

TSUG

Transport Statistics Users Group

Monthly Review: November 2018

This month's review shows that London went from having the lowest public transport mode share of five selected European cities in 1995 to the highest now – from 25% to nearly 50%. The modal share of public transport in Singapore in the peaks grew from 63% to 67% from August 2016 to May 2017, while journeys made using private cars fell from 4.8 million to 4.2 million. During the second half of 2017, in DB the rail tonne-km fell by 6.7% from 47.8 billion in the first half of 2017 to 44.5 billion in the first half of 2018, while tonnage lifted dropped by 7% to 129.4 million tonnes. There are 18 different ways of going from King's Cross/St Pancras to Waterloo - in the UK, TVMs sell around £2.1bn of tickets a year, about 20% of the total value of tickets sold and ATGs account for around 4.4bn passenger entries and exits each year, on main line and metro networks. VIA Rail Canada Inc. served 1.13 million passengers in Q2, marking a 10% increase over the same period a year ago. Norwegian Air Shuttle was the most fuel-efficient airline on North Atlantic routes in 2017. The median weekly wage of an airline pilot in the UK is £1726 gross, 35% higher than a decade ago. Air pollution is believed to be one cause of the reliability issues that have affected a large part of the Rolls-Royce Trent 1000-powered Boeing 787 fleet. Qantas Ultra Long Haul has been flying non-stop between Perth and London for some time and these 17-hour flights are accounted a success, with a 92% load factor. Air Asia's revenue has been above 10m RMB in the four quarters ending Q2, 2018 and Q1, 2018. The latest Q2 2018 data reaffirm a decline in airline profitability compared to the same quarter a year ago. On average, car parking and ground transportation revenue provides 19% of all US airport revenue, or about \$3.49 billion annually. Revenue (in £m) for buses in Great Britain was 5946 in 2004/5: it increased to 6959 in 2009/10 before dropping slowly to 6411 in 2016/7. London, with about a third of bus revenue, has seen relatively little fluctuation. The average American's commute increased to 26.9 minutes from 26.6 minutes the previous year. US motorists are less likely to be involved in a collision with a deer, elk, moose, or caribou in 2018 compared to previous years. In US, 37,133 people died in motor vehicle crashes in 2017, which is 673 fewer deaths compared to 2016 – translating to 1.8% year-over-year decrease in fatalities. In 2017, UK showed between 37% and 75% of freight vehicles were exceeding the speed limit – by more than 10 miles/h in 5% to 11% of cases. Imports of LNG from the US to EU are on the increase. Dover, historically the major port for cross-Channel passengers, saw a continued decline to 11.7m passengers in 2017. We have Letters from and to the Chairman, TSUG and also Kit Mitchell's Statistics Digest.

Dr Shanta Bir Singh Tuladhar and Andrew Sharp

Contents

Dates of the next TSUG seminars	3
Humble Notice	3
Statistics Digest.....	3
STATISTICS DIGEST November 2018.....	3
Members' Forum	4
Request for Help.....	4
Letter to the Chairman, TSUG	4
General News	5
London's Accessibility Indicators	5
Public Transport in Singapore.....	6
Rail.....	6
DB H1 2018.....	6
King's Cross – Waterloo	8
Ticket Gates and Machines	8
VIA Rail Canada Q2 Results.....	9
Air	10
Fuel Efficiency on the North Atlantic Routes	10
New Heights?	11
Pollution behind Rolls Royce Engine Issues	11
Qantas Ultra Long Haul	12
Recent Airline Statistics	13
Recent IATA Statistics	13
Uber and Lyft at US Airports	14
Road	15
Bus Statistics.....	15
Commute Times in the US.....	16
Oh Deer!.....	17
US Traffic Fatality Trends	17
Vehicle Speed Compliance Statistics Great Britain 2017	18
Sea	19
LNG Going Up.....	19
Sea Passenger Statistics.....	19

Dates of the next TSUG seminars

Humble Notice

It is hereby announced with regret that the Seminar planned for the 17th November 2018 has been postponed until further notice.

The seminars can be booked through the TSUG website at www.tsug.org.uk/seminars.php

Statistics Digest

STATISTICS DIGEST November 2018

This digest lists major sets of statistics that have been released recently or which are due to be released. Regular monthly and quarterly releases are not included. The web links given allow free downloads of the documents cited.

Recent releases from Department for Transport

Recent releases from Department for Transport	
11 October	Road freight statistics: April 2017 to March 2018 https://www.gov.uk/government/statistics/road-freight-statistics-april-2017-to-march-2018
25 October	Taxi and private hire vehicle statistics, England and Wales https://www.gov.uk/government/collections/taxi-statistics

Forthcoming releases from Department for Transport

1 November	Renewable Transport Fuel Obligation: Year 10 (2017 to 2018) report 5 (15 April 2017 to 14 April 2018 supply) https://www.gov.uk/government/collections/biofuels-statistics
1 November	Renewable Transport Fuel Obligation: Year 11 (2018 to 2019) report 1 (15 April 2018 to 31 December 2018 supply) https://www.gov.uk/government/collections/biofuels-statistics
7 November	Final sea passenger statistics: 2017 https://www.gov.uk/government/collections/maritime-and-shipping-statistics
8 November	Reported road casualties Great Britain, provisional estimates: year ending June 2018 https://www.gov.uk/government/collections/road-accidents-and-safety-statistics
15 November	Road goods vehicles travelling to Europe: October 2017 to September 2018 https://www.gov.uk/government/collections/road-freight-domestic-and-international-statistics
November	Blue badge scheme statistics: 2018 https://www.gov.uk/government/collections/disabled-parking-badges-statistics
6 December	Transport Statistics Great Britain: 2018 https://www.gov.uk/government/collections/transport-statistics-great-britain

