make a choice of forum in favor of a foreign court in an international dispute which arises from a promissory transaction. As indicated in the preceding paragraph, disputes arising from a right *in rem* over an aircraft are not in this nature. Therefore, no choice of forum can be made in favor of a foreign court regarding the disputes arising from a right *in rem* over an aircraft. In other words, any such choice of forum between the parties will be deemed invalid by the Turkish courts as per Article 47 of the IPPL[13], and the Turkish court, provided that it has jurisdiction pursuant to the CCP, will continue hearing the case.

The IPPL does not regulate jurisdiction in granting an injunctive relief. Therefore, the general rule in Article 40 of the IPPL shall apply and jurisdiction shall be determined in accordance with the CCP. As per Article 390 of the CCP, if the applicant requests an order for an injunctive relief before initiating a lawsuit to resolve the main dispute, the court which has jurisdiction to adjudicate the main dispute has also jurisdiction to grant an injunctive relief. Therefore, the courts which have jurisdiction to resolve a dispute arising from a right *in rem* in accordance with the jurisdiction rules explained in the preceding paragraphs, shall also have jurisdiction to grant an injunctive relief to secure such a right *in rem*, provided that no lawsuit has yet been initiated to resolve the main dispute. If an injunctive relief is requested following the initiation of a lawsuit, in this case, only the court hearing that lawsuit has jurisdiction to grant an injunctive relief. In the Turkish legal doctrine, it is disputed whether a Turkish court can grant an injunctive relief, if there is a choice of forum by the parties in favor of a foreign court or if the main dispute is adjudicated by a foreign court. The same discussion extends to the cases where there is an arbitration agreement between the parties or the main dispute is adjudicated by an arbitral tribunal. The majority of the Turkish legal doctrine is of the opinion that the injunctive relief is a matter of enforcement law, over which the Turkish courts have exclusive jurisdiction, and that even if the parties have made a choice of

forum in favor of a foreign court or have entered into an arbitration agreement, or the main dispute is adjudicated by a foreign court or an arbitral tribunal, the Turkish courts have jurisdiction to grant an injunctive relief.[14]

Jurisdiction under the International Arbitration Law of Turkey

The Turkish International Arbitration Law No. 4686[15] (the **"International Arbitration Law"**) constitutes the main piece of legislation of Turkey on the legal regime of international arbitration. The UNCITRAL Model Law has served as a guide in the drafting of the International Arbitration Law; therefore, it is adapted to the needs of modern international arbitration.

Pursuant to Article 1 on objective and scope, the International Arbitration Law applies with respect to disputes containing a foreign element and where the place of arbitration has been designated as Turkey, or where the provisions of the International Arbitration Law have been chosen by the parties or the arbitral tribunal. The circumstances which will qualify a dispute as having a 'foreign element' are set out in Article 2 of the International Arbitration Law. Accordingly, a dispute will be deemed to have such foreign element if, for instance, the domicile, habitual residence or place of business of the parties to a dispute are located in different states, or the place of arbitration as chosen by the parties is different from the domicile or habitual residence of the parties.

Under Turkish law, the agreement of parties to arbitrate a present or a future dispute constitutes the essential and indispensable condition for arbitration. It is the arbitration agreement that confers jurisdiction to the arbitral tribunal. Therefore, the existence of a valid arbitration agreement is the primary requisite for an arbitral tribunal to hear a dispute.

Article 4/2 of the International Arbitration Law requires arbitration agreements to be in writing. As per Article 4/3, the substantive validity of the arbitration agreements shall be determined pursuant to the law chosen by the parties, and in the absence of such a designation by the parties, by Turkish law. Article 4/4 further provides for the severability of the arbitration agreement by stipulating that no objection can be asserted against the arbitration agreement by arguing that the underlying contract is invalid. Therefore, even if the underlying contract between the disputed parties is invalid and unenforceable, the arbitration agreement, which confers jurisdiction to the arbitral tribunal, survives and the arbitral tribunal can continue hearing the dispute provided that there is no other legal cause invalidating the arbitration agreement. The validity of the arbitration agreement, and accordingly the existence of jurisdiction of the arbitral tribunal, is reviewed and resolved by the arbitral tribunal itself. This authority of the arbitral tribunal to decide on its own jurisdiction, also commonly known as the principle of *Kompetenz-Kompetenz*, is reflected in Article 7/H of the International Arbitration Law. Therefore, if the parties to a dispute arising from a right *in rem* over an aircraft agree to arbitrate their dispute and designate Turkey as the place of arbitration, the arbitral tribunal itself will decide whether it has jurisdiction to hear such dispute. An arbitral tribunal's decision in this regard may later be made subject to a set-aside procedure pertaining to the arbitral award before national courts on the grounds that it unlawfully decided that it has or lacks jurisdiction.

Another issue closely related to the jurisdiction of arbitral tribunal is the question of arbitrability. If the subject matter dispute is not arbitrable, the arbitral tribunal is not competent to hear the case. The issue of arbitrability is governed in Article 1/4 of the International Arbitration Law, which provides that (i) the disputes

concerning the rights *in rem* over immovables and (ii) the disputes that are not within the parties' disposal are excluded from the scope of the International Arbitration Law. The latter principle entails that the disputes regarding an issue which cannot be freely regulated by the parties are not fit to be resolved by arbitration pursuant to Turkish law.[16] Disputes arising from a right *in rem* over an aircraft are not considered within either of the foregoing exceptions. Indeed, it is noted in Turkish legal doctrine that such disputes can be subject to arbitration pursuant to the International Arbitration Law.[17]

Conclusion

Predictability as to the jurisdiction in aviation dispute resolution is crucial for establishing uniform practice and facilitating business transactions in the aviation industry. Jurisdiction in aviation disputes arising from rights *in rem* over an aircraft is regulated by both international and domestic rules of jurisdiction under Turkish law.

The Cape Town Convention, concerning certain rights *in rem*, holds the force of law in Turkey and prevails over domestic law with regards to the matters specifically governed by the Cape Town Convention. Accordingly, the Turkish courts adjudicating a dispute arising from a right *in rem* over an aircraft firstly review whether the dispute falls within the scope of the Cape Town Convention. If it does, they apply the jurisdiction rules therein. If not, they resort to the national rules of jurisdiction to decide whether they are competent to hear the case. Under Turkish law, the disputes arising from a right *in rem* over an aircraft are further arbitrable and the arbitral tribunal is authorized to decide on its own jurisdiction.

In this manner, the matters of aviation law, and more particularly, the jurisdiction in international aviation disputes arising from a right in rem over an aircraft, are governed clearly under Turkish law leaving no room for confusion or misinterpretation. As Turkey is a party to the main international conventions in the field of aviation, and has comprehensively aligned its domestic law with such conventions, it embraces uniform global practices with respect to the field of aviation.

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[1] [2010] EWHC 631 (Comm)

[2] Ilyas Golcuklu, 'Montreal Sozlesmesi Kapsaminda Besinci Yetki Kurali ve Uygulamasi' (2020) 26(1) Marmara Universitesi Hukuk Fakultesi Hukuk Arastirmalari Dergisi 317. The relation of the USA jurisdiction to the dispute is not specified by the author.

