



# proposal for a frequent flyer levy



**fellow  
travellers**

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**contact**  
leo murray

**Fellow Travellers**  
fellowtravellers.org  
leo@fellowtravellers.org



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# 1 introduction

## 1.1 Background

Aviation was responsible for 6% of total greenhouse gas emissions in the UK in 2011 (Committee on Climate Change, 2013). This contribution is expected to more than quadruple, with aviation producing 25% of UK emissions by 2050. A relatively small group of passengers is responsible for the majority of aviation emissions. In 2013 15% of the population took 70% of flights, according to government estimates, (Department for Transport, 2014) while 55% of the population took no international flights at all. (National Travel Survey, 2014).

According to the UK's Committee on Climate Change (CCC), growth in demand for aviation must be limited to 60% more than 2005 levels in 2050 to meet the UK's overall emissions reduction target. The CCC says this means aviation emissions will remain at 2005 levels, while other sectors of the economy will have to cut emissions by 85%. If demand growth is not limited, targets for other sectors will need to be even more ambitious, which the CCC concludes there is limited scope for.

Increasing passenger demand is a major driver of the global warming impacts of aviation, but has been largely ignored in discussions around how to limit aviation emissions. Efforts have focused instead on improving fuel efficiency, exploring lower-carbon biofuels, and other marginal technological substitutes. There has been no assessment of the possibilities for using fiscal instruments to actively constrain the number of flights taken by the frequent flyers who are most responsible for the environmental impacts of aviation.

The current structure of Air Passenger Duty (APD) can be rationalized on environmental and social grounds. Longer journeys are charged more heavily, as are first and business class tickets that require more physical space. However, APD does not provide an escalating incentive to reduce demand amongst frequent flyers. The current tax regime will see an increase in passenger demand of 127%, rather than the 60% the CCC recommends (DFT, 2013).