Releases from Office of Road and Rail

29 Nov 2017	Rail Statistics Compendium Great Britain 2016-17 Annual
http://orr.gov.uk/data/assets/pdf_file/0017/26108/rail-statistics-compendium-2016-17.pdf	
25 Sept 2018	Rail Safety Statistics 2017-18 Annual Statistical Release
http://orr.gov.uk/data/assets/pdf_file/0016/39103/rail-safety-statistics-2017-18.pdf	

Forthcoming release from Office of Road and Rail

Novem ber	Rail Statistics Compendium Great Britain 2017-18 Annual
http://orr.gov.uk/statistics/published-stats/statistical-releases	

Recent release from Office for National Statistics

20 September	Household projections for England (2016 based, includes data from 1961)
https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland	

Recent releases from Eurostat

13 September	Eurostat regional yearbook 2018 edition
https://ec.europa.eu/eurostat/documents/3217494/9210140/KS-HA-18-001-EN-N.pdf/655a00cc-6789-4b0c-9d6d-eda24d412188	
18 September	Sustainable development in the European Union
https://ec.europa.eu/eurostat/documents/3217494/9237449/KS-01-18-656-EN-N.pdf/2b2a096b-3bd6-4939-8ef3-11cfc14b9329	

Members can find past seminar slides here: http://www.tsug.org.uk/past_seminars.php

Members' Forum

Request for Help

We have still not had any responses to our requests for help. We would be particularly grateful if anyone would like to help out organising seminars or indeed has ideas or contacts. Please contact Peter Gordon if you would like to help out.

Peter Gordon
Chairman, TSUG

Letter to the Chairman, TSUG

Hi Peter

I just noticed that you include links to statistical releases for DfT in the newsletter. Rail statistics users might also find the official and national statistics we publish for the GB rail industry useful. These include

- Four quarterly releases on passenger and freight usage and performance, passenger complaints, Disabled Persons Railcard (DPRC) use and assisted journeys data;

- Annual releases including the highly popular station usage estimates; government support for rail finance, and infrastructure, assets and environmental statistics;
- Regular tables on our data portal including signals passed at danger and Network Rail Outputs and Indicators, and
- Annual, ad hoc fact sheets and compendia.

These may be found at <http://orr.gov.uk/statistics/publication-dates>

Kind regards

Abby Sneade
Head of Analytical Framework Development, ORR

Thank you - we have started to do this. I use some of these and find them invaluable. The website lists publication dates up to nine months in advance – Andrew

General News

London's Accessibility Indicators

The International Transport Forum recently published a discussion paper on "London's accessibility indicators: strengths, weaknesses, challenges": it can be found at <https://www.itf-oecd.org/sites/default/files/docs/london-accessibility-indicators.pdf> and is well worth a read. Indeed, it's probably worth a seminar

The introduction shows that London went from having the lowest public transport mode share of five selected European cities in 1995 to the highest now – from 25% to nearly 50%. There has been a strong and consistent growth in the use of all public transport modes – in excess of population growth. In parallel, there has been a steady fall in car driver trips.

There are three main connectivity measures and indicators - Public Transport Access Level (PTAL), Access to opportunities and services (ATOS), and Web-based connectivity assessment tool (WebCAT). Others are being developed – for cycling and walking specifically, for example.

The paper comments on calculation methods and on strengths and weaknesses, with examples. An interesting report.

Public Transport in Singapore

From Metro Report



Singapore's Land Transport Authority (LTA) has recently announced the results of its latest Household Interview Travel Survey, carried out between August 2016 and May 2017 with responses from 45 000 participants.

Total travel demand increased by 5% compared with the survey conducted four years previously, to 15.4 million passenger-journeys. The modal share of public transport

Bus-rail Interchange at Jurong East

in the peaks grew from 63% to 67% in this period, while journeys made using private cars fell from 4.8 million to 4.2 million. This was the first decrease in private car trips since 1997, and was accompanied by a fall in car ownership from 46% of households to 39% in the past four years.

Metro ridership grew to 2.7 million passenger-journeys a day from 2.3 million, with bus ridership rising to 3.4 million from 3.2 million. Bus and metro journeys of less than 20 km completed within 60 minutes increased from 76% to 79%.

Journeys made by taxis and private hire vehicles jumped from 0.8 million a day to 1 million. Active mobility journeys, including those made on foot and by bicycle, increased to 2.6 million from 2.2 million a day.

Rail

DB H1 2018

From International Railway Journal



The second half of 2017 was challenging for German Rail (DB). The Rastatt Tunnel incident, where a new tunnel being built under an existing line collapsed at a time when alternative routes were badly affected by engineering work, caused massive disruption to freight traffic: this was compounded by two severe storms. DB has continued to face problems in the first half of 2018 with more bad weather in

DB Freight Train near Old Oak Common

Germany and rail strikes in France and the Netherlands impacting rail freight, while strikes in Britain affected its Arriva subsidiary.