[3] Markus Petsche, 'What's Wrong with Forum Shopping? An Attempt to Identify and Assess the Real Issues of a Controversial Practice' (2011) 45(4) The International Lawyer 1005-1028.

[4] In Turkish, Taşınır Donanım Üzerindeki Uluslararası Teminatlar Hakkında Sözleşme. Ratified by Turkey following the publication of Decree No.2011/1926 in the Official Gazette dated 4 July 2011 and numbered 27984. Entered into force in Turkey on 1 December 2011 pursuant to the Decree No.2011/2476 published in the Official Gazette dated 21 December 2011 and numbered 28149.

[5] In Turkish, Hava Yoluyla Uluslararası Taşımacılığa İlişkin Belirli Kuralların Birleştirilmesine Dair Sözleşme. Ratified by Turkey following the publication of Decree No.2010/895 in the Official Gazette dated 1 October 2010 and numbered 27716. Entered into force in Turkey on 26 March 2011 pursuant to the Decree No.2011/1898 published in the Official Gazette dated 2 July 2011 and numbered 27982.

[6] In Turkish, Uçaklarda İşlenen Suçlar ve Diğer Bazı Eylemlere İlişkin Sözleşme. Ratified by Turkey following the publication of Decree No.7/10238 in the Official Gazette dated 8 December 1975 and numbered 15436 and entered into force in Turkey on 16 March 1976.

[7] See (n 4).

[8] See in the same vein Baris Mesci, 'Milletlerarasi Ozel Hukukta Hava Araclarinin Teminata Konu Olmasi' (PhD thesis, T.C. Istanbul Kultur Universitesi 2020) 128.

[9] Published in the Official Gazette dated 19 October 1983 and numbered 18196.

[10] Published in the Official Gazette dated 12 December 2007 and numbered 26728.

[11] Karl F. Kreuzer, 'Jurisdiction and choice of law under the Cape Town Convention and the Protocols Thereto' (2013) 2(1) Cape Town Convention Journal 152.

[12] The decision of the 16th Civil Chamber of the Istanbul Regional Court with case number E. 2017/3595, K. 2017/2437.

[13] Aysel Celikel and B. Bahadir Erdem, Milletlerarasi Ozel Hukuk (15th edn, Beta Yayincilik 2017) 618.
[14] Mesci (n 8) 205.

[15] Published in the Official Gazette dated 5 July 2001 and numbered 24453.

[16] Cemal Şanlı, Emre Esen and İnci Ataman-Figanmeşe, Milletlerarasi Ozel Hukuk (6th edn, Vedat Kitapcilik 2018) 645.

[17] Mesci (n 8) 204.

State Aid to Airlines in Times of the Covid - 19 Crisis: Could the Measures Taken by Governments in Order to Save the Industry Restrict the Competition?

Miraslava Kazlouskaya *

Introduction

The coronavirus pandemic has already been called *"an unprecedented crisis for the world's airlines"*.[1] The latest estimates show that for 2020, the loss of gross passenger operating revenues of airlines has been from $389 to 391 billion, and calculations for the first half of 2021 (January-June) show a loss of a total amount from $135 to 183 billion.[2]

Thus, airlines have to fight for survival. In ordinary times, airlines could receive funding from private investors or banks, depending on the applicant's creditworthiness. Now, however, investors are extremely prudent because of the unsettled economic situation. Therefore, financial help from governments may be the only option for the affected airline.[3] However, the amount and allocation of funds may raise the problem of unfair competition, altering the international air transport market.[4] Thus, in this paper the author will describe the measures taken by governments to help airlines survive the current crisis and analyze the effect on competition of such methods. The first chapter covers the regulation of state aid in the European Union (hereinafter – EU), looking at both the general measures that existed before the coronavirus and the regulations adopted to support airlines in response to the damage caused by the pandemic. The second chapter focuses on government assistance to airlines in Russia, the United States, and Australia. These countries are selected for comparison due to their federal system. The paper ends with the author's conclusions on the questions raised.

STATE AID IN THE EU

EU state aid law in general

The pandemic situation, which has caused significant economic damages to airlines across the EU, has prompted affected airlines to find out whether they can receive financial assistance from the Member States in accordance with the EU law,[5] although Article 107 (1) of the Treaty on the Functioning of the European Union (hereinafter – TFEU) contains a general prohibition of state aid. Under the meaning of this provision, financial support will compromise state aid if it is granted by the government or by a body directly or indirectly controlled by a Member State. As long as the funds come from state resources and are not provided on commercial terms, the measure will be state aid.[6] Furthermore, financial assistance will be qualified as state aid if it provides an advantage, affects trade between the Member States, is selective, and the market economy operator principle is not met. In this manner, the restriction described above is intended to ensure "a level playing field" in the EU.[7]
In light of the COVID-19, it should be borne in mind that not all the support offered by States will necessarily be qualified as state aid.[8] Thus, if the state acts in the exercise of its public authority, such activities will not constitute state aid.

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The situation is different when the state acts as an economic entity. In this case, the 'market economy operator' test will be applicable.[9] Certain activities may also be of services of general economic interest, which is the basis for compensation to the provider of such services.[10] This will not give an advantage as prohibited by Article 107 (1) TFEU if the four Altmark criteria are met.[11] Additional state aid rules are set out in 2014 Guidelines on State Aid to Airports and Airlines.[12] According to them, airlines can also be provided with start-up aid in launching new routes. This is especially relevant in the current pandemic situation when an airline cancels certain routes on which it was the only operator.[13] Certain routes may be subject to provide public service obligations (hereinafter – PSOs) to meet transport needs that cannot be fulfilled in any other way.[14] The compensation paid to airlines operating such routes should not be greater than the amount required to cover the costs of PSOs, otherwise its compliance with state aid law will be questionable.[15] Member States can also rely on the Rescue and Restructuring Guidelines[16] to meet their urgent liquidity needs.[17]

There are certain exceptions from the prohibition of state aid, which are described in Article 107 (2) and Article 107 (3) TFEU. During COVID times, special attention should be paid to the exception contained in Article 107 (2) (b) TFEU. This exception applies to assistance in compensation for damage caused by "exceptional occurrences". Since the European Commission (hereinafter – EC) is not capable to set specific rules under this category, this rule is especially attractive nowadays.[18]
Thus, the anti-crisis policy of airline support by the EU Member States should be conducted on the basis of reasonableness, transparency and fairness, taking into account concrete reports and losses of airlines for preventing erosion of the equal playing field in the aviation market due to unfair or disparate financial support. Considering this, the author will further examine the special rules developed in the EU in relation to the current crisis.

