Aviation Trends

Quarter 3 2016

Contents

Introduction

Welcome to Aviation Trends. Every quarter we update key figures which summarise the levels of activity at the UK's airports. Each edition also includes a section entitled 'Did you know?' which presents interesting facts derived from the various data sources available to the CAA.

The Aviation Trends series is available at www.caa.co.uk/aviationtrends, part of Aviation Intelligence, the online home of the CAA's monthly airport and airline statistical publications. Please note that historic numbers may be subject to minor change as the result of prior period adjustments.[1] Due to rounding of figures, there may be an apparent slight discrepancy between the sum of the constituent items and the total as shown.

For a list of all statistics available on the CAA website, see www.caa.co.uk/data-and-analysis.

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[1] Also, in editions of Aviation Trends prior to quarter 4 2008, all figures included activity at Channel Islands and Isle of Man airports. These islands are not formally part of the UK, and as we wish to present only the trends at UK airports, their figures are now excluded from the UK reporting airports, although travel between the UK and these airports is treated as domestic.

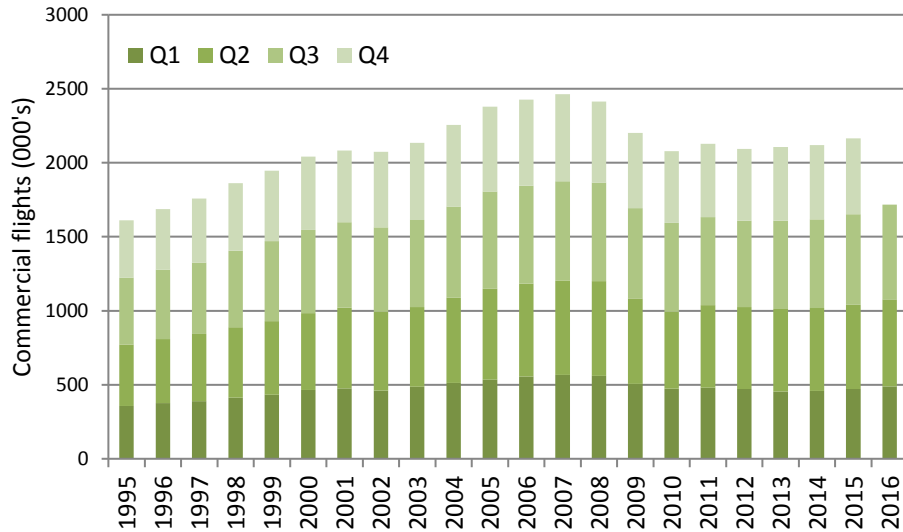# 1. Historical overview of traffic ^{see note 5 on p.14}

a. Terminal passengers
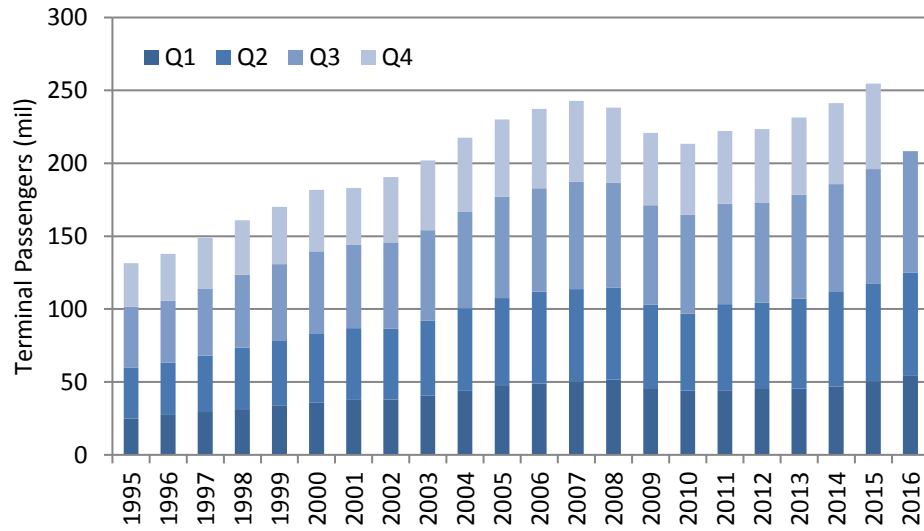
b. Cargo tonnage
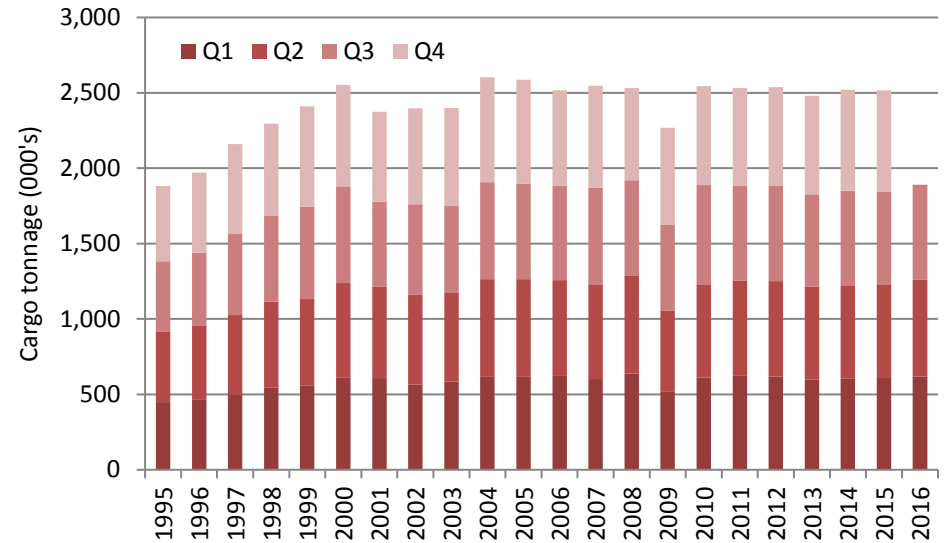
c. Commercial flights

The three time-series charts on this page show both seasonal and annual trends in UK aviation activity for terminal passengers, commercial flights and cargo tonnage.

On pages 4 to 6, the top charts show traffic volume in each quarter (left axis), and the corresponding year-on-year quarterly growth rates (right axis). The bottom charts show the rolling annual total traffic in each quarter (left axis), and the year-on-year percentage growth of the rolling annual total (right axis). The highlighted data points indicate the annual traffic volumes and growth rates of the respective calendar years.

In Q3 2016, UK airports handled 83 million terminal passengers, representing a new high in terms of the number of passengers flown in Q3 of any previous year. On a rolling year basis, terminal passengers also hit a new record (267m pax), surpassing the previous high (262m pax) set in Q2 2016.

Q3 2016 saw 641 thousand commercial flights, representing 4.9% growth against the same quarter in the previous year.