There was a significant reduction in rail tonne-km which fell by 6.7% from 47.8 billion in the first half of 2017 to 44.5 billion in the first half of this year, while tonnage lifted dropped by 7% to 129.4 million tonnes. DB Cargo's revenue fell 1.8% to €2.11bn.

In contrast, DB's multi-modal logistics business DB Schenker reported a 2.8% increase in first half revenue to €8.3bn thanks to improvements in the performance of all four of its divisions, with land transport recording a 3.5% increase to 52.5 million consignments, air freight achieving a 5.9% jump to 649,000 tonnes, ocean freight growing by 2.3% to just over a million TEUs, and contract logistics revenue showing a 1.8% increase to €1.16bn.

DB's long-distance passenger business performed particularly well during the first half with revenue increasing by 7.3% to €2.18bn and traffic growing by 6% from 19.5 billion passenger-km to 20.6 billion. In terms of passenger journeys, the increase was more modest, with DB carrying 70.9 million passengers representing an increase of 3.8%. Conversely, regional passenger traffic was almost static at 20.6 billion passenger-km, although DB did manage to increase revenue by 1.7% to €4.3bn.

DB says use of the national rail network is continuing to grow, with a 1.1% increase in demand for train paths totalling 540 million km, while the proportion of the network used by non-DB operators has risen to nearly 32%.

The growth in traffic is making it increasingly difficult for DB to maintain a satisfactory level of punctuality for long-distance services. This fell from 78.9% in 2016 to 78.5% in 2017 and 77.4% for the first half of 2018. By contrast, the punctuality of regional services is stable at 94.4%.

DB is close to its capacity limits in Frankfurt, Hamburg, Cologne, Munich and other major hubs on the network.

Overall capital expenditure rose by 2.7% in the first half of 2018 to €4.2bn due to large increases in spending on the infrastructure as well new trains for both long-distance and regional services. As a consequence, net debt jumped by 5.8% to a record €19.7bn.

Total first half revenue grew by 2.3% to €21.55bn and DB predicts a similar growth rate for the full year to reach €43.7bn. Net profit dropped by 27.9% to €562m.

Hamburg has been selected to be a pioneer in digitalising rail transport in Germany. Specifically, a 23km section of the Hamburg S-Bahn network will be equipped for digital operation by October 2021. One positive effect will be higher service frequency on the line, which will translate to major improvements in transport services for passengers.

DB is offering innovative products to its passengers: when customers purchase a long-distance ticket, it will include travel to and from the train station by U-Bahn, S-Bahn, tram and bus. Customers in the Frankfurt metropolitan area can now book DB long-distance tickets using the app from RMV, their local transport authority.

Tickets from a total of 21 transport authorities have been integrated into DB Navigator to date.

The first-half performance of DB's international rail and bus business, DB Arriva, was mixed. The division achieved a 1.6% increase in turnover to €2.7bn despite a 1% drop in total passenger journeys to 990.3 million and a more worrying 2.8% fall in rail traffic to 6.4 billion passenger-km. Rail traffic is likely to drop further due to the loss of the Arriva Wales franchise in Britain, and problems with Arriva's Northern rail franchise in England as a result of disruption to services following the introduction of a new timetable in May. One of the main causes of the disruption was the failure by infrastructure manager Network Rail to complete the electrification of the Manchester – Preston – Bolton line which threw Northern's plans to operate services over the route with EMUs into disarray. Northern decided to cut 168 trains per day from its timetable on June 4 representing 6% of its services in a bid to stabilise the service. It reinstated 75% of the cancelled trains on July 30 and planned to reintroduce the remainder on September 1.

One new initiative is in Spain where Arriva submitted a request to the Spanish rail regulator in May to introduce an international passenger service between A Coruña and Porto in Portugal in the second or third quarter of 2019. This would be the first open-access operation over a Spanish high-speed line.

King's Cross – Waterloo

A recent article in Modern Railways dealing with passenger flows claimed that there were 18 different ways of going from King's Cross/St Pancras to Waterloo (presumably by rail).

Would any reader like to try to list them?

Ticket Gates and Machines



Brussels Metro: Ticket Gate for People needing Extra Time

In September, ORR published their "Market study into the supply of automatic ticket gates and ticket vending machines", looking at the near-monopoly in Great Britain.

Ticket vending machines (TVMs) sell around £2.1bn of tickets a year, about 20% of the total value of tickets sold on the UK railway (and ORR specifically says UK, although there is nothing about Northern Ireland in the paper as far as I can see). Automatic ticket gates (ATGs) account for around 4.4bn passenger entries and exits each year, on main line and metro networks. There are estimated to be 10,000 ATGs and TVMs in Great Britain (again, ORR specifically says Great Britain). 2663 of the 5128 ATGs are operated by TfL. Well maintained gates can last for 20 years, so the re-

supply market is small.

As a passenger passes through an ATG, a series of laser sensors tracks their movement through the gate to ensure it doesn't trap them or allow a second person through. Wide aisle gates have longer opening times.

There are two suppliers of ATGs – the US-owned Cubic (94% of the National Rail market) and the German Scheidt & Bachmann (S&B). S&B are one of four suppliers of TVMs (69% of the market): the others are the French Worldline (15%) and Parkeon (16%), and Cubic (who only supply TVMs to TfL).