EU COVID measures

Latest EUROCONTROL figures show that the loss of flights in comparison to 2019 since 1st March is -64% in Turkey, -67% in Poland, -72% in Spain, -64% in France, -70% in Italy, -71% in the UK, -65% in Germany, just to name few.[19]

During this COVID crisis, the EC has shown a desire to help the Member States develop assistance schemes in order to support them overcoming the difficulties caused by the coronavirus outbreak.[20] In order to keep up with this economic emergency, a new Temporary Framework has been developed in order to clarify justification of measures under Article 107(2)(b) TFEU and Article 107(3)(b) TFEU.[21]

Regarding the pandemic, the EC, first of all, has stated that the COVID-19 should be qualified as an 'exceptional occurrence' under Article 107 (2) (b) TFEU,[22] which allows the Member States, subject to the EC approval, to compensate airlines for damages. According to the EC, "*the exceptional nature of the COVID-19 outbreak means that such damages could not have been foreseen, are of a significant scale and hence put undertakings in conditions that sharply differ from the market conditions in which they normally operate*".[23] On similar grounds, the EC approved state aid to the aviation sector after the 9/11 terrorist attacks.[24]

The 'one time, last time' principle of the Rescue and Restructuring Guidelines[25] does not affect measures under Article 107 (2) (b) TFEU. Within the meaning of these Guidelines, this type of assistance is not *"rescue aid, restructuring aid or temporary restructuring support"*.[26] Thus, even if the airline has already received assistance in accordance with the Rescue and Restructuring guidelines, the Member States can

still compensate it for the damage caused by the pandemic, on the basis of Article 107 (2) (b) TFEU.[27] In general, the 'one time, last time' principle is designed to 'filter' economically inefficient companies without keeping them in the market. Although the principle is now somewhat abolished for affected companies, after the coronavirus receding, it will be necessary to assess the viability of the airlines that received additional support.[28]

Next, taking into account the serious economic shocks in the EU, the Temporary Framework provides several types of assistance available under Article 107(3)(b) TFEU, which says that aid is compatible with the internal market if it remedies *"a serious disturbance in the economy of a Member State".*[29] Thus, the Temporary Framework gives instructions on the application of this Article. As such, it allows aviation industry to use next assistance: 1) direct grants, repayable advances or tax advantages, not exceeding EUR 800 000 per undertaking; 2) guarantees on loans for ensuring that the suffering undertaking has access to liquidity; 3) subsidized interest rates for loans, which are limited to maximum 6 years; 4) guarantees and loans channeled through credit/financial institutions; 5) short-term export credit insurance, in case when marketable risks *"cannot be covered by export-credit insurance with the support of Member States".*[30] All of the above-mentioned types of help are available until 31st December 2020.[31] In order to provide such aid measures, states must comply with the notification obligation.[32] To do so, the Temporary Framework includes a template that Member States can follow when making a notification.[33]

The EU has not left the aviation industry to crumble under the weight of pandemic losses, and has adopted quite flexible measures that can help airlines. With the new Temporary Framework and the classification of coronavirus as an exceptional occurrence, airlines have now additional opportunities for financial assistance in various forms. These measures will undoubtedly help them stay afloat. Next, the author will examine on which grounds and in which form European airlines have already received assistance from their governments. We will also draw attention to an interesting and controversial situation of Ryanair.

State aid to EU airlines

The first measure of state aid to the airline in connection with damages from coronavirus pandemic was approved by the EC on March 31st, 2020. It concerned the French scheme deferring payment by airlines of certain taxes, based on the Article 107(2)(b) TFEU. On the similar 'exceptional circumstances' grounds, SAS obtained €137 million from Danish public guarantee and €137 million from Swedish public guarantee, €550 million German state-guaranteed loan was provided to Condor, €1 million Romanian public support was given to Timișoara Airport, Italy supported Alitalia with €199.45 million, Polish airports were granted with aid equal to €32 million.

Even more airlines received aid on the grounds provided in the Temporary Framework, as discussed above. From April 2020 to November 2020, next measures were taken by the Member States: Sweden provided airlines affected by coronavirus outbreak with €455 million, France contributed €7 billion in urgent liquidity support to Air France, Finland guaranteed on €600 million loan to Finnair, Germany issued €6 billion measure to recapitalize Lufthansa, KLM received €3.4 billion Dutch liquidity support, Denmark and Sweden provided €1 billion to recapitalize SAS, Romania guaranteed Blue Air €62 million loan and provided the airline with urgent liquidity support, Romanian TAROM also received €19.3 million loan, and Slovenian airlines received €5 million of state aid.[34]

Interesting to note that government support to airlines in some cases comes with

certain conditions. For instance, a governmental bailout for Austrian Airlines was granted on the condition of cutting its carbon footprint.[35] Similarly, conditions of Air France's loan also had climate targets – one of the conditions is that it should become "*the most environmentally friendly airline on the planet*" by cancelling a number of domestic routes.[36]

Indeed, it seems reasonable that state aid should be granted under strict sustainability conditions. Of course, at the moment, the urgency of state aid is to support sectors of the economy affected by the coronavirus outbreak. At the same time, the support can also be based on long-term conditions, such as compliance with the sustainable development and climate goals. This could be implemented if, when providing airlines with financing, they would in turn agree to reduce the percentage of carbon dioxide emissions. Using alternative fuels and reducing domestic flights where other modes are available, such as trains, would be a good solution for this purpose.[37] Moreover, it would fall under the provision of state aid under Article 107 (3) (b): *"aid to promote the execution of an important project of common European interest".*[38] Undoubtedly, environmental protection is one of these projects.[39]

Speaking of support to airlines in the EU, we cannot ignore the case of Ryanair, challenging a significant number of decisions of the EC on state aid. In this regard, it should be mentioned that when deciding to provide assistance to compensate for insurance premiums after the 9/11 terrorist attacks, the EC made sure that state intervention was absolutely equal and uniform in relation to all airlines in a particular Member State, giving priority to those airlines that can least affect competition in the market.[40] In *Olympic Airways* case the court held that the approved compensation shall be limited to the amount of losses acquired from 11 to 14 September, with the condition of causality between the losses and the 9/11 attacks and that these losses are precisely evaluated.[41] This time, the EC did not pay the same attention to this issue, which was the reason for Ryanair's claims.[42]

Ryanair disagrees with the EC for approving state aid for initially unprofitable airlines, while others who entered the crisis with a better situation, are left without privileges. Representatives of Ryanair even said about the approval of TAP assistance that the resulting money will make the airline 'lazy'.[43] Thus, Ryanair claims the annulment of the EC decisions regarding state aid to such companies as SAS, Finnair, TAP, Air France, KLM, Lufthansa, Alitalia, LOT, Condor. Arguments of Ryanair are as follows: violation of article 107(2)(b) TFEU, under which compensation should be granted for damages caused by exceptional incidents and not only for damages suffered by a single victim of such incidents; an error in the approval of such irrational sums of money for damage from the coronavirus; violation of general principles of European law relating to the prohibition of discrimination by allowing States to provide assistance only to their flag airlines ignoring the role of pan-European airlines on the EU market; the inability of the EC to initiate a formal investigation procedure; breach of the duty of the EC to indicate the reasons for decisions.[44]

However, in recent decision on Condor, it was concluded that measures mentioned above are compatible with EU state aid rules, as they help ensuring the continuation of flights in the interests of passengers. Moreover, given that the loan is granted for a limited period, distortion of competition in the market will be minimized.[45]
Above-mentioned practices demonstrate that EU Member States have provided significant support to airlines. It is worth noting smart decisions regarding arrangements for obtaining financial assistance to airlines, subject to future improvements in environmental efficiency.