Q3 2016 also saw 629 thousand tonnes of cargo pass through UK airports, which represents 2.1% growth on Q3 2015.

a. Terminal passengers

Terminal passengers - Quarterly totals and y-o-y growth rates

Legend: Q1 Grw% · Q2 Grw% · Q3Grw% · Q4Grw% · Q1 Pax · Q2 Pax · Q3 Pax · Q4 Pax
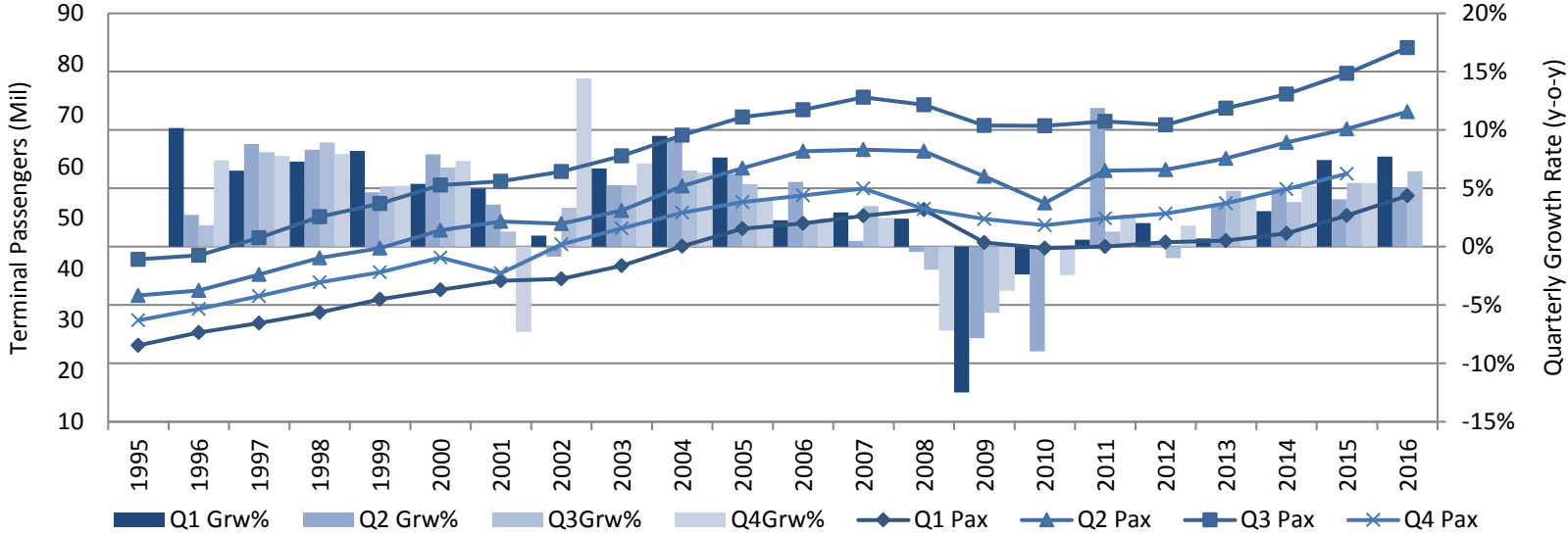
Terminal Passengers - Rolling annual totals and Y-O-Y growth rates

Legend: Rolling Annual Growth (Right) · Rolling Annual Total (Left)
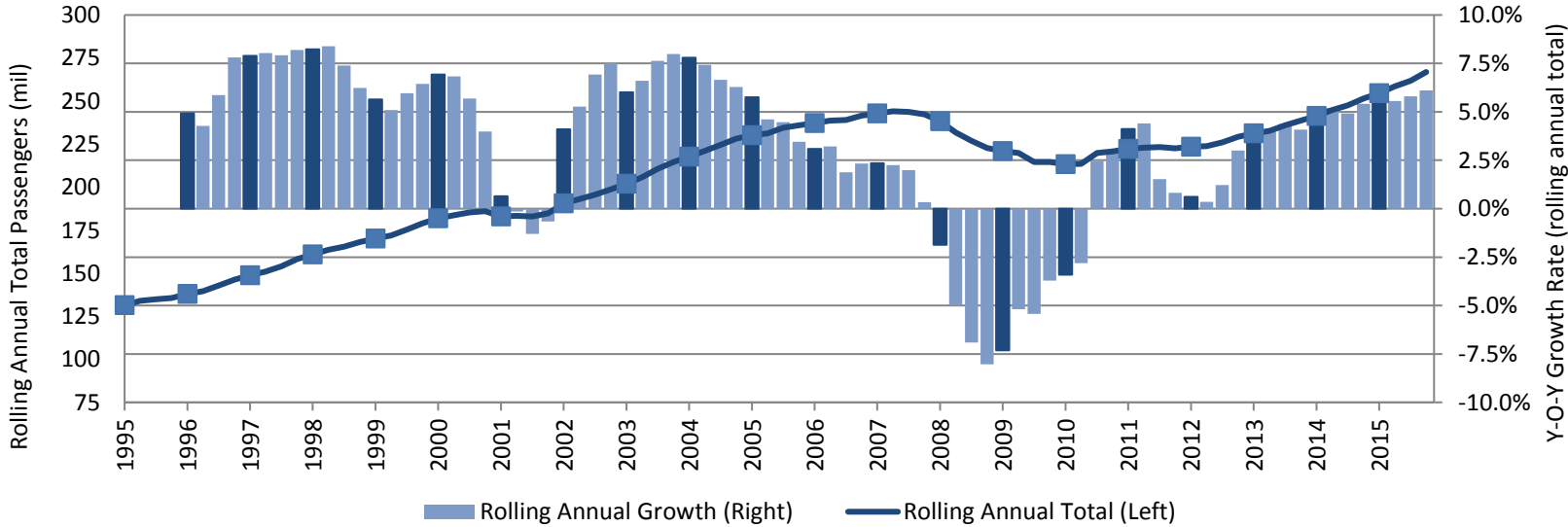
b. Commercial flights

Commercial Flights - Quarterly totals and growth rates

Legend: Q1 Grw% | Q2 Grw% | Q3 Grw% | Q4 Grw% | Q1 Flights | Q2 Flights | Q3 Flights | Q4 Flights
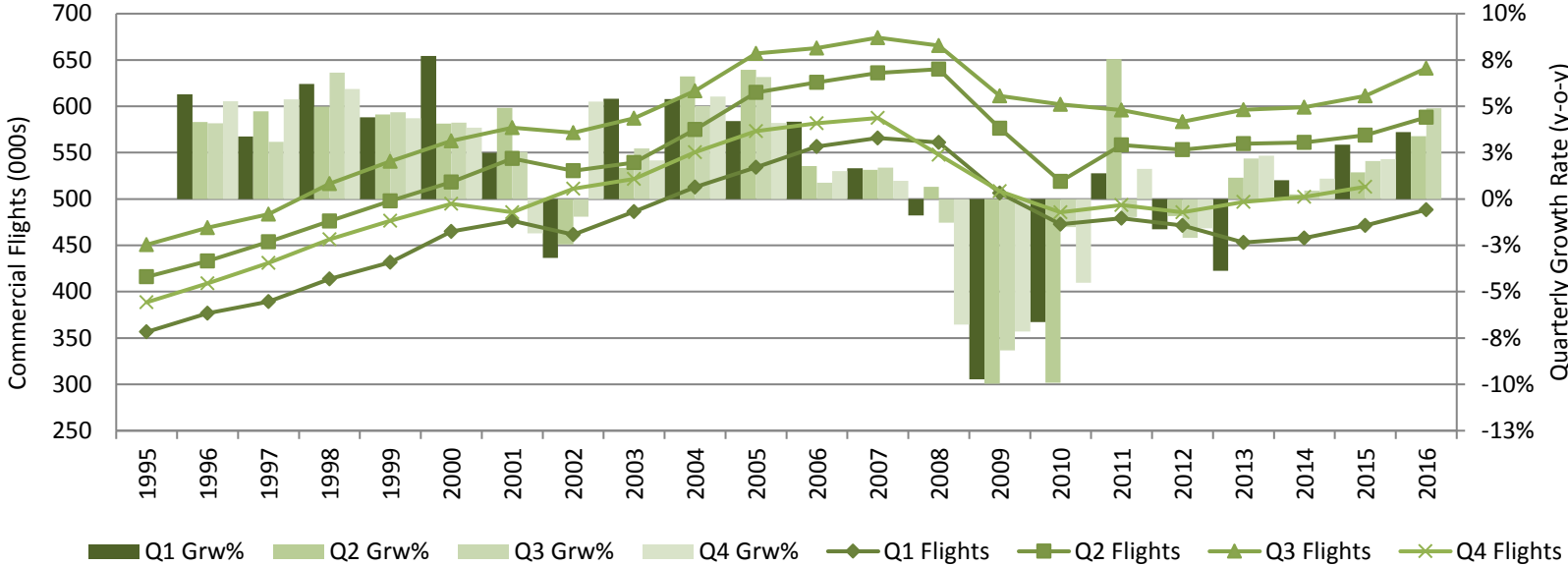
Commercial flights - Rolling annual totals and Y-O-Y growth rates