One respondent to ORR's enquiries commented that Cubic charged 15%-20% of the rail price to bus companies buying barcode readers, and said that value for money was better in the more competitive TVM market. ORR specifically states that the evidence does not support any suggestion that prices in the Great Britain ATG market are so high as to raise any suspicion of illegality under competition law.

The Great Britain rail retail market is complex, with 55m fares available to purchase at any one time. There are five formats – magstripe, barcode, ITSO, Oyster and contactless payment card – and ATGs may need to process all or any of these, depending on location.

ORR decided that the best way forward was to develop a set of remedies to the problems they identify, rather than a reference to the competition authorities.

VIA Rail Canada Q2 Results

From Progressive Railroading

VIA Rail Canada Inc. served 1.13 million passengers in the second quarter, marking a 10% increase over the same period a year ago. Revenue increased 8.4% to C\$87.8 million compared with the same quarter last year, according to VIA Rail's second-quarter report. Ridership was highest along the Quebec City-Windsor corridor, which served 1.079 million passengers and logged revenue of C\$68.4 million, representing 11.5% and 13.6% increases, respectively.

The second quarter marked the 17th consecutive quarter of revenue growth and 10th consecutive quarter of ridership increases.

As the railroad marks its 40th anniversary this year, VIA Rail leaders are seeking to improve the rider experience, for example by awarding contracts to Bombardier and Cad Railway Industries to refurbish Heritage Fleet rail cars. And in June, the railroad announced the short list of potential manufacturers of a new fleet of trains for the Quebec City-Windsor corridor.

Fuel Efficiency on the North Atlantic Routes

From ATW Online



Norwegian Air Shuttle was the most fuel-efficient airline on North Atlantic routes in 2017, according to a new study. The LCC had a 63% better fuel-burn figure than the worst operator, British Airways (BA). The survey, which measured the 20 airlines with the greatest capacity operating nonstop flights between the US and various points in Europe in 2017, was published by the International Council on Clean Transportation (ICCT), an

BA Boeing 747-400 at Heathrow

independent non-profit organization founded to provide unbiased research and technical and scientific analysis to environmental regulators.

The survey reported that Norwegian Air Shuttle had an average fuel efficiency of 44 passenger-kilometers per litre of fuel (PKM/L), 33% higher than the industry average of 34 PKM/L. The second and third most efficient were, respectively, Iceland's WOW Air and Lufthansa Group subsidiary Swiss International Air Lines. BA's fuel-consumption figure was 27 PKM/L, 22% below the industry average. The next two least-efficient carriers were Lufthansa and United Airlines.

The estimated gap between the most and least fuel-efficient transatlantic airlines widened from 51% in 2014 to 63% last year. Norwegian's average fuel efficiency increased by 3 PKM/L, while BA's decreased by 1 PKM/L. Although the fuel efficiency of BA's fleet increased, and average passenger load factors were similar in 2014 and 2017, the freight share of total payload and average seating density of BA's fleet fell during this time.

The industry average fuel efficiency improved only marginally from 33 PKM/L in 2014 to 34 PKM/L in 2017. This improvement could be attributed to an increase in fuel-efficient aircraft.

Major improvers in the ranking from 2014 to 2017 include Virgin Atlantic (30 to 35 PKM/L) and Aeroflot (30 to 33 PKM/L). These improvements are linked to the increased use of more fuel-efficient aircraft—the Boeing 787-9 for Virgin and Boeing 777-300ER for Aeroflot.

The importance of seating density as a driver of fuel efficiency has increased since 2014 because of the expansion of carriers like LCC Norwegian and WOW Air, which operate transatlantic flights with more seats and a lower percentage of premium seats than their competitors. One significant factor in BA's poor figure was that the elderly Boeing 747-400 remains the most prevalent aircraft in the company's transatlantic fleet. They also carry more premium passengers. The only other carrier in the top 20 to operate this model was KLM Royal Dutch Airlines. The most common aircraft now operating US-European sectors is the Airbus A330-300.

BA plans to retire the 747-400 from its fleet by 2024. It also operates more fuel-efficient Boeing 787s on transatlantic routes, with average fuel efficiencies at or above the industry average.

New Heights?

Source: Financial Times

Apparently the median weekly wage of an airline pilot in the UK is £1726 gross, 35% higher than a decade ago.

At Ryanair, senior pilots are paid €140,000-€200,000, while at easyJet it's £150,000.

In China, Sichuan Airlines is advertising jobs at \$313,000 with a \$60,000 signing-on bonus.

The article noted that when Monarch went into administration last year, it had 340 pilots who were members of BALPA (British Airline Pilots' Association): of these, 260 found new jobs within a year. Less than 3.5% of BALPA members were looking for jobs.

Pollution behind Rolls Royce Engine Issues

From ATW online



Air pollution, especially in large Asian cities, is believed to be one cause of the reliability issues that have affected a large part of the Rolls-Royce Trent 1000-powered Boeing 787 fleet. But the manufacturer says it is close to finding a final fix to the problems.