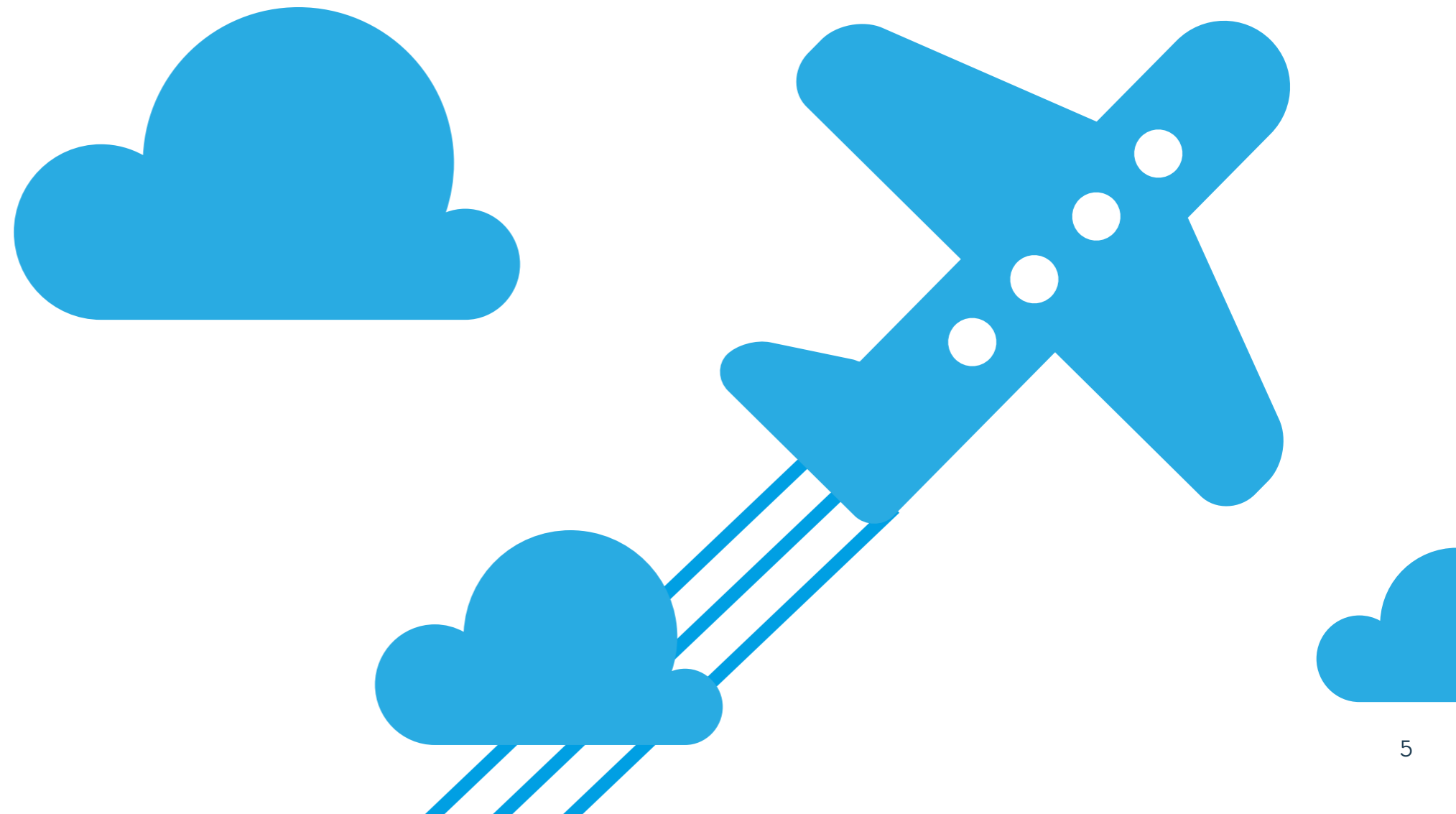
## 1.2 Objective and outline

This paper considers the potential for a fiscal reform that can:

- Limit passenger demand to no more than 60% by 2050 in line with CCC's recommendations, and remove the need for a new runway in south-east England;
- Incentivise a more equitable distribution of flights across the income spectrum.

In **Chapter 2** we discuss the features of a Frequent Flyer Levy (FFL), a fiscal reform designed to achieve these goals.

In **Chapter 3** we describe how a FFL could be implemented, considering practical implementation including the method of collecting tax revenues and data collection requirements. We also assess the impact on passenger demand, runway capacity requirements and socio-economic distribution of demand for air travel.



## 2 proposal for a frequent flyer levy

### 2.1 Introduction

In this chapter we present a proposal for reforming Air Passenger Duty (APD) into a Frequent Flyer Levy (FFL) in which passengers pay tax based on the frequency of their flights within a given twelve month period. In **section 2.2** we present a brief overview of APD. In **section 2.3** several options for designing a FFL are discussed. In **section 2.4** we present a proposal, and **section 2.5** summarises and concludes the chapter.

### 2.2 Air Passenger Duty

**APD** is an excise duty levied on the carriage of passengers flying from a UK airport, which came into effect on 1st November 1994.

The rate of APD depends on the class of travel and final destination of the passenger. Reduced rates apply to passengers traveling in the lowest class of travel. Standard rates apply where passengers are carried in any class of travel other than the lowest. Higher rates apply where passengers are carried on an aeroplane with an authorised take off weight of 20 tonnes or more and equipped to carry fewer than 19 passengers. APD is higher if the destination's capital city is more than 2,000 miles from London.

The current rates of APD are summarised in **Table 1**.

**table 1 - APD rates per passenger from 1 April 2015**

(from 1 April 2016 in brackets)

distance from london (miles)	reduced rate	standard rate	higher rate
Band A (0 to 2,000 miles)	£13 (£13)	£26 (£26)	£78 (£78)
Band B (over 2,000 miles)	£71 (£73)	£142 (£146)	£426 (£438)

source: HM Revenue and Customs (2015)

APD ranges between £13 and £426 per passenger (£438 from 1 April 2016). Standard rates are twice as high as the reduced rates for travel in the lowest class. Higher rates are three times higher than standard rates, and six times higher than the reduced rate. Journeys over 2,000 miles attract higher levies, with rates for band B roughly five and a half times higher than those for band A.

APD revenue from passengers is collected by airlines. HM Revenue and Customs (HMRC) collects tax revenue from the airlines, oversees the process and provides information to airlines. The legal framework for APD is contained in the Finance Act 1994. (Sections 28 to 44 inclusive and schedules 5A and 6.)