In the author's opinion, Ryanair's claims can be supported based on the laws of the

free competitive market. However, we should take into account that it is precisely the broader support of various airlines that has helped to avoid the bankruptcy of an excessive number of undertakings. In the opposite situation, this would lead to an increased tension in the labor market and to an even greater European crisis as a result.

Concluding remarks

Use of the exception in accordance with Article 107 TFEU gives airlines a chance for survival. However, the COVID-19 crisis can be used to redefine the aviation sector as a push for structural changes aimed at building a more sustainable future. That is why the EU, when approving state aid measures, can state conditions for airlines to reduce CO2 emissions.
The EU Member States do not skimp on supporting national airlines. Nevertheless, the future effect of the new European regulation is to be seen. The coronavirus pandemic will not last forever. After the industry gets out of this crisis, we may see that there has been a rollback from the privatization and liberalization of aviation in favor of greater protectionism. In addition, without taking into account in which financial position entered the crisis, and careful consideration of each decision by the EC, the competitive landscape of the European aviation industry may change, because it is the large national carriers that are now receiving the most support, destroying the business strategies of low-cost airlines such as Ryanair.

STATE AID TO AIRLINES IN OTHER COUNTRIES

Russian Federation

In Russia, aviation sector has been recognized as one of the most affected by the spread of COVID-19.[46] In this regard, the Russian government in April 2020 approved the list of strategic undertakings of the transport complex, which included 30 airlines.[47] For such companies, in order to provide them with state aid, the procedure for passing 'a financial stability assessment (stress test)' has been established.[48] The stress test is based on the assessment of number of employees, total income and profit at the end of 2019, volume of liquid assets.[49] After the test, backbone companies can receive state aid in the form of subsidies, tax deferrals, advance payments on taxes, state guarantees from the Russian Federation on for purposes aimed at solving federal urgent tasks to ensure the sustainability of economic development. Combination of such measures is also available.[50]

For example, S7 and Aeroflot are among the strategic companies that can take advantage of the described privileges. S7 attracted a bank loan of 3 billion rubles (€33 million), and Aeroflot signed governmental loan agreements totaling 6.7 billion rubles (€73 million). Overall, the Russian Federation provided subsidies to airlines for 23.4 billion rubles (€256 million).[51]

Thus, the Russian Federation decided not to conduct broad governmental support under a simplified scenario, but focused on the worthiest candidates which need to pass a certain assessment process. However, we will find out the result of this policy after the end of the COVID crisis. In our view, the most likely outcome is the withdrawal from the market of those airlines that are not included in the list of strategic undertakings due to the lack of the necessary funds to survive the pandemic. At the same time, the positions of selected airlines will only be strengthened, which in turn will lead to a decrease in the level of competition in the Russian aviation.

AVIATION

United States

Under the U.S. Constitution, Congress has the exclusive right to authorize funding from tax revenue and may do so for the purposes listed in the Constitution, including funding for the general welfare of the United States.[52] With regard to the pandemic, Congress passed several key legal acts, including the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

Under the CARES Act, American airlines received $25 billion in the form of grants and loan guarantees. In exchange for assistance, recipients must make certain commitments in return, such as the maintenance of scheduled air transportation service and not laying off employees or reducing their payments.[53] In addition, the CARES Act requires recipients of state loans to issue *"warrants, options, preferred stock, debt securities, notes, or other financial instruments <…> that provide appropriate compensation to the federal government for the provision of the financial assistance".*[54]

However, major carriers have tried not to use the described option. Delta Air Lines has rejected the federal loan under the CARES Act and has instead took on the debt secured by the SkyMiles frequent flier program.[55] The same did United, using the MileagePlus program.[56] This step allows airlines to avoid transferring some of the control to the state.

The CARES Act, which has expired in September, was lobbied for a six-month extension to protect tens of thousands of employees at risk.[57] For instance, American Airlines has announced in October the layoff of 19.000 workers, but they said they would change course if lawmakers reached an agreement on a new government program.[58] However, the prospects for negotiations on this issue at the moment of writing this paper are still unclear.

Thus, the US government has adopted a special regulation, thanks to which airlines have a chance to receive good amounts of state financial assistance. However, despite this well-intended activity, some airlines were wary of the clause on securities, which implied giving some of the control to the state. Thus, American method raises an important question about what the role of the government will be in the future strategies of private airlines that have received state aid.[59] In addition, the US lawmakers failed to anticipate the full scale and duration of the pandemic. The non-extension of the CARES Act leads to uncertainty of airlines about their own future, and as a result, we observe increased tension in the industry and the aggravation of the crisis due to the huge number of layoffs. The terms of the CARES Act seem quite logical and take into account the will of taxpayers, but at the same time they can contribute to a process that will be opposite to the deregulation of American aviation industry.

Australia

The Australian government recognizes the critical role of aviation in the Australian economy and is committed to support this sector. Therefore, it quickly took measures to support the aviation sector during the COVID-19 crisis, which also includes measures to support aviation companies. State assistance in Australia is aimed at those companies that really need it, thereby avoiding subsidizing commercially viable actors. As noted by the government, the main goal is to maintain critical capacity so that after the end of the pandemic, competition in the aviation market can resume.[60]

Thus, initiatives such as Domestic Aviation Network Support (DANS) and Regional

Airline Network Support (RANS) were developed. Together, the two programs totaled more than $150 million. Through the DANS program, the Government provides support to the aviation industry and helps maintain connectivity within Australia providing shortfall subsidies to four domestic commercial airlines to operate flights along the top 50 domestic routes. The RANS program targets regional airlines serving remote areas across the continent. Regional Airlines Funding Assistance (RAFA) also works in conjunction with these projects, providing $100 million in assistance to airlines *in remo*te areas, thereby maintaining air connectivity to more than 110 regional and remote communities. On top of that, Australian Airline Financial Relief Package (AAFRP) package provides Australian airlines with a $715 million for exemptions from a range of aviation fees.[61] It was recently announced that DANS packages are extended until January 31, 2021, and RANS until March 28, 2021.[62]
Thus, Australia has a well-established policy keeping a balance between supporting airlines and preserving healthy competition in the market. Thanks to this support, the government is achieving stability of internal transport links, maintenance of employment and rapid economic recovery in the future.

Concluding remarks

While counting on sufficient support, airlines are not ready to sacrifice their independence, as the US example shows. In addition, not all lawmakers were able to predict the duration of the pandemic. Australia is one step ahead of others in this regard, having already announced the extension of funding programs for 2021. The Australian approach stands out from the rest: it does not require any special obligations from the airlines, which will allow them to quickly recover from the crisis. Australia, among other things, takes into account that assistance should be provided to companies that really need it. Russia, on the contrary, conducts a stress test, providing support to those airlines that have a greater viability. Russian approach can be understood: to preserve the backbone airlines that bring the state more revenue, small businesses will be sacrificed to save governmental assets. Of course, with such a policy, it is impossible to talk about healthy competition in the market, because of the artificial reduction in the number of airlines.