Several 787s have been sitting at airports around the world while their engines are inspected and modified. Air China, Air New Zealand,

Airbus A350-900 with Rolls-Royce Trent Engine at Toulouse

British Airways and Virgin Atlantic are among those affected. Air New Zealand has suspended two routes partly because of aircraft shortages caused by the issue after being forced to make significant schedule changes earlier to accommodate the inspections and repairs mandated for its 787-9s. Many other airlines are also experiencing schedule disruption because of the engine issues.

Rolls Royce said it is completing development of the final element of a suite of modifications to fix the issues and says it is confident the redesign will be cleared for introduction in the next few months. The improvements will ultimately allow operators of earlier-standard Package B and C engines to resume unlimited long-range flights as well as relieve them of inspection burdens imposed earlier this year by regulators following the discovery of fatigue cracks.

The baseline problem was caused by “hot corrosion” in which the thermal barrier coating on the turbine blades was stripped away prematurely, exposing the underlying material to low-cycle fatigue. Analysis of the phenomena indicated it was related primarily to operations around airports in the Asia-Pacific region with high atmospheric sulphur concentrations. A new base material and coating to counter the corrosion is being installed in the engines.

The second issue affecting the Trent 1000 is a compressor-rotor cracking problem, which Rolls is tackling by redesigning the blades. Certification of the redesigned rotors is in the final stages. At the same time, the company is collecting data to back up its assertion that current Extended-range Twin-engine Operational Performance Standards (ETOPS) restrictions are too conservative and can be eased.

Earlier this summer, an EASA engine-inspection directive was issued together with an FAA order limiting ETOPS flights to 140 minutes from the nearest suitable airport for certain aircraft (compared with the 787’s normal 330 minutes).

The blade cracking in the compressor was traced to interaction with fan wakes that produced a vibrational response in the compressor blades. This caused microcracking that could develop into full cracks and cause blade failures.

After inspecting the suspect population of 366 engines and finding around one-third of them affected by cracks, the “forensic big data” uncovered surprising results. Although more than 100 engines showed the same pattern of small cracks, only one engine had progressed to the point of failure.

Rolls set about proving the slow propagation speed by testing an instrumented Trent 1000 with cracked rotors. Ground tests were initially conducted in Derby with almost 10 hours accumulated running at maximum continuous power without further crack propagation. The same engine has now been flown to Rolls’ flight test operation in Tucson, Arizona (presumably inside an aircraft, rather than powering it!), and attached in mid-September to the manufacturer’s 747-200 flying testbed.

The flight test program is expected to be a relatively short effort involving medium-level flights up to 12,000 feet with the engine running at maximum power. The test condition represents the power setting for a single engine operating at the drift down altitude of a 787 during an ETOPS diversion. Flights will begin this week over a Pacific test range off the California coast, and are scheduled to be followed by colder weather tests later in September in the same altitude, speed and power regime at Fairbanks, Alaska.

Qantas Ultra Long Haul

Qantas has been flying non-stop between Perth and London for some time. These 17-hour flights are accounted a success, with a 92% load factor. This has encouraged the company to investigate flying Sydney – London non-stop: a fleet of 10-12 dedicated aircraft would probably be necessary for this and other similar ultra-long flights. Sydney – London is 17,012km and flights are likely to take 21 hours: other possible destinations are New York, Chicago, Rio de Janeiro and Cape Town. Flights, with modified Boeing 777-8x or Airbus A350-1000 aircraft, could start in 2022.

Recent Airline Statistics



Air Asia Planes at Kuala Lumpur International Airport

Air Asia recorded some interesting figures recently in its Q2, 2018 report.

Revenue has been above 10m RMB in the four quarters ending Q2, 2018 and Q1, 2018: this is the first time this has happened since my series starts in the four quarters to Q4, 2015 when it was 6.3m RMB. Revenue passenger kilometres (RPKs) have seen their third

consecutive 4-quarter moving total above 50,000m and available seat kilometres their second consecutive one above 60,000m. It is also the second consecutive 4-quarter period when passenger numbers were above 40m.

Other statistics are less positive. Revenue/passenger is a record low (246 RMB): revenue/passenger kilometre is up a bit on the last few 4-quarter periods at 0.1914RMB – but it has been above 0.21. Journey length is also down a bit – from 1313km in the four quarters to Q4, 2016 to 1283 in the latest four quarters. However in the year to Q4, 2015 it was 1237.

Recent IATA Statistics

As last month's issue was being finalised, IATA released its **Airlines Financial Monitor** for July-August 2018. Key points were as follows.

The latest Q2 2018 data reaffirm a decline in airline profitability compared to the same quarter a year ago, probably because of the continuing impact of high oil prices. Industry-wide cash flow generation is broadly unchanged compared with Q2 2017.

Global airline share prices edged higher in August, matching the wider global equity index, and consolidating the strong gain recorded in July. August's improvement in the airline share price index was driven solely by the North American carriers. Airline shares are still 10% lower than at the beginning of this year.

Oil prices eased slightly again in August, but the upward trend remains in place. Jet fuel prices were steady, at just under US\$90/bbl.

Passenger yields (base fare only) continue to trend lower overall, however, premium cabin yields continue to show more resilience than that of the economy cabin, helping to offset some of the impact of higher input prices.

Passenger demand remained robust at the start of the peak northern hemisphere summer period, growing at an above-trend rate. Freight demand has slowed over the recent period, slipping below the pace of capacity growth.