Legend: Rolling annual growth (Right) | Rolling annual totals (Left)
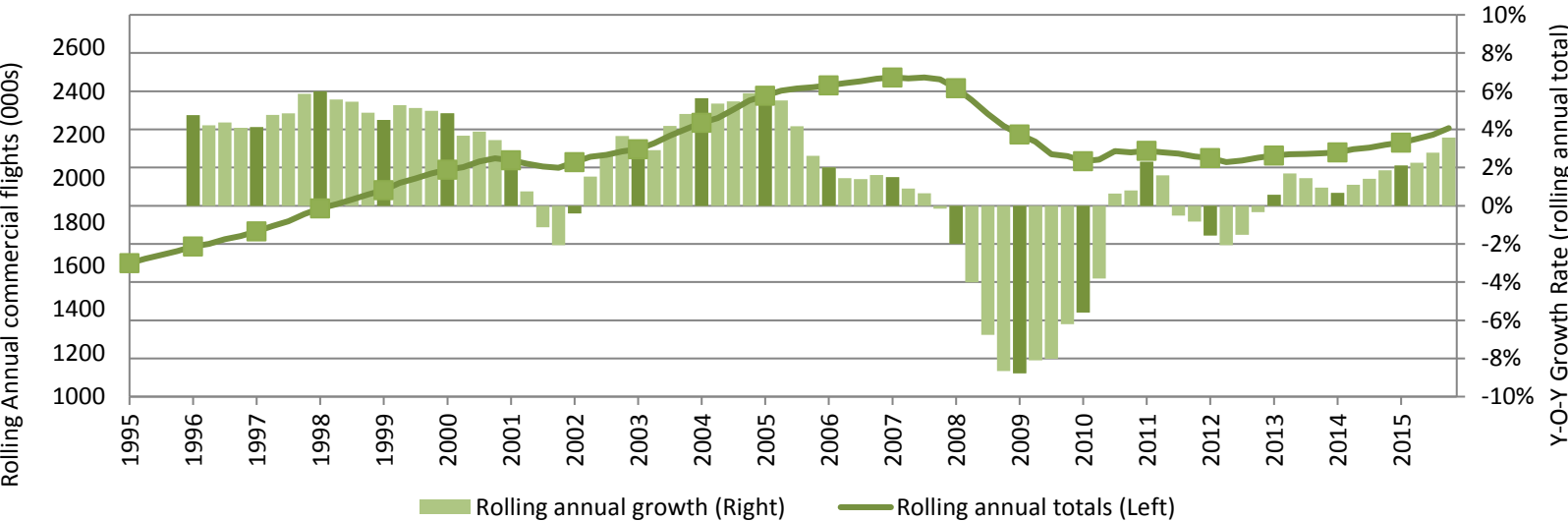
c. Cargo tonnage

Cargo Tonnage Quarterly totals and growth rates

Legend: Q1 Grw% | Q2 Grw % | Q3 Grw % | Q4 Grw % | Q1 Tonnage | Q2 Tonnage | Q3 Tonnage | Q4 Tonnage
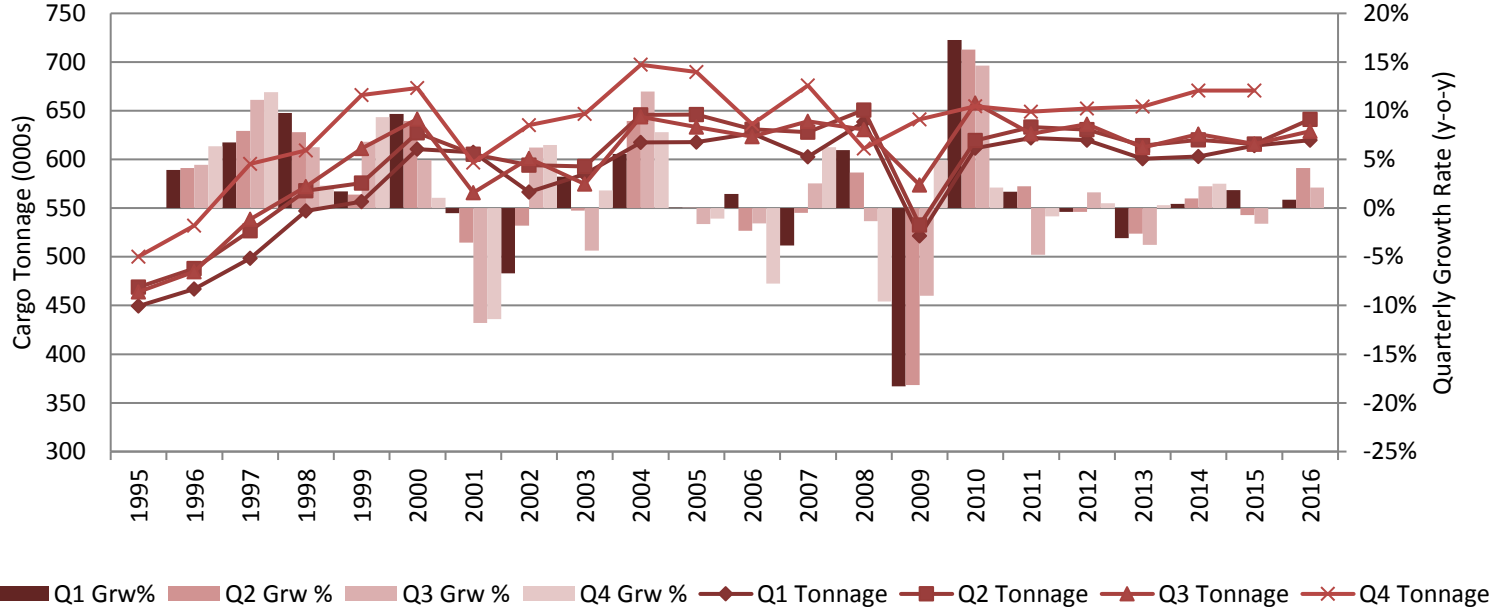
Cargo tonnage- Rolling annual totals and Y-O-Y growth rates

Legend: Rolling annual growth (Right) | Rolling annual totals (Left)
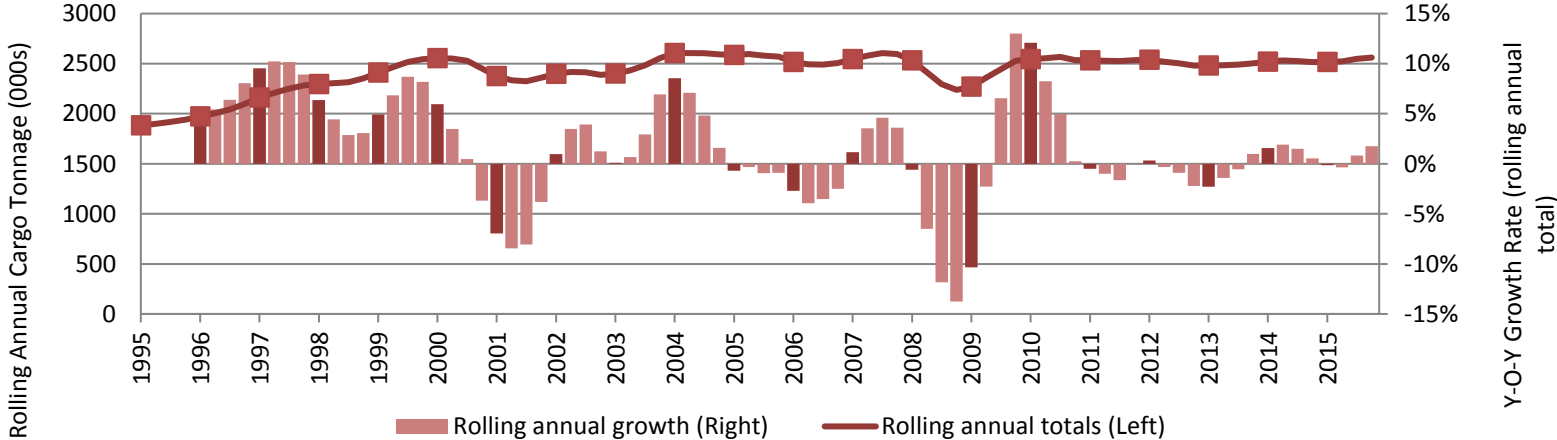
2. Terminal passengers at UK airports ^{see note 5 on p.14}