Children under the age of 12 and flying in the lowest class of travel have been exempt from APD since May 1st 2015.<sup>1</sup> Airlines are required to keep electronic records proving that passengers are exempt, and to check that passengers have submitted their correct age during check-in or boarding. HMRC audits these records by requesting information from the airlines' electronic booking systems, and relies that such checks have been carried out properly.<sup>2</sup>

### 2.3 Options for a Frequent Flyer Levy

There are several options for introducing a progressive element in the tax system covering aviation:

1. Introduce a tax rate that increases with each subsequent flight a passenger takes;
2. Add a percentage to the current APD which increases with each subsequent flight;
3. Add a percentage to ticket prices which increases with each subsequent flight;
4. Apply a uniform tax increase to all flights, but exempt the first flight from tax.

<sup>1</sup> Other examples of exempted passengers are children below the age of 2 years who are not allocated a separate seat and from 1 May 2016, passengers under the age of 16 years and flying in the lowest class of travel.

<sup>2</sup> Source: interview Ian Barry, HMRC, June 5th 2015.

All options apply to passenger journeys within a given 12 month period in which the first flight is untaxed. Each has advantages and disadvantages. A single progressive tax rate (Option 1) would introduce a progressive element while decreasing the complexity of the current APD system<sup>3</sup>, but abandon the socially and environmentally desirable higher taxation of higher classes and longer travel distances. Adding a progressive percentage to APD (Option 2) would avoid this disadvantage, but would make the tax system more complicated. Adding a progressive percentage to ticket prices (Option 3) would also increase complexity. A uniform tax increase with a first flight exemption (Option 4) is the least desirable in terms of providing a progressive incentive to limit demand, but would be the easiest to administer.

**Option 3** – a progressive levy applied as a percentage on ticket prices - is recommended and examined further by this study. Basing a levy on ticket prices has a major benefit: Ticket prices are correlated with environmental impacts because they contain a significant fuel cost component, and with the income of passengers because passengers with higher income purchase more expensive tickets. Hence adding a percentage levy to ticket prices will generally provide a larger price incentive for flights with larger environmental impacts and for passengers with larger incomes.

This option also offers the most potential differentiation of taxes, potentially making it the most effective option from a social and environmental perspective. A disadvantage is that it is administratively complex to implement relative to APD (see Chapter 3). We will therefore also discuss Option 4 as a 'fall-back option'.

## 2.4 Frequent Flyer Levy proposal based on ticket prices

An indicative scheme for the FFL as a percentage-based levy on ticket prices is presented in Table 2. There are a variety of different possible tax structures that could limit growth in demand to 60%, and so this should be taken as an example rather than a definitive scheme. The calculations behind the figures in Table 2 are presented in Annex A.

The tax level ranges from 0% of a single journey ticket price for the first flight, to 239% for the ninth flight.

<sup>3</sup> By abandoning travel classes and distance bands.

**table 2 - example percentage levy on current ticket prices (excluding APD) for single one-way journeys, to limit growth in demand to 60% by 2050**

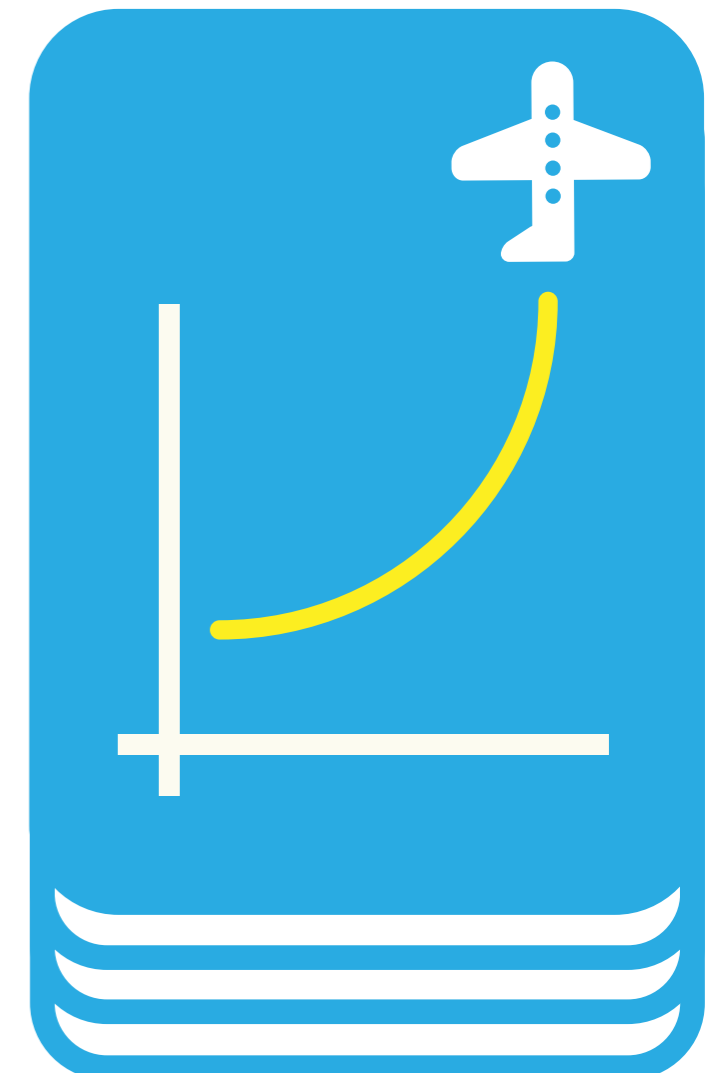
flight rank	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Percentage on ticket price	0%	9%	24%	46%	74%	109%	149%	193%	240%