CONCLUSION

After analyzing the different approaches of several countries related to state aid to airlines in the times of COVID-19, we see different reactions to a common problem. Based on this, we can give a possible forecast on which of the described regulatory tactics is better for maintaining competition in aviation industry. As such, in the EU, thanks to the comprehensive legislation and well-coordinated mechanism of the EC, even small airlines will survive, but in other countries, as Russia, only large strategic ones will remain, which will significantly reduce competition there. Australia's methods can also save the industry, which will have a positive impact on a level playing field. The US did not forecast its support for a sufficient period of time and put forward condition of warrants to the government, which was not accepted by some airlines. If the support program is not restored, it will negatively affect the industry, overriding past achievements, as airlines will have to either leave the market or change their business models significantly. Speaking about conditions in exchange for support, the author of this paper appeals to the idea of environmental requirements for airlines, so this will positively impact the industry via new ways of airlines development in the post-COVID crisis period.

The EU may also face the problem that competition will be distorted: small national airlines that were about to leave the market receive support from its states due to the coronavirus. Perhaps the EC will take money back from the airlines once the

pandemic will have receded, in order to recreate fair competition in such a way that these airlines will not have an advantage, thus filtering out inefficient undertakings. Nevertheless, the coronavirus highlighted the trend towards the return of sovereignty in aviation.

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[11]*Altmark* judgment: (a) the scope of the public service is clearly defined and necessary; (b) compensation parameters are clearly defined; (c) controls are in place to avoid overcompensation; and (d) compensation paid corresponds to the least cost to the community

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[27] C/2020/1863, para 15

[28] Rivas, "State aid"

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AVIATION

The Urgency to Amend the Indonesian Aviation Law on Passengers Protection: Lessons Learned from Lion Air JT-610 and Sriwijaya Air SJ-182 Accidents

Ridha Aditya Nugraha *

Abstract

Two fatal accidents involving Lion Air JT-610 and Sriwijaya Air SJ-182 within the last three years has shown an existing inequality between the passenger and the industry. The passengers are less protected when flying the domestic routes. The main issues are the inadequate amount of compensation which has not been fixed since a decade ago and the absence of advance payment clause. This situation is at odds with international flights, in which more routes to and from Indonesia are covered by the Montreal Convention of 1999. This international convention ensures both advance payment and a higher amount of compensation. Some ASEAN Member States rely on the Montreal Convention of 1999 for domestic carriage to ensure a high standard of passenger protection. In the end, this article provides legal and policy recommendations to keep the balance between airlines' interest, government duty in protecting its nationals, and efforts to further promote passenger protection in Indonesia.

The State of Play

Around three years ago, the tragic Lion Air JT-610 flight enroute from Jakarta to Tanjung Pandan crashed in the Java Sea. The fatal accident on 29 October 2018 took the lives of all its 189 passengers and crew onboard. On 9 January 2021, the unfortunate Sriwijaya Air SJ-182 flight enroute from Jakarta to Pontianak crashed in the Java Sea within five minutes after departing from Soekarno-Hatta International Airport. In total, 62 lives perished. These accidents, which sadly involved Indonesian airlines, stressed the importance of a better passenger protection regulation.

At the moment, two national laws, namely the Indonesian Minister of Transportation Regulation No. 77/2011[1] (the "**Minister Regulation No. 77**") and the Indonesian Minister of Transportation Regulation No. 89/2015[2] (the "**Minister Regulation No. 89**"), regulate airline liability in Indonesia. These are the implementing regulations of the Indonesian Aviation Law of 2009.[3] The Minister Regulation No. 77 deals with liability for loss of life, bodily injury, and third-party damage; while the latter, namely the Minister Regulation No. 89, regulates explicitly liability for delays.[4] Both regulations have yet to be amended until now.

The Minister Regulation No. 77 sets up a new standard in protecting air passengers' rights since 2011. The regulation evaluates a passenger's life at IDR 1.25 billion, which is equivalent to approximately 61,000 SDR or USD 88,000, for death that is a

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The views expressed are purely those of the author.

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result of an accident or incident on-board an aircraft.[5] That amount is around 47% of the Montreal Convention of 1999[6] maximum value for a passenger life, which limit stands at 128,821 SDR.[7] This amount is the first tier which limits are breakable if the accident was proven due to the negligence or fault of the airline.[8] While a lower amount - IDR 500 million, is equivalent to approximately 24,200 SDR or USD 35,000 - is provided for the death of a passenger boarding or disembarking an aircraft at an airport.[9]

	Montreal Convention of 1999 (in SDR)	**Warsaw Convention of 1929 (in SDR)**	**Minister of Transportation Regulation No. 77 of 2011 (in SDR)**
Passenger's life	128,821	12,300 *approximately	61,000 *on board of aircraft
			24,200 *boarding or disembarking

Table 1 - Comparison of Airline Liability Applicable in Indonesia

The airline liability concept established by the Warsaw[10] - Montreal Convention has already been adopted within domestic law through the Minister Regulation No. 77, albeit not all of them.[11] This article shall analyse the importance to include the two important pro-passenger rights provisions which currently are not included in the Indonesian regime, namely the advance payment and automatic increase of liability limits calculations. With around 79 millions passengers in domestic flights before Covid-19 pandemic,[12] definitely this is a real issue to address.

The Main Loophole: Absence of Advance Payment Provision

The Minister Regulation No. 77 does not mention in details how to compensate the passengers or its heirs. Based on the previous and on-going cases, namely the AirAsia QZ-8501, Lion Air JT-610, and Sriwijaya SJ-182 accidents, the Minister of Transportation stands firm with one-time compensation payment.

Unfortunately, the compensation did not always come promptly. In case there is any indication of aircraft manufacturer defect, which is one of the keys to prove the non-existence of airline negligence,[13] the compensation payment would take years to be paid, as the case of Lion Air JT-610.[14] Such situation happened due to the release and discharge agreement controversy as presented by Lion Air to the passengers' heirs. Most likely, the on-going investigation on Sriwijaya SJ-182 crash will share a similar fate— noticing how the Indonesian National Transportation Safety Commission (NTSC - *Komite Nasional Keselamatan Transportasi*) preliminary report mentions an indication of aircraft manufacturer fault.[15] It needs around one year – which means January 2022 - before the Indonesian NTSC announce its final official report revealing the cause aircraft accident.