Pax (millions)	CURRENT QUARTER					ROLLING YEAR				
	Q3 2016		Q3 2015			Q4 15 – Q3 16		Q4 14 – Q3 15		
	Pax (Mil)	% of total	Pax (Mil)	% of total	% chg	Pax (Mill)	% of total	Pax (Mil)	% of total	% chg
London Airports	**48.4**	**58%**	**46.1**	**59%**	**5.0%**	**161.1**	**61%**	**153.4**	**61%**	**5.0%**
- Scheduled	46.7	56%	43.8	56%	6.6%	156.9	59%	148.0	59%	6.0%
- Charter	1.7	2%	2.3	3%	-26.6%	4.2	2%	5.4	2%	-22.1%
Regional Airports	**34.7**	**42%**	**31.9**	**41%**	**8.7%**	**105.1**	**39%**	**97.3**	**39%**	**8.0%**
-Scheduled	31.2	38%	26.9	34%	16.0%	96.0	36%	85.5	34%	12.3%
- Charter	3.5	4%	5.0	6%	-30.2%	9.1	3%	11.9	5%	-23.3%
All Airports	**83.1**	**100%**	**78.0**	**100%**	**6.5%**	**266.2**	**100%**	**250.7**	**100%**	**6.2%**
-Scheduled	77.9	94%	70.7	91%	10.2%	252.9	95%	233.4	93%	8.3%
- Charter	5.2	6%	7.3	9%	-29.1%	13.3	5%	17.3	7%	-22.9%

UK terminal passengers are those travellers who board or disembark an aircraft on a commercial flight at a reporting UK airport. The figures in this section therefore exclude transit passengers – those who remain on-board aircraft which land at a UK airport and then continue on to another destination.

In Q3 2016, London airports handled 5% more passengers, and regional airports 8.7% more than in the same quarter last year. Scheduled passengers grew by 10.2% overall. Charter traffic on the other hand saw a decline of 29.1% overall, driven by both London and regional airports.

On a rolling year basis covering Q4 2015 to Q3 2016, terminal passengers were 5% higher at London and 8% higher at regional airports, respectively.

## 3. Passenger flights to and from UK airports ^{see note 5 on p.14}

see note 5 on p.14

| Flights (000's) | CURRENT QUARTER | | | | | ROLLING YEAR | | | | |
| | Q3 2016 | | Q3 2015 | | | Q4 15 – Q3 16 | | Q4 14 – Q3 15 | | |
	Flights (000s)	% of total	Flights (000s)	% of total	% chg	Flights (000s)	% of total	Flights (000s)	% of total	% chg
London Airports	**301.4**	**49%**	**289.9**	**50%**	**3.9%**	**1,081.1**	**51%**	**1,044.4**	**52%**	**3.5%**
- Scheduled	292.2	48%	277.8	48%	5.2%	1,056.1	50%	1,014.2	50%	4.1%
- Charter	9.2	2%	12.2	2%	-24.5%	25.0	1%	30.2	1%	-17.2%
Regional Airports	**309.2**	**51%**	**288.1**	**50%**	**7.3%**	**1,031.9**	**49%**	**979.1**	**48%**	**5.4%**
- Scheduled	288.8	47%	258.6	45%	11.7%	974.5	46%	903.1	45%	7.9%
- Charter	20.3	3%	29.5	5%	-31.0%	57.4	3%	76.0	4%	-24.5%
All Airports	**610.5**	**100%**	**578.0**	**100%**	**5.6%**	**2,113.0**	**100%**	**2,023.5**	**100%**	**4.4%**
- Scheduled	581.0	95%	536.4	93%	8.3%	2,030.7	96%	1,917.4	95%	5.9%
- Charter	29.5	5%	41.6	7%	-29.1%	82.4	4%	106.2	5%	-22.4%

The figures in this table are for commercial passenger flights and thus exclude air freighter flights (those carrying cargo only).

The number of total passenger flights at all UK airports increased by 5.6%. There were 8.3% more scheduled flights and 29.1% fewer charter flights compared to the same quarter last year.

On a rolling year basis, the number of scheduled passenger flights was up by 5.9% and the number of charter passenger flights was down by 22.4%.

Looking at the regional split, there were 3.9% more passenger flights at the London airports and 7.3% more passenger flights at regional airports when compared to the same quarter last year. On a rolling year basis, the number of flights was up by 3.5% at the London airports and up by 5.4% at the regional airports.
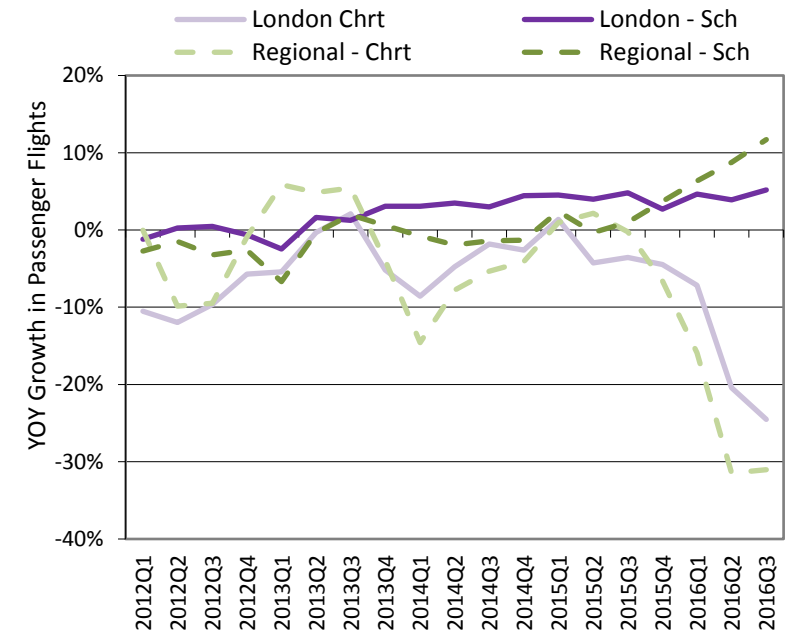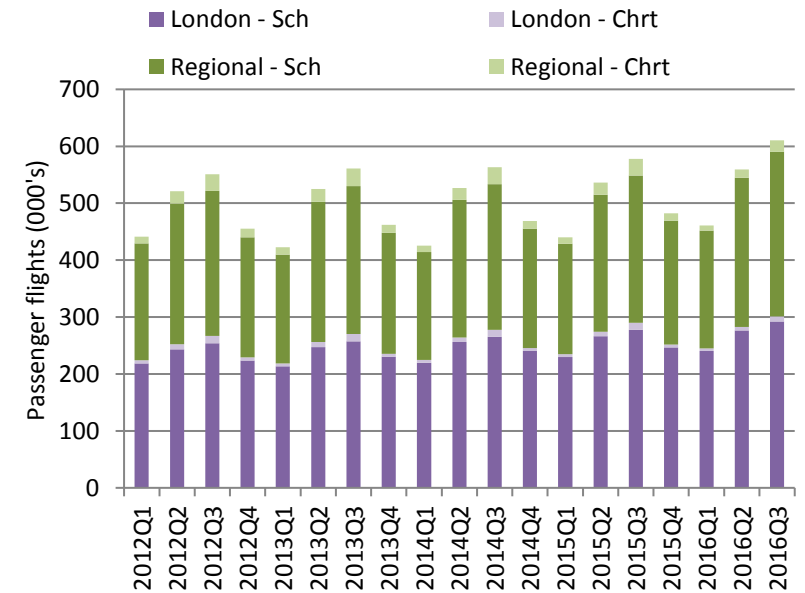
4. Terminal passengers at UK airports by origin/destination