Under such a scheme, demand would be limited to a 60% increase in 2050, the need for new runway capacity would be obviated and demand for flights would be distributed more evenly across the income spectrum.

## 2.5 Conclusion

In this chapter an option for a **Frequent Flyer Levy (FFL)** has been proposed, based on a percentage of air ticket price and meeting the objectives mentioned in the introduction.

A fall-back option has also been suggested, which would apply the same tax increase to all flights, and exempt the first flight from tax. In the next chapter we examine how such reforms could be implemented.



## 3 implementation of the frequent flyer levy

### 3.1 Introduction

In this chapter we examine how the FFL could be implemented. Implementation should ensure the levy is collected by a logical and reliable body, seek to keep any administrative burden as low as possible, and ensure that immigrants and businesses are not unduly burdened. Further, reliable data must be available for tax purposes, there must be minimal opportunities for tax fraud, the requirements for gathering new data from passengers must be limited and information security must be guaranteed.

We propose that implementation of the FFL should adhere as closely as possible to the current processes and responsibilities of parties involved in the current APD. A short overview of the administration of the current APD is presented in **section 3.2**. In **section 3.3**, we present the additional steps that are required for transforming APD into a progressive FFL. In **section 3.4**, **3.5** and **3.6** we respectively discuss implications for airlines, international passengers, and business travellers and SME's. **Section 3.7** concludes.

### 3.2 Processes, responsibilities and definitions in the current APD

By adhering as closely as possible to the current processes of the APD, implementation of a FFL can be made the most cost-efficient, require relatively limited administrative and organisational changes, and make optimal use of the current infrastructure for collecting tax revenues.

We propose to adhere as closely as possible to the current definitions of the APD:

A chargeable passenger is anyone carried on a chargeable flight who is not covered by an exemption. Exempted passengers are flight crew, cabin attendants, persons escorting a passenger or goods, persons undertaking repair, maintenance, safety or security work or ensuring the hygienic preparation and handling of food and drink, children below the age of 2 years who are not allocated a separate seat, children below the age of 12 years and in the

lowest class of travel, persons carried free of charge under a statutory obligation and passengers on connecting flights. From 1st May 2016, passengers under the age of 16 years and flying in the lowest class of travel will also be exempt. Chargeable flights are fixed wing aircraft with an authorised take off weight of 5.7 tonnes or more, fuelled by Avtur.

Exemptions are emergency/public service flights, short pleasure flights, flights departing from the Scottish Highlands and Islands and NATO flights.

In the current APD system there are two important players in the process of collecting tax revenues:

**Airlines** are responsible for collecting tax revenues from passengers;

**HMRC** is responsible for collecting tax revenues from the airlines, overseeing the process, auditing and providing information to the airlines. If airlines have not declared tax correctly there may be an assessment for under-declared taxes and they are liable to penalties.

The FFL would use the same registration process as APD. Airlines operating chargeable aircraft used for the carriage of chargeable passengers from any UK airport, including Northern Ireland, will register for the tax and be required to provide notification of changes in registration details, keep records and accounts, submit returns and make tax payments.

### 3.3 Database requirements

Because the FFL is progressive, implementation requires gathering additional information to make sure passengers are taxed correctly based on the number of flights they take.

The most straightforward way to meet this requirement is to create a database with information on the number of flights each passenger has taken. Passengers will be required to submit their passport numbers to airline companies before they purchase a ticket. Airline companies send the passport number to a central database operator that provides airlines with information on the number of flights the passenger has taken and the level of tax they should be charged. Once a ticket has been sold, airlines send a notification to the oper-

ator of the database, confirming that the submission of the passport number by the passenger resulted in a payment and a flight.