The absence of advance payment provision within the Minister Regulation No. 77 has put passenger protection at its ebb. Consequently, there is no legal obligation for the airline to pay the 1.25 billion Indonesian Rupiah compensation in stages. It is important to cover the basic immediate needs, such as funeral as well as the passengers' relatives' private matters, especially where those victims were breadwinners. The fact that Minister Regulation No. 77 was enacted six years prior to the ratification of the Montreal Convention of 1999 could answer the absence of advance pay-

ment for passenger death and injury clause within the domestic law.[16]

One essential step needs to be taken within the time being is to include advance payment provision for passenger death and injury. The practices within the neighbourhood could become an example to follow. Both Malaysia and the Philippines refer to the convention governing international flights in regards to death and bodily injury of a passenger in domestic carriage.[17] This means an immediate payment of compensation will be granted noticing both countries have ratified the Montreal Convention of 1999.[18]

Vietnam, as another Association of South East Asia (ASEAN) Member State, also mentions advance payment within their domestic law.[19] The liability limits for death and bodily injury also refer to the original Montreal Convention of 1999 limits, which stands at 100,000 SDR, as introduced in 2006.[20] However, the airline has the privilege to set up such advance payment amount as recorded within the airline's conditions of carriage.[21] This situation provides a room among the Vietnamese airlines in determining the right measure in accordance with their financial conditions.

Three ASEAN Member States, namely Malaysia, the Philippines and Vietnam, have shown a better passenger protection in regards to domestic carriage. In fact, the Indonesian regulation is left behind. Learning from the prolonged Lion Air JT-610 compensation payment, the Minister Regulation No. 77 should immediately be revised by including advance payment provisions. All eyes are on Sriwijaya Air SJ-182 crash, as whether the compensation could be granted faster to the heirs. This is a momentum for the Ministry of Transportation to take action.

Increasing the Liability Limits for Domestic Carriage

The Minister Regulation No. 77 does not mention any automatic increase in liability limits calculation – nor any reference to inflation and living standards. As the regulation was introduced almost a decade ago, the current amount of IDR 1.25 billion for passengers death is considered low and outdated. There has not been any revision towards liability limits for passenger's death and injury since the enactment of Minister Regulation No. 77 in 2011.

The Ministry of Transportation has two options in amending the Minister Regulation No. 77. First, they can just amend the liability limits taking into account the current inflation rate and living standards in Indonesia. Then a periodic review should be conducted to propose amendment on the latest regulation whenever it is deemed necessary. However, there is no guarantee the Ministry of Transportation could enact a new regulation on time.

As the second option, the Ministry of Transportation can use the Montreal Convention of 1999 liability limits as the basis. This step will show that Indonesian lives, with the highest number of domestic fliers, are equal with all lives flying the international flights covered by the Montreal Convention of 1999. The latter case could be considered extreme noticing it will doubled the Indonesian IDR 1.25 billion for passengers death standard; but still realistic noticing efforts realized by other ASEAN Member States such as Malaysia, the Philippines, and Vietnam in protecting their nationals in particular when flying domestic flight.[22]

Currently, only up to the Fifth Freedom of the Air within the ASEAN Single Aviation Market[23] is allowed for member ASEAN Member States' airlines. Cabotage is firmly opposed within the region. Noticing the huge amount of passengers and its future growth in Indonesia, this fact shows the urgency to increase the liability limits for

domestic carriage in the country.

Conclusion and the Way Forward

Passenger protection in Indonesia, especially pertaining to passenger death, is still at its ebb. The heirs could not obtain compensation easily and promptly even though it has been regulated straightforwardly within the domestic law.

The success to include advance payment provision as well as to increase the liability limits for passenger death and injury shall become a relieving news from the passengers' (heirs') perspective. The loss of breadwinner(s) is never easy, and it shall be compensated in appropriate and prompt manners. Speaking of the latter, its presence shall provide a legal ground for the Ministry of Transportation as the regulator in speeding up compensation payment – as could applicable for the ongoing Sriwijaya Air SJ-182 crash.

Finally, Indonesia could learn from some other ASEAN Member States legislation which extend the Montreal Convention of 1999 applicability to domestic law. This step shall guarantee the advance payment presence and automatically increases the liability limits. A definitive step to promote passenger protection within the region.

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[1] The Indonesian Minister of Transportation Regulation No. 77 Year 2011 on Airline Liability.

[2] The Indonesian Minister of Transportation Regulation No. 89 Year 2015 on Delay Management on Scheduled Commercial Airline in Indonesia.

[3] The Indonesian Aviation Law No. 1 Year 2009 on Aviation.

[4] Ridha Aditya Nugraha, "The Revisited Indonesian Aviation Law: From Warsaw to Montreal", The Aviation & Space Journal Vol. XVII No. 1, pp. 3-5.

[5] The Minister of Transportation Regulation No. 77 Year 2011, art. 3. Conversion rate to SDR is made in March 2021.

[6] Convention for the Unification of Certain Rules for International Carriage by Air, done at Montreal on 28 May 1999. Date of the deposit of the instrument of ratification by the Republic of Indonesia on 20 March 2017. The Convention came into force since 19 May 2017.

[7] International Civil Aviation Organization, 2019 revised limits of liability under the Montreal Convention of 1999. This action is pursuant to Article 24. Effective as of 28 December 2019.

[8] The Indonesian Aviation Law, Article 180. See also the elucidation part.

[9] The Indonesian Minister of Transportation Regulation No. 77 Year 2011, art. 3(b).

[10] Convention for the Unification of Certain Rules Relating to International Carriage by Air, done at Warsaw on 12 October 1929.

[11]See Ridha Aditya Nugraha, "The Revisited Indonesian Aviation Law: From Warsaw to Montreal", The Aviation & Space Journal Vol. XVII No. 1.

[12] Indonesia National Air Carriers Association, INACA Annual Report 2019, p. 7.

[13] Pablo Mendes de Leon, Introduction to Air Law, Tenth Edition, Kluwer Law International B.V., Alphen aan den Rijn (2017), p. 363. See also R.D. Hursh and H.J. Bailey, American Law of Products Liability, Vol. 2(3) (1974).

[14] See Ridha Aditya Nugraha, "Lion Air JT-610 Passenger Compensation: A Commentary and Review of the Current Progress", The Aviation & Space Journal Vol. XVIII No. 2.

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[17] The Philippines, Department of Transportation and Communications (DOTC)-Department of Trade and Industry (DTI) Joint Administrative Order No. 01 (Series of 2012) or also known as Air Passenger Bill of Rights Year 2012, sections 15-16. Malaysia, Malaysian Aviation Consumer Protection Code 2016 as amended by the Malaysian Aviation Consumer Protection (Amendment) Code 2019.

[18] Date of the deposit of the instrument of ratification by Malaysia on 31 December 2007, the Convention came into force since 29 February 2008. Date of the deposit of the instrument of ratification by the Philippines on 19 October 2015, the Convention came into force since 18 December 2015.

[19] Vietnam, Law on Civil Aviation of 2006, art. 169.

[20] Ibid., art. 166.

[21] Ibid., art. 169.

[22] See The Philippines, Air Passenger Bill of Rights Year 2012, section 15. Vietnam, Law on Civil Aviation of 2006, art. 166. Malaysia, Malaysian Aviation Consumer Protection Code 2016 as amended by the Malaysian Aviation Consumer Protection (Amendment) Code 2019.

[23] ASEAN Multilateral Agreement on the Full Liberalisation of Passenger Air Services, done in Brunei Darussalam on 12 November 2010.