Passengers (millions)	CURRENT QUARTER					ROLLING YEAR				
	Q3 2016		Q3 2015			Q4 15 – Q3 16		Q4 14 – Q3 15		
	Pax (Mill)	% of total	Pax (Mill)	% of total	% chg	Pax (Mill)	% of total	Pax (Mill)	% of total	% chg
Domestic	**12.28**	**15%**	**12.07**	**15%**	**1.7%**	**44.5**	**17%**	**44.0**	**18%**	**1.1%**
- Scheduled	12.22	15%	11.94	15%	2.3%	44.2	17%	43.5	17%	1.6%
- Charter	0.06	0%	0.13	0%	-56.4%	0.3	0%	0.5	0%	-43.4%
Europe	**54.60**	**66%**	**50.34**	**65%**	**8.5%**	**166.3**	**62%**	**152.3**	**61%**	**9.2%**
- Scheduled	49.92	60%	43.83	56%	13.9%	155.0	58%	138.5	55%	11.9%
- Charter	4.68	6%	6.51	8%	-28.1%	11.2	4%	13.7	5%	-18.1%
North America	**7.06**	**9%**	**6.68**	**9%**	**5.7%**	**22.5**	**8%**	**21.4**	**9%**	**5.2%**
- Scheduled	6.98	8%	6.60	8%	5.7%	22.4	8%	21.2	8%	5.3%
- Charter	0.08	0%	0.08	0%	7.3%	0.2	0%	0.2	0%	-3.6%
Rest of World	**9.14**	**11%**	**8.91**	**11%**	**2.6%**	**32.8**	**12%**	**32.9**	**13%**	**-0.3%**
- Scheduled	8.78	11%	8.32	11%	5.6%	31.2	12%	30.1	12%	3.8%
- Charter	0.36	0%	0.59	1%	-39.4%	1.6	1%	2.8	1%	-44.1%
All Airports	**83.07**	**100%**	**78.00**	**100%**	**6.5%**	**266.1**	**100%**	**250.7**	**100%**	**6.2%**
- Scheduled	77.89	94%	70.69	91%	10.2%	252.9	95%	233.4	93%	8.3%
- Charter	5.18	6%	7.31	9%	-29.2%	13.3	5%	17.3	7%	-23.0%

Compared to the same quarter last year, total passengers increased by 6.5% across all UK reporting airports. All regions experienced an increase in passenger numbers over the same period, with Europe being the best performing (+8.5%), while the domestic market saw the weakest growth (+1.7%). There were 5.7% more passengers travelling to North American destinations and 2.6% more passengers travelling to the rest of the world.

On a rolling year basis, the total number of passengers was also up by 6.2%. This was made up of an increase of 9.2%, 5.2% and 1.1% of passengers travelling to and from Europe, North America and domestic respectively, and a 0.3% decrease in Rest of World traffic.
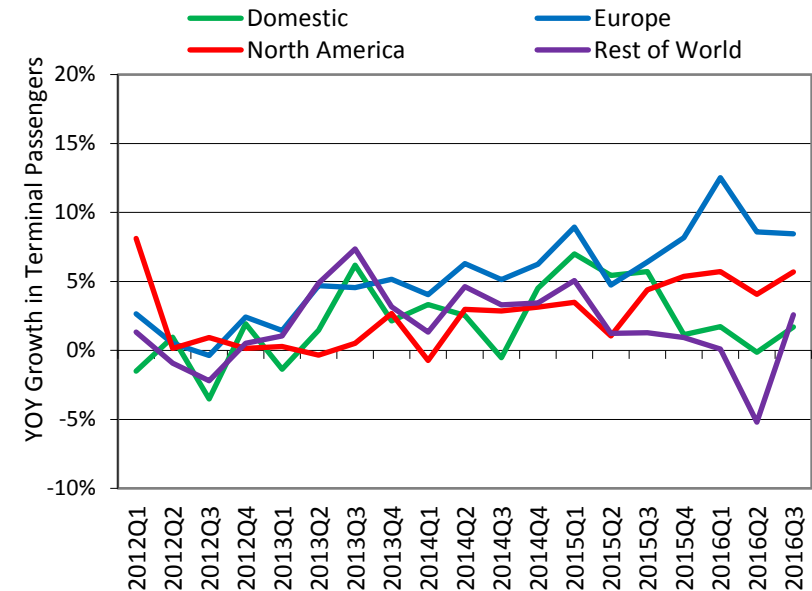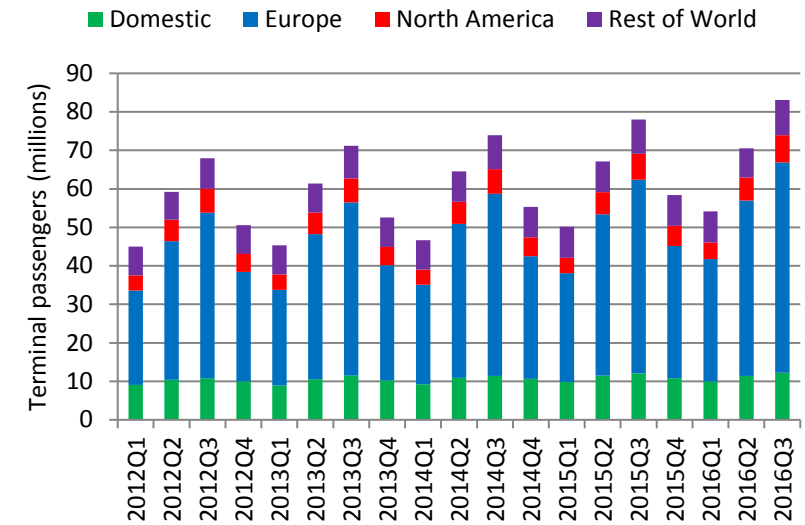
5. Air cargo tonnes carried to and from UK airports