An important requirement is that the system is able to verify passport numbers and make sure that they are valid and current. This audit could be carried out by airlines during check-in or boarding, by comparing the submitted numbers with the passenger's official document - passport or driving licence. This procedure would be similar to current procedures for verifying the age exemptions of the APD (see section 2.2). The verification of passport numbers is already common practice, as airlines are obliged under many foreign laws to verify that passengers have submitted correct travel documents, and airlines can receive penalties by foreign authorities if travel documents are incorrect.<sup>4</sup> In case of fraud, airline companies could send the correct passport numbers to the central database.

## Gathering passport numbers during payment of tickets?

An alternative option is to gather information on passport numbers and flight frequency during payment for airline tickets. This implies that the tax would be collected separately after the payment of tickets. Disadvantages of this approach are that additional transactions and transaction costs will be required. Because the tax would not be included in the ticket price, passengers could also be less aware of the tax costs in their purchase, reducing the tax incentive limiting growth in demand. Because of these disadvantages we recommend that passport numbers are collected before the purchase of tickets and not at the stage of the actual transaction.

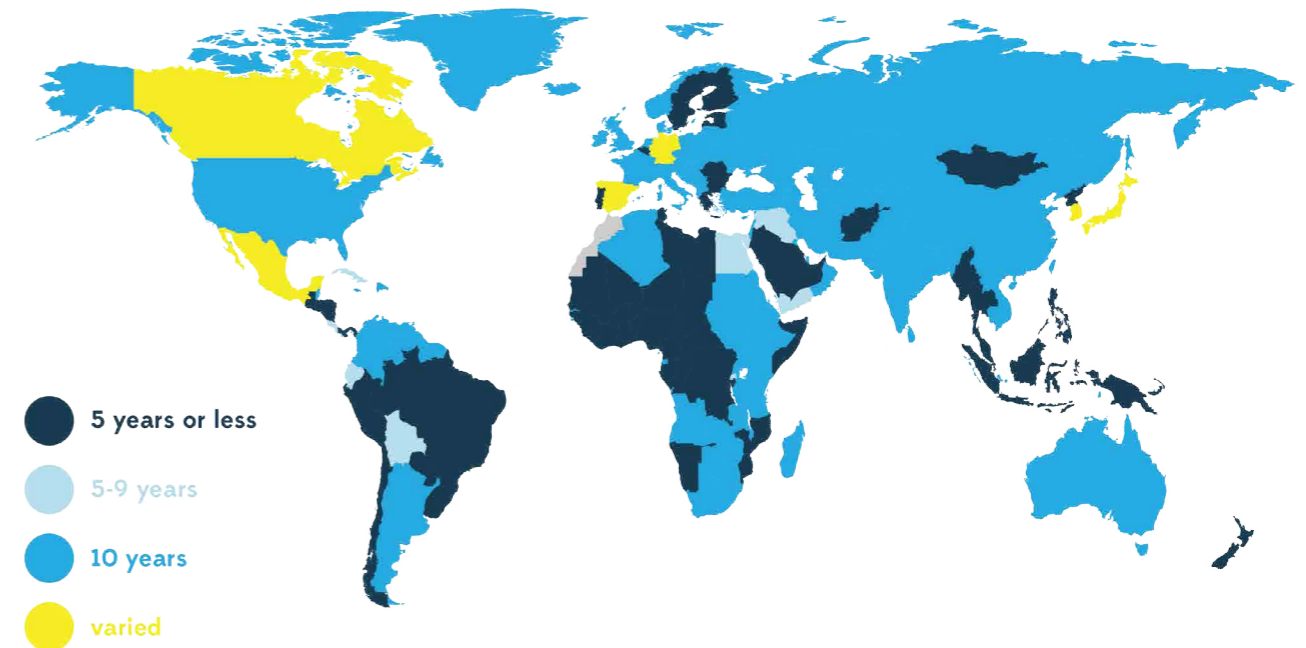
Given the current roles and responsibilities for collecting APD, HMRC seems to be the most logical body for maintaining the database and gathering information on passport numbers and flight frequencies. HMRC is already equipped for managing sensitive information, and airlines

<sup>4</sup> Source: Interview Ian Barry, HMRC, June 5th 2015.

already submit to HMRC market sensitive information such as flight coupons, passenger numbers and certificates. This data will be required to audit the FFL and make sure that taxes are collected properly, so having HMRC administer the scheme removes the need for sharing this data with a third party to enable successful auditing.