At the beginning of October, IATA published their **Air Passenger Market Analysis** for August 2018.

Highlights were as follows.

Industry-wide revenue passenger kilometres (RPKs) grew by 6.4% year-on-year in August – underlining previous signs of solid growth in passenger traffic during the peak season over the northern hemisphere summer. Passenger volumes have risen by 6.8% over the first eight months of the year compared with the same period last year, although this growth is slightly less than experienced in the first eight months of last year (which showed a 7.9% growth). Higher fuel and labour costs are slowly translating into higher fares.

The industry-wide load factor was at its highest ever level since IATA's time series began in 1990 (85.3%). As was the case last month, European airlines led the way (88.7%), followed by North American carriers (86.5%).

Domestic India RPKs posted their 48th consecutive month of double-digit annual growth in August. Meanwhile, Asia Pacific carriers topped the international RPK growth chart for the second time in five months. There has been little growth among European carriers.

Uber and Lyft at US Airports

From Morningconsult

According to the Airports Council International-North America Concessions Benchmarking Survey this year, 46% of airports' cash flow comes from places like airport retail stores and rental cars. The largest part of this income comes from car parking. On average, car parking and ground transportation revenue provides 19% of all US airport revenue, or about \$3.49 billion annually, according to calculations from the report. For some major airports, it can make up more than a quarter of all revenue.

The popularity of ride-hailing apps has had an adverse impact on airports' bottom line, according to a 2017 report from the Transportation Research Board. It estimates that 10% to 20% of customers of transportation network companies, or TNCs, previously used private vehicles to get to the airport, and it predicts up to a 13% decline this year in both public parking transactions and rental car revenue as a result of the apps' popularity. For most airports, fees charged to TNCs would not make up for the shortfall in parking revenue, according to the report. It is estimated that every Uber or Lyft vehicle is displacing eight to 10 parked vehicles at any given airport. Uber serves 146 airports to Lyft's 326, including the 20 airports in this analysis.

Las Vegas McCarran International Airport has seen one of the largest discrepancies in parking revenue growth, with operating revenue expanding 55% but parking increasing 34% between 2012 — a year after Uber debuted — and 2017, according to the airport's annual reports. As a tourist destination, Las Vegas has a higher number of visitors over locals, so there has always been a high demand for temporary transportation such as taxis and, in recent years, TNCs. The airport attributes the discrepancy in growth rates to passenger volume increasing overall,

which pushed up operating revenue, and does not point to TNCs to fully explain the gap.

In contrast, the Seattle-Tacoma International Airport has achieved what only a handful of major US airports have: seen its growth in parking revenue eclipse operating revenue. Much of that can be credited to its in-house marketing team: Sea-Tac devotes a significant portion of its \$300,000 marketing budget toward promoting parking.

TNCs now constitute 41% of Sea-Tac's ground transportation, while taxis make up 18%. In March 2016, taxis made up 31% of ground transportation. This is roughly in line with findings from the TRB report, which estimated that TNCs created a decline of up to 30% in the use of taxicabs at any given US airport.

Other airports have managed to keep their parking growth on track thanks to fees. Minneapolis-Saint Paul International Airport is one of them, and the \$3 fee it charges TNCs keeps its revenues fairly balanced. Minneapolis' growth in parking revenue has nearly mirrored that of operating revenue between 2012 and 2017 (31% and 33%, respectively), but parking revenues dropped 2.6% over the past year – probably a result of the popularity of TNCs. The airport is still planning on investing in parking. Its 5,000-space parking structure that is set to open in 2019 will add additional parking options to the airport's 23,000 existing spaces. The airport aims to get creative with its parking pricing and possibly make space in the structure for autonomous vehicles.

As a point of comparison, Vancouver International Airport, the largest airport in a city where Uber has been banned and Lyft does not operate, has seen operating and parking revenue growth nearly mirror each other: 31% and 34%.

Airports need to become more sophisticated in their parking offerings by providing different pricing based on the time of day or weekends, appealing to customers with more convenient options such as a “pre-booking” service, or offering services like a valet and car wash.

Sea-Tac has said they're already working on a pre-booking option, which will come in early- to mid-2019.

Airports should also be mindful of the rising trend of autonomous vehicles and could market themselves as a space to store and charge that technology, further entrenching their status as transportation hubs.

Road

Bus Statistics

DfT recently released an update of BUS0401b, which shows bus revenue at current prices (adjusted for inflation).

Revenue (in £m) for buses in Great Britain was 5946 in 2004/5: it increased to 6959 in 2009/10 before dropping slowly to 6411 in 2016/7. London, with about a third of bus revenue, has seen relatively little fluctuation. The six English Metropolitan Areas showed the same trend as seen in Great Britain – from 1358 in 2004/5 to 1434 in 2009/10, then a steady decline to 1235 in 2016/7. The same was true in non-metropolitan areas – the change was from 1899 in 2004/5 to a peak of 2417 in 2009/10 then down to 2187 in 2016/7.

Scotland grew from 579 in 2004/5 to 720 in 2009/10 and then dropped relatively little: revenue has stayed around the £700m mark. Wales, however, followed the national trend - £198m in 2004/5 to £230m in 2011/12 then a drop to £173m in 2016/7.

Bus journeys are shown in BUS0103, with BUS0103b showing journeys/head.