| Tonnes (000's) | CURRENT QUARTER | | | | | ROLLING YEAR | | | | |
| | Q3 2016 | | Q3 2015 | | | Q4 15 – Q3 16 | | Q4 14 – Q3 15 | | |
	Tonnes (000's)	% of total	Tonnes (000's)	% of total	% chg	Tonnes (000's)	% of total	Tonnes (000's)	% of total	% chg
Cargo only flights	**193.2**	**31%**	**200.8**	**33%**	**-3.8%**	**815.3**	**33%**	**835.1**	**33%**	**-2.4%**
- London	86.1	14%	83.7	14%	2.8%	336.9	13%	329.8	13%	2.2%
- Regional	107.1	17%	117.1	19%	-8.5%	478.4	19%	505.3	20%	-5.3%
Bellyhold cargo	435.3	**69%**	414.6	**67%**	**5.0%**	1,686.8	**67%**	1,688.8	**67%**	**-0.1%**
- London	397.6	63%	383.9	62%	3.6%	1,568.5	63%	1,582.0	63%	-0.8%
- Regional	37.6	6%	30.7	5%	22.4%	118.2	5%	106.9	4%	10.6%
Total cargo	**628.5**	**100%**	**615.4**	**100%**	**2.1%**	**2,502.0**	**100%**	**2,523.9**	**100%**	**-0.9%**
- London	483.7	77%	467.6	76%	3.4%	1,905.4	76%	1,911.7	76%	-0.3%
- Regional	144.8	23%	147.8	24%	-2.1%	596.6	24%	612.2	24%	-2.5%
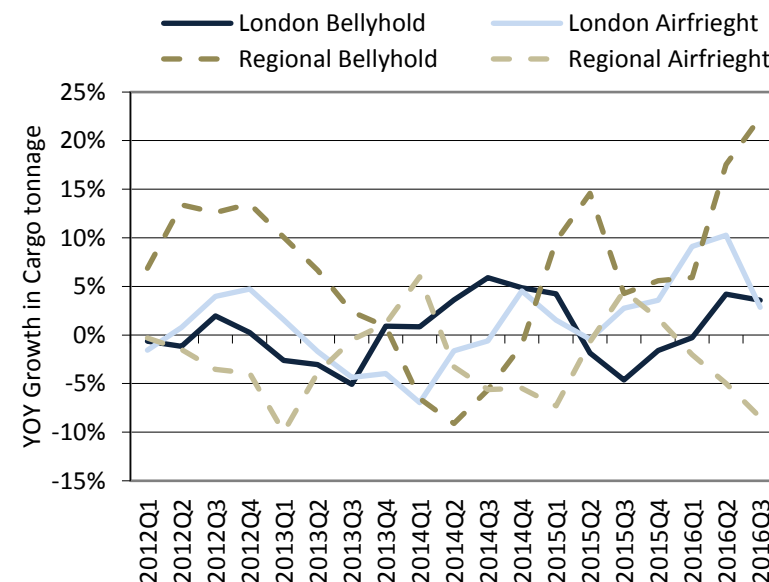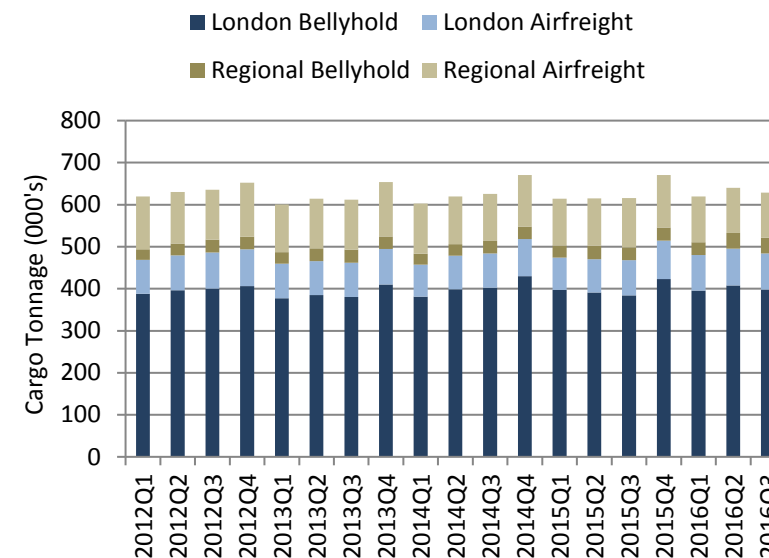
Air cargo – freight and mail – is transported into and out of the UK on air freighters and in the bellyhold of passenger aircraft.

Overall, total cargo tonnage at UK airports grew by 2.1% compared with the same quarter last year. At London airports cargo tonnage grew by 3.4% while cargo tonnage at regional airports decreased by 2.1%. Air freighter tonnage decreased by 3.8% whilst bellyhold cargo tonnage increased by 5% compared with the same quarter last year.

The weak performance of the regional airports was driven by the 8.5% reduction in cargo tonnes transported by freighter in Q3 2016.

On a rolling year basis, total cargo tonnage handled at UK airports was down by 0.9% compared with the year before, driven by a 2.5% decrease at regional airports.

6. All commercial flights to and from UK airports see note 5 on p.14

| Flights (000s) | CURRENT QUARTER | | | | | ROLLING YEAR | | | | |
| | Q3 2016 | | Q3 2015 | | | Q4 15 – Q3 16 | | Q4 14 – Q3 15 | | |
	Flights (000's)	% of total	Flights (000's)	% of total	% chg	Flights (000's)	% of total	Flights (000's)	% of total	% chg
Airfreighter	**13.4**	**2%**	**14.3**	**2%**	**-6.0%**	**54.3**	**3%**	**56.2**	**3%**	**-3.4%**
- London	3.9	1%	3.5	1%	10.9%	15.2	1%	13.7	1%	11.4%
- Regional	9.5	2%	10.8	2%	-11.5%	39.1	2%	42.5	2%	-8.1%
Passenger flights	**611.0**	**98%**	**578.0**	**98%**	**5.7%**	**2,113.5**	**97%**	**2,023.7**	**97%**	**4.4%**
- London	301.4	48%	289.9	49%	3.9%	1,081.1	50%	1,044.5	50%	3.5%
- Regional	309.6	50%	288.1	49%	7.5%	1,032.3	48%	979.2	47%	5.4%
Total flights	**624.4**	**100%**	**592.3**	**100%**	**5.4%**	**2,167.7**	**100%**	**2,079.9**	**100%**	**4.2%**
- London	305.2	49%	293.4	50%	4.0%	1,096.3	51%	1,058.2	51%	3.6%
- Regional	319.1	51%	298.9	50%	6.8%	1,071.4	49%	1,021.7	49%	4.9%
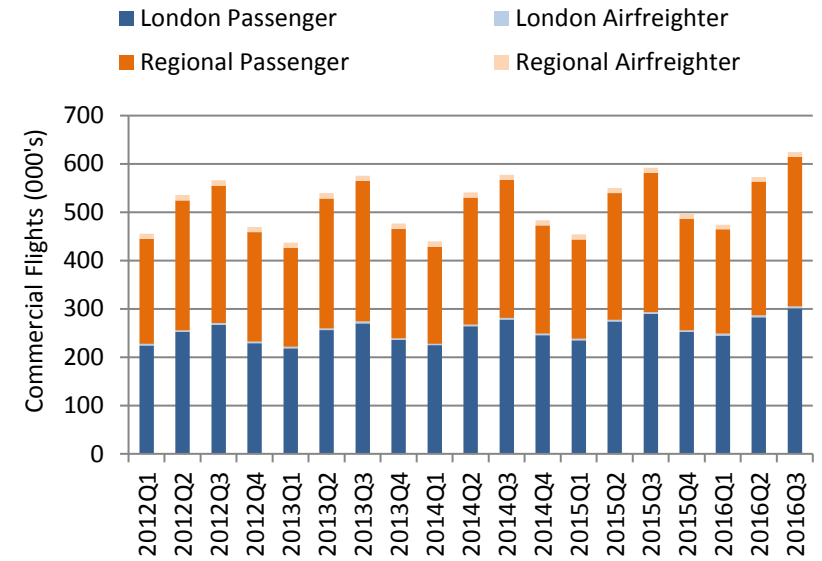
The number of commercial flights at reporting UK airports is a measure of commercial aviation activity in the UK. It includes both passenger and cargo flights, but excludes military flights, general aviation, and aircraft that pass through UK airspace without landing.

The total number of commercial flights in the UK was up 5.4% compared to the same quarter last year – the combined effect of a 5.7% increase in the number of passenger flights and a 6% decrease in the number of freighter flights. Overall, London airports and regional airports grew at 4% and 6.8% respectively.