Maintaining a database on the number of flights taken could prove complicated. UK citizens are not obliged to have a passport or identity card, and may fly domestically by submitting driving licence numbers, and so the database will also need to contain driving licence numbers.

Passports and passport numbers are replaced every 10 years in the UK, and more frequently in some countries – see **Figure 1** – so the database will need to keep records



of previous passport numbers and their replacements. This might prove complicated for international passengers.

**figure 1 - validity period of passports**

source: timatic database

However, even if a record of international passengers were not available, the number of passengers benefiting from this limitation of the system would be relatively low.

The most recent Civil Aviation Authority Passenger survey report (CAA, 2014) shows that approximately 32% of the air passengers terminating in the UK are foreigners. Assuming these passengers replace their passports every 5 to 10 years, just 3% to 6%<sup>5</sup> of all passengers might potentially benefit from the database containing no flight history for their renewed passport number.

This figure is also likely to be an overestimate, as overseas residents would not benefit from the renewal unless they are making multiple trips to the UK each year.

On the other hand, the system may be open to abuse, with international passengers strategically renewing their passports to avoid paying the FFL. For example, in the Netherlands passports can be renewed at any time and as frequently as required, providing the previous passport is handed in and at a cost of £48. With an average ticket price of £ 161 and the indicative scheme described in **Table 2**, such a strategy would be profitable from the fourth flight onwards. Additional research would be required to determine the impacts of this potential limitation.

For the fall-back option presented in **section 2.3**, a more simple implementation would be possible. Under this option passengers could submit a declaration to HMRC that they did not book a flight in the previous calendar year, referencing their passport or driving licence number. In response to the submission, passengers could be issued with a code that could be submitted to airlines in the booking process, exempting them from the levy.

Under this option, there are no requirements for maintaining a database with the number of flights for each passenger. Tax authorities would issue only one code to each passenger in each year, and there would be no loophole in terms of passport renewals.

### 3.4 Implications for airlines

For airlines, a progressive FFL will add some complexity to the collection of tax revenues. The current information HMRC requires from airlines is presented in **Table 3**:

Airlines will need to collect additional information on the number of flights taken by passengers, and keep records of ticket prices to make a calculation of the FFL due.

<sup>5</sup> 32% divided by 5 and 10 years results in a 3% to 6% range (rounded).

**table 3 - information required for APD** (not comprehensive)

category	information required
APD account	Monthly summary of passengers carried and calculation of APD due
Passengers	Total number of passengers carried at reduced, standard or higher rate for each destination band
	Number of passengers not chargeable
Duty declaration	Total amount of duty due at each rate, total amount of duty due and amount, date and payment method (credit transfer, direct debit, cheque) of any duty paid
Other records	All documents that prove passengers are not chargeable for any reason
	Copies of any returns made to CAA and airport authorities relating to number of flights operated or number of passengers carried
	Voyage reports, load sheets, passenger manifests
	Flight interruption manifests
	CAA certificate of airworthiness
	Documents relating to any contractual arrangement for the leasing, hiring or chartering of aircraft by or to yourself
Invoices relating to 'Time-saver Chequebook' type tickets	
Flight coupons	

source: HMRC

However, they will no longer be required to keep records of the total number of passengers carried at reduced, standard or higher rate for each destination band.



For the fall-back option, airlines would need to keep a record of documents that prove that passengers have submitted a declaration to HMRC that they did not book a flight in the calendar year. As airlines already have to keep records of passengers that are not chargeable for any reason, this would be a relatively small change to the current regime.

### Possible conflicts with Regulation (EC) No 1008/2008

The FFL may potentially conflict with the European Regulation on common rules for the operation of air services (EC 2008). This states in article 23 that “air fares available to the public include the applicable air fare or air rate as well as all applicable taxes, and charges, surcharges and fees which are unavoidable and foreseeable at the time of publication.” Under the FFL, airlines would not be able to include all taxes in advertisements, as the total amount of tax is calculated on a case-by-case basis and is not known in advance of ticket purchase. A more in-depth assessment is required to determine to what extent a FFL might conflict with this regulation, although it is unlikely to be a major issue.<sup>6</sup>

### 3.5 Implications for (international) passengers

Passport numbers currently have to be provided as part of check in, but a progressive tax implies passport numbers will be submitted before buying a ticket, requiring a small change in the purchase process.