About a New European Multi - Orbit Connectivity System

Sara Dalledonne *

New EU ambitions in the space telecommunication sector

Over the last years, the EU has shown a growing interest in playing a more active role in the domain of secure space communication. Following preparatory studies and activities, a new component named GOVSATCOM was included in the EU Space Programme to address user needs for secure and cost-effective governmental satellite communication.[1]
More recently, Commissioner Breton and industrial stakeholders have also expressed their interest in moving forward with the development of a *"new integrated, secure and autonomous space connectivity system"*.[2] A call for tenders for the execution of a year-long study was published and a consortium of European companies (gathering major actors for a unique bid) was awarded a € 7.1 million contract in December 2020. According to the call, this initiative will build on the GOVSATCOM component of the EU Space Programme and include the development of a new multi-orbit connectivity system to complement GOVSATCOM preliminary services. The initiative would also promote innovative quantum cryptography technologies in relation with the EuroQCI (Quantum Communication Infrastructure) initiative.[3]

The study will assess different elements of this new space connectivity system:

- During the "Inception phase", the consortium will investigate user cases and mission requirements and will provide a first round of recommendations in April 2021.
- During the "System study", contractors will provide a preliminary architectural design for the space and ground segments, deliver the service provision concept and estimate associated costs.
- According to the results of the Preliminary Design Review in December 2021, the European Commission *"might put forward a proposal to the European Parliament and the EU Council and initiate the procurement phase."* [4]

The place of this new initiative in the EU agenda

This new initiative stands at a crossroad for the European Union. It offers the perspective of a potential new flagship programme complementing Galileo/EGNOS and Copernicus and building on the GOVSATCOM component to further establish the EU in the space telecommunication domain. Such prospect confirms the determination of the European Commission to foster EU´s role in safeguarding and strengthening Europe's capacity to address autonomously its strategic objectives, namely of the European Digital Agenda and Common Foreign and Security Policy:

- Delivering broadband coverage to EU citizens and commercial enterprises, ensuring connectivity in rural or not-spot areas and more generally bridging the digital divide.

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- Offering cost-effective, reliable, resilient, and secure connectivity to governmental and security users, in particular against rising cybersecurity threats.
- Fostering EU leadership in digital research, development and innovation for key enabling technologies, such as Quantum Communication, Internet of Things, 5G and future generations.

Furthermore, such programme, which involves the design, production, launch and operation of a large space infrastructure is certainly welcome for the European space industry at large. The space telecommunication sector is critical for Europe and for its space industry which is highly dependent on healthy competitive satcom markets. Yet, these markets, on which European satellite operators, manufacturers and launch service providers have been World-class leaders, are quickly mutating and the European industry is now facing uncertain prospects. In this respect, this project has clear industrial policy implications.

Although the commercial viability of connectivity services based on large LEO constellations is not demonstrated yet, it becomes increasingly difficult for Europe to disregard the various projects under (fast) development in the United States with SpaceX's Starlink and Amazon's Kuiper, in China and Russia with government-backed projects and now in the United Kingdom with the joint acquisition of Oneweb by the UK government in partnership with India's Bharti Global. The level of risk incurred in such innovative business must be weighed against the risk posed to the European space industry of being left out of what might turn out as the next growth engine for the global space sector.

Convergence of public and private stakeholders around a suitable programme scheme

The development of a multi-orbit secure connectivity system is a major endeavour that will be long and resource-intensive. Legitimate questions arise on the capacity of the public need to justify, by itself, such investment, in particular since the new Multiannual Financial Framework does not foresee any dedicated budget for that.
Despite a political interest in the initiative, several Member States have already raised concerns about the funding model for this project during the Council of the EU in January 2021.[5] The possibility to establish some kind of Public-Private Partnership is clearly put forward. This option also makes sense given the global and commercial nature (at least partially) of the communication services to be provided to various users/customers.
Beyond the need to find appropriate arrangements for cost and risk sharing, the success of any PPP necessarily entails some degree of complementarity between public and private objectives. This raises, in turn, the question of European companies' capacity to build a compelling business case around this project. The possibility of a joint investment (purely speculative at this stage) may also pose a challenge to gain the confidence of private investors in the current sanitary crisis context.

Finding a suitable compromise agreeable by all the (many) parties is clearly one of the many questions that the ongoing study will have to address. Following the recent announcements and discussions held during the European Space Policy Conference,[6] there is an undeniable convergence of interest between the European Union and the space industry, but a compelling case will be necessary to:

- Convince all Member States of the common interests at stake to address both secure connectivity needs and industrial policy concerns;

- Establish the legitimacy of the European Commission in these matters;
- Define the role to be played by the various public and private stakeholders, including Member States and ESA.

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[1] *European Commission*, "Commission welcomes the political agreement on the European Space Programme", December 2020, at 4. Link: https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2449

[2] *eTendering*, "GOVSATCOM and EuroQCI: building blocks towardsa secure space connectivity system", September 2020. Link: https://etendering.ted.europa.eu/cft/cft-document.html?docId=77642

[3] *European Commission*, "The future is quantum: EU countries plan ultra-secure communication network", June 2019. Link: https://ec.europa.eu/digital-single-market/en/news/future-quantum-eu-countries-plan-ultra-secure-communication-network

[4] *Supra* note 2.

[5] *Agence Europe*, "Member States cautious about the proposal for a secure connectivity constellation2; January 2021. Link: https://agenceurope.eu/en/bulletin/article/12640/22

[6] 12th European Space Policy Conference. Link: https://www.spaceconference.eu/2020.html

The enforcement of Regulation (EU) 2019/947 on the operation of unmanned aircraft and the new ENAC UAS-IT Regulation

Daniele D'Antonio and Carla Bonacci***

The development of Unmanned Aircraft System (UAS)

Over the last decades, the development of Unmanned Aircraft Systems (UAS) performances enabled the use of drones not only for leisure activities but also for several commercial operations. This development has led to the recognition of the economic relevance of drones' activities, as confirmed by the European Parliament which has estimated that by the year 2050 the drone industry could create around 150.000 jobs in the EU[1].

In this scenario, since Regulation (EC) 2008/216[2] provided that drones with a maximum take-off weight less than 150kg should have been regulated autonomously by the civil aviation authorities (CAA) of each Member State[3], national CAAs has adopted rules regarding both the airworthiness and safety of UAS performed in their national airspace.

As a result of this approach, the European regulatory framework has become particularly heterogeneous. In order to mitigate the effects of the legislative divergences within the EU and to implement the Single European Sky, in 2015 the European Commission[4] has proposed a major revision of the EU legislative framework for civil aviation.

The proposed revision has been accomplished with Regulation (EU) 2018/1139[5] , which repealed Reg. (EC) 2008/216 and introduced rules relevant to the civil operations of all types of aircraft, including UAS. Indeed, whereas No. 26 of Reg. (EU) 2018/1139 establishes the applicability of its rules also to drones, regardless of their operational weight, since "*technologies for unmanned aircraft now make possible a wide range of operations and those operations should be subject to rules that are proportionate to the risk of the particular operation or type of operations*".