Looking at the same range of years as in BUS0401b, the GB figure starts at 79, climbs to 87 in 2008/09 before dropping back to 77 in 2016/7. In London, the figure grew from 242 before plateauing at around 280 between 2007/8 and 2014/5. It then dropped in both successive years to 255. In the English Metropolitan Areas, the figure was virtually static at 95 from 2004/5 to 2009/10, after which a decline set in: it is now (2016/7) 79. In the English non-Metropolitan areas, there has been little change – journeys/head have averaged around 37 all through the period.

Scotland grew from 90 in 2004/5 to 94 in 2007/8: it then dropped to 73 in 2016/7. Finally in Wales, the figure was 42 in 2004/5: after staying virtually the same until 2008/9 it dropped to 32 in 2016/7.

Commute Times in the US

From National Public Radio

New survey data show the average American's commute increased to 26.9 minutes from 26.6 minutes the previous year, according to the US Census Bureau's 2017 American Community Survey. That 18-second increase may seem small, but it represents an extra two and a half hours on the road for Americans last year, according to the Washington Post. Total commute time has been steadily rising, with more than 14 million people now spending an hour or more travelling to work in 2017.

The longest average travel times are generally associated with large metropolitan areas. The US Census Bureau said that the New York-Newark-Jersey City metro area has an average travel time of 37 minutes.

Among the shortest average travel times, usually less than 20 minutes, were in Cheyenne, Wyo. and Grand Forks, N.D.

Population growth and the booming job market means more vehicle miles travelled. When vehicle miles travelled goes up — especially in dense areas — travel times go up with it. App based services like Uber, Lyft and Via also contribute to time spent in traffic because they are often in motion dropping off and picking up passengers. These vehicles have a greater impact than a car that is parked in a lot or garage and doesn't move during the course of a day. Speeds over the five or six years that Uber and others have been in existence have dropped from a very slow 6.5 miles/h to 4.7 miles/h in New York City. However, more trucks making daily deliveries for companies like Amazon and others also decrease speeds.

As numbers are rising, municipalities are grappling with solutions. Encouraging people to use public transportation is one. Another is congestion pricing, which makes people pay to drive on roads they normally drive on for free. This would in effect limit the number of cars on the roads, allowing the remaining vehicles to move faster.

Oh Deer!

From AASHTO

The 16th annual State Farm deer-vehicle collision study, released on October 1, indicates that US motorists are less likely to be involved in a collision with a deer, elk, moose, or caribou in 2018 compared to previous years – despite the fact that there are nearly four million more licensed US drivers in 2018 compared to 2017 and that vehicle miles travelled (VMT) has increased.

State Farm's research indicates that US motorists have a one in 167 chance of colliding with a deer, elk, moose, or caribou this year, compared to a one in 162 chance in 2017. The insurance company estimated motorist collisions with deer, elk, moose, and caribou across the US dropped slightly to 1.33 million between July 1, 2017 and June 30, 2018 — down from 1.34 million in 2017.

Yet the costs to motorists of collisions with deer or related animals is rising as damage caused by an encounter with those animals – a male deer can weigh up to 300 pounds – jumped \$162 to \$4,341/claim from 2017 to 2018 period.

In terms of states where the chances of hitting a deer is highest, State Farm said that for the 12th consecutive year, West Virginians were most likely to hit a deer. However, the likelihood of having an insurance claim involving a deer was one in 46 for West Virginia drivers; down three points from 2017.

The insurance company noted that the chance of hitting a deer or other large animal doubles in the fall, with November, October and December, in that order, as the months for the highest number of claims nationwide. Yet those “high claim” months can vary depending on the state and its particular type of deer population.

For example, the Wisconsin Department of Transportation noted earlier this year that June is the month when the chances of a deer-vehicle collision are greatest within its borders.

Deer activity increases in June as females search for places to give birth and young deer separate from their mothers and while crashes between deer and motor vehicles tend to peak in the fall – just as State Farm's data indicates – June is typically when motorists are most likely to be injured in a deer/vehicle crash in Wisconsin.

In 2017, WisDOT said Wisconsin law enforcement agencies reported 20,482 deer-motor vehicle crashes, which resulted in nine fatalities – six of them motorcyclists.

US Traffic Fatality Trends

Source: AASHTO

Data released by the National Highway Traffic Safety Administration (NHTSA) in early October indicates highway fatalities declined overall in 2017 after two consecutive years of large increases, with preliminary estimates for the first six months of 2018 indicating that the downward trend in fatalities is continuing – even as vehicle miles travelled (VMT) continues to rise. According to NHTSA's data, 37,133 people died in motor vehicle crashes in 2017, which is 673 fewer deaths compared to 2016 – translating to 1.8% year-over-year decrease in fatalities. That compares to a 6.5% increase in fatalities from 2015 to 2016 and an 8.4% increase in deaths from 2014 and 2015.

The decline in fatalities is also occurring as road travel by Americans continues to increase. NHTSA said that, according to Federal Highway Administration data, VMT increased by 1.2% from 2016 to 2017. As a result, the fatality rate/100 million VMT decreased by 2.5% year-over-year, falling from 1.19 in 2016 to 1.16 in 2017. NHTSA noted that 2017 highway fatalities declined in several key areas: speeding-related fatalities dropped 5.6%; cyclist deaths decreased 8.1%; and pedestrian fatalities dipped 1.7%.