In case of the fall-back option the process would be more complex for passengers, who would be required to submit a declaration and enter a code before purchasing a ticket. This would require a clear system that provides sufficient information to facilitate the process.

### 3.6 Implications for business travellers and Small and Medium Enterprises

The FFL may impact business travellers and SME's, particularly those that have no good alternatives to taking flights. Recycling increased tax revenues from a FFL to companies that are disproportionately impacted could mitigate some of these effects, perhaps by allowing candidates to

<sup>6</sup> Source: M. Sijm. Policy officer aviation Dutch Ministry of Transport.

deduct a certain percentage of ticket prices from corporation taxes.

An alternative option might be to introduce a system in which companies instead of passengers are taken as the central entity for levying business flights. In such a system, instead of calculating the levy individually on the basis of a single employee's flights, the flights of the company's employees are summed in order to determine an overall levy. This system could be designed to minimise negative impacts on SMEs, but further research is required for exploring such options in more detail.

### 3.7 Conclusion

In this chapter the practical implementation of a FFL has been discussed. We recommend aligning the system as closely as possible to the current definitions, roles and responsibilities for administering the APD.

For adding a progressive element, the key change required is a central database to record passport numbers and flight frequencies, preferably including international passengers, although it is not strictly necessary. HMRC seems to be the most logical body to manage the database and collect the necessary information. In addition, airlines will need to capture passport numbers during the ticket sale process rather than simply prior to boarding as happens under current arrangements.

There will be implications for airlines, international passengers, business travellers and SMEs. Most passengers will benefit from the reform, while good implementation and supporting policies could mitigate any negative impacts. More detailed work is needed on treatment of business travel under a FFL, and on compliance with European Regulation on common rules for the operation of air services. Beyond these outstanding questions, we judge that there are no major practical obstacles to implementation of a FFL.

there are **no major practical obstacles** to implementation of a **frequent flyer levy**

## 4 literature

### CAA (2014)

CAA Passenger Survey Report 2013. A survey of passengers at Aberdeen, Birmingham, East Midlands, Edinburgh, Gatwick, Glasgow, Heathrow, Inverness, London City, Luton, Manchester, Newcastle and Stansted Airports. Civil Aviation Authority.

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### EC (2008)

REGULATION (EC) No 1008/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 September 2008 on common rules for the operation of air services in the Community (Recast).

### National Travel Survey (2014)

Published:30 July 2013Updated:29 July 2014 <https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons>

### NEF (2014)

Managing aviation passenger demand with a Frequent Flyer Levy. S. Devlin, S. Bernick, New Economics Foundation, 2014.

## ANNEX A

### calculation of percentages and robustness of results

The calculation of the required percentages of ticket prices is based on NEF (2014). An indicative scheme of a FFL has been calculated in this study to limit demand to a 60% increase in 2050. The scheme is presented in **Table 4**. For the details of this calculation we refer to NEF (2014).

The required percentage of ticket price has been calculated based on this scheme. In DFT (2013) average ticket prices are presented, coming to approximately £160 excluding APD. This price remains fairly constant between 2015 and 2050. The required percentage has been calculated by dividing the numbers in **Table 4** by this amount.

**table 4 - example of a single progressive tax rate to limit demand under 60% (£)**

flight rank	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Tax rate	£0	£14	£39	£74	£119	£174	£239	£309	£384

source: NEF (2014)

The presented figures are indicative, and meant to provide insight in the order of magnitude of percentages. They should not be interpreted as definitive figures. The most important reasons to not do so:

There are multiple possible combinations that could limit demand growth to 60% in 2050; the scheme presented is only one such option.

**table 5 - required percentages on current one ticket prices for single one-way journeys excluding APD**

flight rank	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Percentage on current APD	0%	9%	24%	46%	74%	109%	149%	193%	240%

source: author's calculation

Calculations in NEF (2014) of the single progressive tax rate are based on assumptions on elasticity of demand that depend on flight rank and household income. Indicative figures have been used which the authors state are somewhat arbitrary. If no differentiation is applied and a uniform elasticity of demand of -0.6 for all flights and income groups is assumed, the results do not differ significantly: demand increases by 57.4% instead of 59.7%. However, the absence of specific elasticity figures for flight rank and income group creates some uncertainty in the results.



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