The *"rules proportionate to the risk"* referred to in Reg. (EU) 2018/1139 has been introduced by Implementing Regulation (EU) 2019/947[6] on the operation of unmanned aircraft, which is now the relevant regulatory source for all operations conducted with UAS.

Regulation (EU) 2019/947

Reg. (EU) 2019/947 has been adopted in view of the development of the possible applications of the UAS and it has introduced rules relevant for several aspects, such as the safety of people on the ground and of other airspace users during UAS operations, the requirements necessary for the UAS airworthiness and the criteria for the organization of the activities and the actors involved.

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Reg. (EU) 2019/947 has been enforced on January 1st 2021, six months after the initial forecast. The reasons of such deferral have been clarified by Implementing Regulation (EU) 2020/746[7], which states that "*the measures introduced to contain the COVID-19 pandemic severely hamper the ability of Member States and the aviation industry to prepare for the application of a number of recently adopted Implementing Regulations in the field of aviation safety*".

Indeed, the Covid-19 outbreak has further slowed down the process of enforcement of the Reg. (EU) 2019/947, whose applicability was already complex since some of its provisions consist in the transfer of competences in the field of UAS regulation from the single national CAAs - in Italy, the *'Ente Nazionale Aviazione Civile'* (ENAC) - in favor of the European Aviation Safety Agency (EASA).

This choice is driven by the desire to ensure harmonized rules among all Member States that can replace those established by the single CAAs under Regulation (EC) 2008/216. The different authorities of each Member State will still be responsible for the operations performed in their national airspace, for the training of pilots and for issuing the necessary flight authorizations.

Indeed, whereas No. 18 of Reg. (EU) 2019/947 states that, in accordance with paragraph 8 of Article 56 of Reg. (EU) 2018/1139, the new Reg. is without prejudice to the possibility for Member States to lay down national rules to make subject to certain conditions the operations of UAS, for reasons falling outside the scope of Reg. (EU) 2018/1139, including public security or protection of privacy and personal data, in accordance with the Union law.

Since the development of the operations that can be performed with UAS has made urgent the need for homogeneous rules to mitigate the risks, one of the most relevant principles of Reg. (EU) 2019/947 is the proportionality of the requirements for carrying out UAS activity to the level of risk of the operation carried out.

In fact, the Reg. establishes that as the risk connected to the use of the drone increases, certain conditions of use shall be respected and the activity carried out shall be identified in different categories. In particular, the three categories of operations outlined are *open, specific and certified*.

UAS operations are open when they are carried out by private individuals with drones weighing less than 25kg, without overflying assemblies of people, keeping the drone in Visual Line Of Sight (VLOS), maintaining the drones within 120 meters from the closest point of the earth's surface and without carrying dangerous goods. These operations do not require an authorization or a declaration by the UAS operator prior to the flight[8].

Included in this specified category are those activities with drones that do not meet the conditions of open operations. The specified activities require an operating authorization issued by the competent national authority based on a prior declaration by the operator[9].

An UAS operation falls into the certified[10] category when, after its assessment, the national competent authority finds that the risk associated with the activity cannot be adequately mitigated without the prior certification of the drone, the operational authorization to carry out the activity and the issuance of a remote pilot license to the UAS operator, pursuant to Delegated Regulation (EU) 2019/945[11].

The mandatory insurance coverage for drones

The new Reg. (EU) 2019/947 highlights the need for UAS pilots to be adequately informed about the national and European regulations "in *particular with regard to safety, privacy, data protection, liability, insurance, security and environmental protection"*[12].

In particular, Article 12, paragraph 2 of Reg. (EU) 2019/947 states that, if necessary, the competent CAA shall recognize the authorization to carry out the UAS activity only if the remote pilot issues a statement certifying that the flight operation complies with national and European insurance regulations.

In this regard, it should be noted that ENAC Regulation "*Mezzi Aerei a Pilotaggio Remoto"*[13] of November 2019 required a mandatory third-party liability insurance coverage in order to perform UAS flight operations, expressly stating that the coverage should have been "adequate for the scope" (Article 32).

After the enforcement of Reg. (EU) 2019/947, on January 4th 2021, ENAC has adopted the new UAS-IT Regulation[14], which states, in Article 27, that operations with a UAS cannot be performed without a valid third-party liability insurance coverage.

The new ENAC UAS-IT Reg. specifies that, in addition to being adequate for the purpose, drone insurance must provide for insurance ceilings that are not less than the minimum parameters set out in the table of the Article 7 of Regulation (EC) 785/2004, setting out the insurance requirements applicable to air carriers and aircraft operators flying to, from or within the territory of a Member State.

In particular, this table requires the minimum insurance limits for third party liability to be related to the maximum take-off mass of the aircraft and, for an aircraft with a maximum take-off weight less than 500kg, it establishes a minimum amount of 750.000 SDRs (corresponding to 900.000 Euros).

Moreover, Article 27 of the new ENAC UAS-IT Regulations establishes that, in accordance with Article 743 of the Navigation Code, Article 1015 of the Navigation Code is also applicable to unmanned aircraft. This last rule establishes, in particular, that a damaged third party may take direct action against the insurer for compensation of the suffered damages, without the latter being able to oppose any cause of termination or nullity of the contract having retroactive effect.
ENAC Regulation "Mezzi aerei a Pilotaggio Remoto" - third edition of 11 November 2019, adopted with resolution C.d.A. n. 23/2019.
ENAC UAS-IT Regulation - first edition, adopted on January 4th 2021 with resolution DG 01/2021.

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[1]JSee European Parliament, Drones: new EU-wide rules to boost safety and privacy, 30 November 2017, https://www.europarl.europa.eu/news/en/press-room/20171129IPR89119/drones-new-eu-wide-rules-to-boost-safety-and-privacy

[2]Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. This Regulation was subsequently repleadedby Regulation (EU) 2018/1139.

[3]G. Loffreda, I droni civili nell'Unione Europea: un focus particolare sul regime italiano, in RLADA n. 32/2016, IJ-CVI-881.

[4]COM(2015) 598, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, An Aviation Strategy for Europe, 7 December 2015.

[5] Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91.

[6] Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on the rules and procedures for the operation of unmanned aircraft.

[7] Commission Implementing Regulation (EU) 2020/746 of June 4th 2020 amending Implementing Regulation (EU) 2019/947 as regards postponing dates of application of certain measures in the context of the COVID-19 pandemic.

[8] Article 4 Reg. (EU) 2019/947.

[9] Article 5 Reg. (EU) 2019/947.

[10] Article Article 6 Reg. (EU) 2019/947.

[11] Commission Delegated Regulation (EU) 2019/945 of March 12th 2019 on unmanned aircraft systems and on third-country operators of unmanned aircraft system.

[12] Whereas No. 20 Reg. (EU) 2019/947.

[13] ENAC Regulation “Mezzi aerei a Pilotaggio Remoto” - third edition of 11 November 2019, adopted with resolution C.d.A. n. 23/2019.

[14] ENAC UAS-IT Regulation - first edition, adopted on January 4th 2021 with resolution DG 01/2021.

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