Yet the agency added that highway fatalities in 2017 jumped significantly in the sport utility vehicle category and the commercial trucking sector. Fatalities among SUV occupants climbed 3%, and deaths in crashes involving a tractor-trailer were up by 5.8%.

However, NHTSA added that the overall downward trend in highway deaths has continued through the first half of 2018. The agency said a statistical projection of traffic fatalities for the first six months of this year estimates that 17,120 people died in motor vehicle traffic crashes; a decrease of about 3.1% compared to the 17,664 fatalities reported during the first half of 2017. And that decline is occurring even as VMT keeps increasing: FHWA data showed VMT during the first six months of 2018 climbed to about 5.2 billion miles, or a 0.3% increase compared with the VMT recorded during the same period of 2017. That means the fatality rate continues to drop, falling to 1.08 fatalities/100 million VMT for the first six months of 2018 compared with 1.12 fatalities/100 million VMT in the first half of 2017.

The agency also noted another trend: that the number of urban highway fatalities was higher than rural highway deaths in 2016 and 2017. In 2015 and earlier, rural fatalities outnumbered urban fatalities, NHTSA noted, and suggested population shifts may be one reason driving that change. The agency said that US Census Bureau data indicate that the nation's urban population increased by 12.7% from 2007 to 2016, while its rural population decreased by 11.8%, with urban highway fatalities rising by 17.4% over the last decade and rural fatalities dropping by 18%.

Vehicle Speed Compliance Statistics Great Britain 2017

The DfT published this annual release in September. As usual, it shows widespread disregard for speed limits. I do wonder what the reaction of the media would be if they were told that, depending on the speed limit, between 37% and 75% of freight trains were exceeding the speed limit – by more than 10 miles/h in 5% to 11% of cases? But HGVs do this as a matter of course.

The headline figures are that, on motorways, 48% of cars exceeded the speed limit in 2017 with 12% doing so by over 10 miles/h: on single-carriageway roads 9% of cars exceeded the limit, on 30 mile/h roads, 52% of cars did so (6% by more than 10 miles/h) and in 20 mile/h zones, 86% of cars were over the limit. A qualification is that the measurements are only taken in free-flow conditions, exaggerating the overall rate. Nonetheless, it would be interesting to know how many drivers in total break speeding laws each year – how many offences there are.

Data are not comparable with previous years: sites have been reviewed and several non-free flow or otherwise unsuitable sites have been removed.

The report shows, for each type of vehicle, the distribution of speeds by road type (so you can tell, for example, that 84% of vans exceed 20 mile/h limits, 55% exceed 30 mile/h limits and 49% exceed motorway speed limits).

In 2015, speed limits for HGVs over 7.5 tonnes MLW increased from 50 mile/h to 60 on dual carriageways, and from 40 mile/h to 50 on single carriageways. This has reduced non-compliance from 80% in 2011 to 20% in 2017. Average speed (a contributor, of course, to accident severity) has hardly changed.

Overall, on motorways and national roads, the average free-flow speed of each vehicle type is below the speed limit (except for motor cycles on motorways). For 30 mile/h roads, free flow speeds are slightly above limits for some vehicle types: for 20 mile/h zones they are consistently above.

1.97m fixed penalty notices were issued for speeding in England & Wales in 2016, up 1.3% on the previous year. 1.23m drivers attended speed awareness courses in the UK in 2017 – the same as most years from 2014.

Exceeding the speed limit was reported as a contributory factor for 4545 accidents in 2016, down from 2014's peak of 4783. It was a contributory factor in 1299 (7.3%) fatal and serious accidents – marginally up on the previous two years.

Sea

LNG Going Up

Imports of liquefied natural gas (LNG) from the US are on the increase. The EU has published a list of new developments in ports for importing LNG: this can be found at http://europa.eu/rapid/press-release_IP-18-4920_en.htm.

Sea Passenger Statistics

DfT recently released a suite of data on sea passengers.

SPAS 0101 deals with international short-sea passengers.

Dover, historically the major port for cross-Channel passengers, saw numbers peaking at 21.236m passengers in 1998. Thereafter, the impact of the Channel Tunnel was clear: there were 19.3m in 1998, 18.3m in 1999 and 16.1m in 2000. There was a brief surge to 16.3m in 2002 but then, with brief interruptions to the trend, it was downhill all the way to 2012 (11.9m). Another climb to 13.3m in 2014 was followed by continued decline to 11.7m in 2017. This is the lowest figure since 1980.

West coast ports, serving Ireland (Cork, Rosslare and Dublin/Dun Laoghaire as shown by SPAS 0102), have shown less of a decline despite low cost air carriers. 2.667m passengers used this set of ports in 1983: by 1998 the figure was 4.6m. It then dropped away and has been below 3m since 2011. At 2.688m, the 2017 figure is virtually the same as that for 1983.

The 'All short sea' category peaked at 36.3m in 1997: there has been a fairly steady decline since then to 19.5m in 2017.

The first figure for cruise passengers was recorded in 1970, when there were 287,000. After dropping to 86,000 in 1982, the number grew to 226,000 in 1996. Cruise passengers were not recorded in 1997 and 1998: in 1999 the number was 445,000. In 2006 it was just over a million: in 2016, the last year for which data are available, it was just under two million.