On a rolling year basis, the total number of commercial flights was up 4.2% compared with the year before. Commercial flights at London airports rose by 3.6% while regional airports rose by 4.9%.
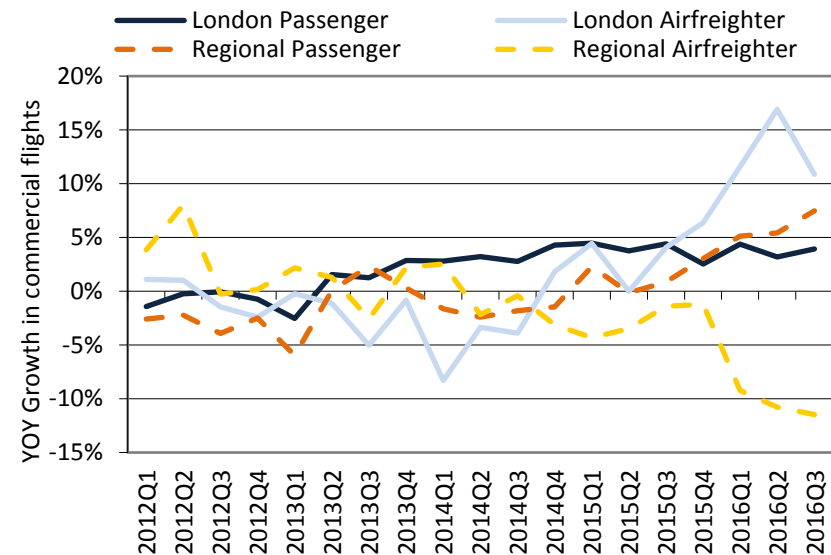
7. Punctuality of scheduled passenger flights to and from UK airports

a. On-time performance

Matched scheduled passenger flights (000s), % of flights on-time	Q3 2016		Q3 2015		Change (% points)
	Flights (000s)	% on-time	Flights (000s)	% on-time	
London Airports	**289.1**	**67%**	**275.1**	**69%**	**-2**
- Gatwick	76.3	52%	70.9	57%	-5
- Heathrow	123.3	73%	122.9	71%	+2
- London City	20.8	79%	19.7	82%	-3
- Luton	28.0	63%	23.9	68%	-5
- Stansted	40.8	71%	37.8	77%	-6
Regional Airports	**253.8**	**72%**	**224.1**	**77%**	**-5**
- Aberdeen	12.1	74%	13.1	82%	-8
- Belfast City	11.3	84%	10.8	82%	+2
- Belfast International	9.5	64%	8.3	76%	-12
- Birmingham	27.5	70%	22.1	79%	-9
- Bournemouth	1.0	82%	2.2	83%	-1
- Bristol	16.8	72%	14.6	78%	-6
- Cardiff	3.4	74%	2.9	75%	-1
- Doncaster Sheffield	2.2	78%	0.9	76%	+2
- Durham Tees Valley	0.9	83%	1.0	82%	+1
- East Midlands	10.5	75%	9.4	81%	-6
- Edinburgh	31.1	66%	28.4	76%	-10
- Exeter	3.4	81%	2.6	80%	+1
- Glasgow	22.8	71%	20.7	74%	-3
- Jersey	7.2	68%	6.8	70%	-2
- Leeds Bradford	9.7	82%	9.6	84%	-2
- Liverpool	10.6	72%	9.1	78%	-6
- Manchester	49.7	69%	41.8	73%	-4
- Newcastle	12.8	79%	10.3	81%	-2
- Southampton	11.3	76%	9.5	79%	-3
All Airports	**542.9**	**69%**	**499.3**	**73%**	**-4**

Q3 2016: y-o-y change in on-time performance (% points)
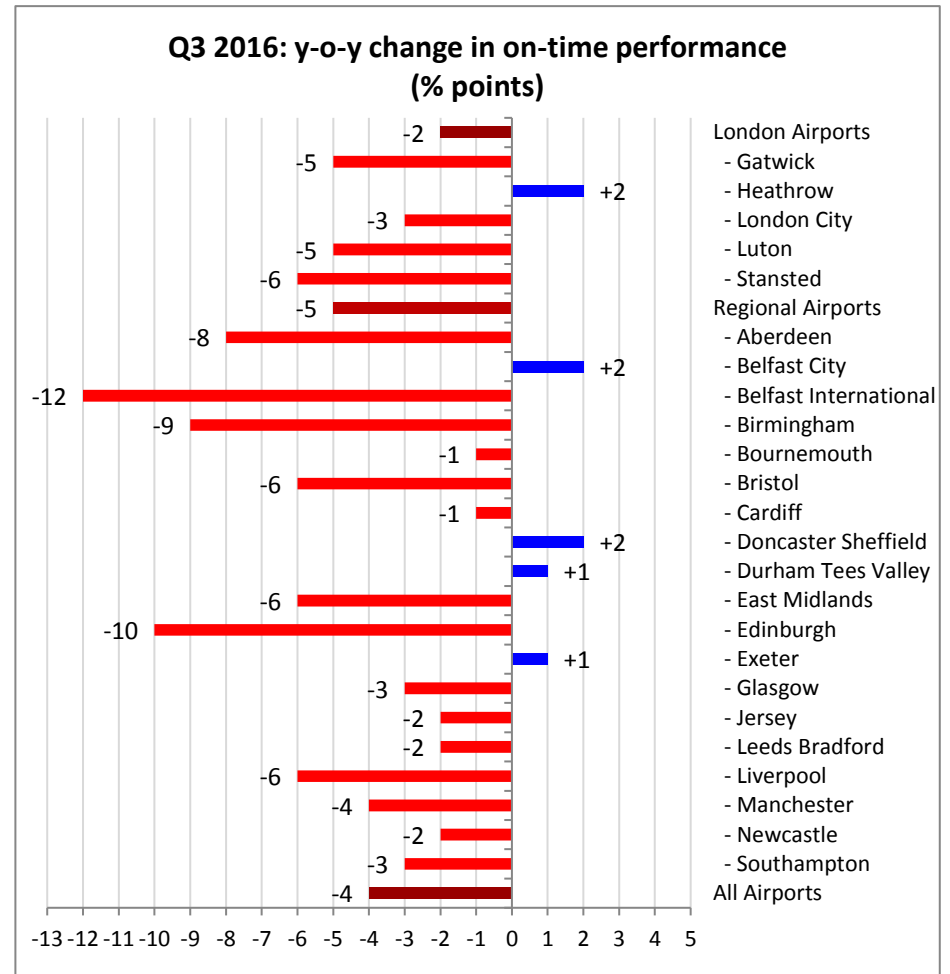
Punctuality of arriving and departing passenger flights is measured by comparing actual and planned times of operation. The data covers 24 airports.

On-time performance is defined as the proportion of flights arriving or departing early or up to and including 15 minutes late. It is calculated from the scheduled on-stand time, the reported runway time and the expected time an aircraft takes to travel between a stand and the runway.

b. Average delay

Matched scheduled passenger flights (000s), Average Delay (min)	Q3 2016		Q3 2015		Change in Avg. delay (min)
	Flights (000s)	Avg. Delay (min)	Flights (000s)	Avg. Delay (min)	
London Airports	**289.1**	**18**	**275.1**	**17**	**+1**
- Gatwick	76.3	26	70.9	23	+3
- Heathrow	123.3	15	122.9	15	0
- London City	20.8	12	19.7	9	+3
- Luton	28.0	20	23.9	17	+3
- Stansted	40.8	15	37.8	12	+3
Regional Airports	**253.8**	**16**	**224.1**	**13**	**+3**
- Aberdeen	12.1	17	13.1	10	+7
- Belfast City	11.3	10	10.8	11	-1
- Belfast International	9.5	22	8.3	14	+8
- Birmingham	27.5	17	22.1	13	+4
- Bournemouth	1.0	10	2.2	10	0
- Bristol	16.8	15	14.6	13	+2
- Cardiff	3.4	16	2.9	14	+2
- Doncaster Sheffield	2.2	13	0.9	14	-1
- Durham Tees Valley	0.9	10	1.0	10	0
- East Midlands	10.5	13	9.4	10	+3
- Edinburgh	31.1	18	28.4	13	+5
- Exeter*	3.4	13	2.6	12	+1
- Glasgow	22.8	16	20.7	15	+1
- Jersey	7.2	20	6.8	17	+3
- Leeds Bradford	9.7	10	9.6	10	0
- Liverpool	10.6	16	9.1	13	+3
- Manchester	49.7	17	41.8	15	+2
- Newcastle	12.8	12	10.3	11	+1
- Southampton	11.3	14	9.5	14	0
All Airports	**542.9**	**17**	**499.3**	**15**	**+2**

Q3 2016: y-o-y change in average delay (min)
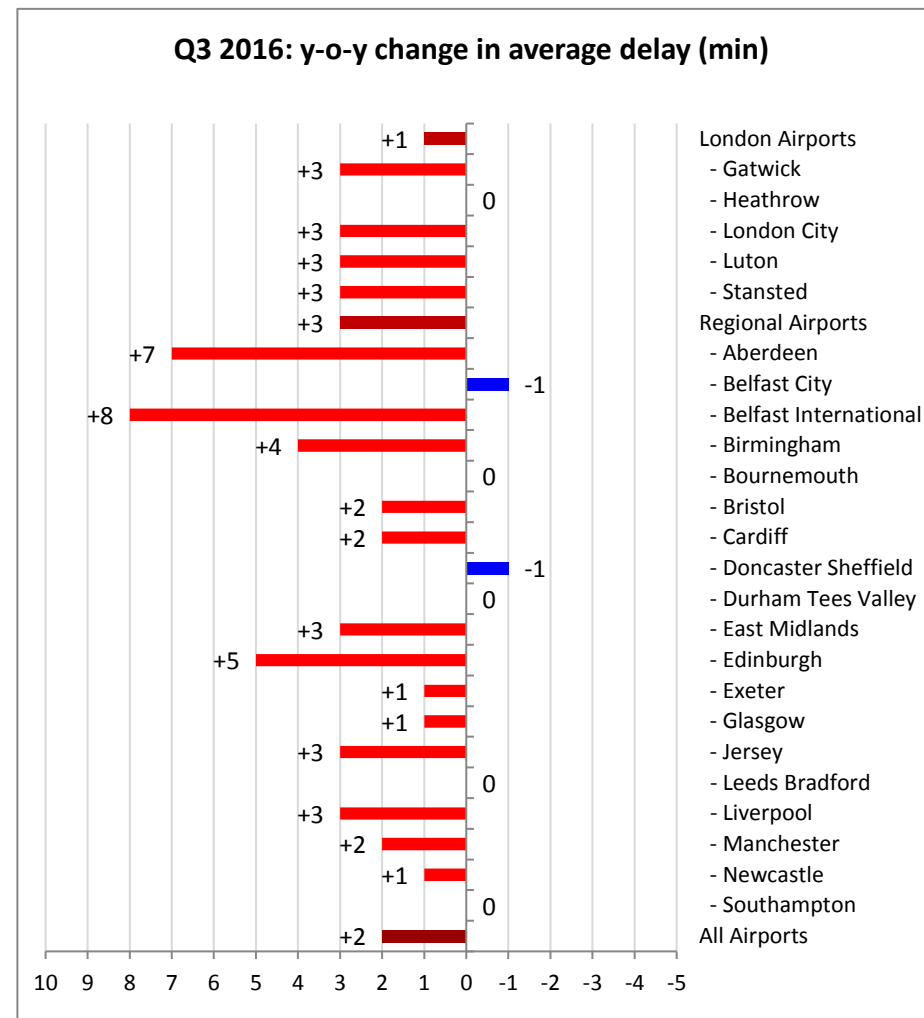
Average delay per flight across the 24 monitored airports was 16 minutes for Q3 2016. This represented an increase in average delay by 2 minutes against the same quarter last year.

Belfast City and Doncaster Sheffield were the only airports that experienced a decrease in average delay. Average delay for Heathrow, Bournemouth, Durham, Leeds Bradford and Southampton remained unchanged while all other airports experienced an increase in delay.

The airports with the shortest average delay in Q3 2016 was Belfast City and Durham (10 minutes), whilst Gatwick saw the longest average delay (26 minutes).

Explanatory notes

1. The Civil Aviation Authority data is prepared with the co-operation of the United Kingdom airport and airline operators. The assistance from all these organisations is gratefully acknowledged.
2. The information contained in this report has been compiled from various sources and it is not possible for the CAA to check and verify whether it is accurate and correct, nor does the CAA undertake to do so. Consequently the CAA cannot accept any liability for any financial loss caused by any person's reliance on it.
3. More detailed data are available from the Civil Aviation Authority website at the following address - www.caa.co.uk/aviationintelligence.
4. The CAA is the UK's specialist aviation regulator whose regulatory activities range from ensuring the aviation industry meets the highest safety standards to preventing holidaymakers from being stranded abroad because of tour operator insolvency.
5. Explanatory notes for Parts 1 to 6:

Notes	Applicable to Part					
	1	2	3	4	5	6
Tables and charts are generated from data in CAA Airport Statistics.	✓	✓	✓	✓	✓	✓
All data excludes the activity of Air Taxis – those aircraft with maximum take-off weights of less than 15 tonnes flying non-scheduled services.	✓	✓	✓	✓	✓	✓
London airports are Heathrow, Gatwick, Stansted, Luton, London City and Southend. Regional Airports are all other UK airports, this category includes the Channel Island Airports – Jersey, Guernsey, and Alderney – and the Isle of Man, which are not formally part of the UK.	✓	✓	✓	✓	✓	✓
Exclude traffic to and from North Sea oilrigs.		✓	✓	✓	✓	✓
Terminal passengers are those commencing their journey or connecting between flights at the airport, but exclude transit passengers who do not disembark.	✓	✓		✓		
Cargo comprises mail and freight.	✓				✓	✓
For the purposes of this report, World Areas are defined as follows: Domestic - the United Kingdom, the Channel Islands and the Isle of Man (these numbers are not adjusted for the double counting which occurs when both airports report arriving and departing passengers to the CAA); Europe - geographical Europe including Turkey and the former Soviet Union states; North America - USA, Canada and Puerto Rico; Rest of World - all other countries.				✓		
A destination is defined to be where a passenger boards or alights the aircraft on which they arrived or departed from the reporting airport; it is not necessarily the first or last stop of a multi-sector flight.				✓		

6. Explanatory notes for Part 7:
   - In these punctuality data, 'delay' is recorded as the difference between an aircraft's scheduled and actual arrival or departure time at the airport terminal. It does not therefore measure any delay, such as that due to congestion, which has already been allowed for in the planned flight times of the service.
   - Average delay is the total minutes of delay recorded by all flights (with early arriving flights counted as zero delay) divided by the total number of flights monitored.
   - On-time performance and delay is calculated from the scheduled on-stand time (provided by Airport Co-ordination Ltd.), the reported runway time (provided by the airport) and the expected time an aircraft takes to travel between a stand and the runway (taxiing time – calculated from historic data). The use of average taxi times is sufficient for calculating an aggregate level of on-time performance, but would not be suitable for reviewing the punctuality of an individual flight.
   - The statistics cover only those flights which were operated and do not cover those flights which were cancelled.