Goodbody

Airlines and Travel

Invest in Aviation Building a Sustainable Future for Air Travel

October 2023

Passenger numbers are expected to double by 2040 and the challenge for the commercial aviation sector is to build a sustainable future

Significant investment will be required in sustainable aviation fuel, new technology and operational improvements

The investment into newer, more efficient aircraft is expected to be over $1tn over the next 10 years, this presents an opportunity for investors

Analysts

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Airlines

Why invest in aviation - Building a Sustainable future for Air Travel

Equity Research **16/10/2023**

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Passenger numbers are expected to double between 2019 and 2040…

The International Air Transport Association's (IATA) long-term view for passenger traffic growth is that demand for air travel will double between 2019 and 2040, resulting in an annual average rate of 3.4%. To put that forecast in more stark terms, passenger numbers are projected to increase from c.4 billion in 2019 to just over 8 billion at the end of the forecast horizon. In the near-term the balance of risks to this forecast remains tilted to the downside with challenges such as airline costs, geopolitical uncertainty, and macroeconomic headwinds to be dealt with. Over the longer-term IATA also highlights the uncertainty around climate change and the costs associated with the net zero transition as major concerns.

IATA forecast c.4bn additional passengers by 2040

	Recovery year	CAGR (2019 - 2040)	Additional passengers
Africa	2024	3.40%	155.72m
Asia Pacific	2024	4.60%	2554.41m
Europe	2024	2.10%	665.81m
Middle East	2024	3.70%	276.03m
North America	2023	2.20%	564.98m
Latin America & Caribbean	2023	2.90%	313.47m
World	2024	3.40%	3940.8m

Source: IATA Sustainability and Economics

… bringing a unique set of challenges for the aviation industry…

Global equity markets remain focused on the shorter-term issues such as the current inflationary cost pressures, the impact of higher airfares on demand and the general macroeconomic headwinds caused by higher interest rates. Post-Covid credit spreads have increased but the debt markets remain very much open to the aviation sector. While remaining mindful of the short-term, we have taken a step back to assess the biggest challenges faced by the commercial aviation sector over the next decade:

- Sustainability
- SAF scalability
- New technology
- Operational improvements
- OEM issues
- Airport congestion
- Pilot shortages
- Industry consolidation

…as well as offering a platform for growth for the right businesses…

In the next decade, commercial aviation will provide a growth platform for a variety of business models including airlines, lessors, OEMs, airports and other service providers. Investors will have to navigate these opportunities knowing that air travel is a volatile and often capital-intensive business. However, the aviation industry has shown an ability to generate long term value when led by management teams focussed on efficiency, scaling and competition.

…and a big opportunity for investors

The scale of investment required over the next decade is phenomenal. We estimate that the investment in the global fleet alone will come to over c.$1.1tn. While there will be further investment by existing operators, private equity, sovereign wealth and governments, there will also be a significant need for funding from both the equity and debt capital markets.

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Global passenger numbers expected to reach 8bn by 2040

According to the IATA's June 2023 Global Outlook for Air Transport, its long-term view for passenger traffic growth is that global demand for air travel is expected to double from 2019 to 2040. This will see passenger numbers growing at an annual average rate of 3.4%. Origin-destination passengers are projected to increase from c.4 billion in 2019 to just over 8 billion in 2040. In the short-term IATA is of the view that the balance of risks is to the downside, driven by the near-term challenges of higher costs, geopolitical uncertainty, and macroeconomic headwinds. Over the long run, IATA also highlights the uncertainty around climate change and the costs associated with the net zero transition as major concerns for the aviation industry.

With global equity markets focused on the shorter-term with issues such as the inflationary cost pressures, higher airfares and the general macroeconomic headwinds caused by higher interest rates, we have decided to take a step back to think about the biggest challenges faced by the commercial aviation sector over the next decade.

1. Sustainability - The sustainability agenda represents a call to action for the entire commercial aviation sector. Air traffic accounts for c.2% of global CO2 emissions but the journey to net zero in 2050 will require significant investment.

2. SAF scalability – SAF has been identified as the biggest contributor to reducing carbon emissions but there are still significant question marks over the scalability of SAF production.

3. New technology – Once again aerospace engineers will have to deliver what seems impossible with most research focusing on electric propulsion and hydrogen engines

4. Operational & Infrastructure improvements – The Single European Sky ATM Research project aims to contribute to the Single European Skys 10% emissions reduction target.

5. OEM production issues – While supply chain issues are getting all of the headlines now, just to replace an aging fleet with more efficient aircraft the OEM's will need to increase production meaningfully.

6. Airport congestion - According to IATA there are over 200 Level 3 airports globally, 50% of all passengers depart from a Level 3 airport and 35% of all flights operate between Level 3 airports. Increasing passenger numbers combined with the sustainability agenda will add to the pressure on airports.

7. Pilot shortages – Unless there is a downturn in demand or strenuous efforts by the aviation industry, Oliver Wyman expects global aviation to be short nearly 80,000 pilots by 2032.

8. Industry consolidation, government intervention and new entrants - Given the above a logical assumption is that the industry will continue to consolidate, with the pace of consolidation likely increasing. However, this process will continue to be influenced by the levels of government intervention in the industry. At the same time there remains an insatiable appetite amongst investors to invest in start-ups within the sector.

1) Sustainability – A call to action for the commercial aviation industry

As mentioned above, the sustainability agenda represents a call to action for the entire commercial aviation industry. While air traffic only accounts for c.2% of global CO2 emissions, the industry is often highlighted by politicians as one which needs to reform. As a result, there seems to be a public perception that aviation's share of global emissions is higher than it is. Aside from dealing with the public perception issue, the journey to net zero in 2050 will also require significant investment from all of the stakeholders in the industry.

In terms of the pathway to net zero in 2050, at the UN December 2015 Climate Change Conference (COP21) in Paris, world leaders signed the Paris Agreement. The Agreement sets out the long-term goal to substantially reduce global greenhouse gas (GHG) emissions to limit the global temperature increase this century to 2 Celsius while pursuing efforts to limit the increase even further to 1.5 degrees, to review countries' commitments every five years and to provide financing to developing countries to mitigate climate change. Acting in line with this, the EU has signed several targets since ratifying the Paris Agreement in October 2015. European climate law makes reaching the EU's goal of reducing EU emissions by at least 55% by 2030 a legal obligation. The Fit for 55 package is a set of proposals to revise and update EU legislation and to put in place new initiatives with the aim of ensuring that EU policies are in line with the climate goals agreed by the Council and the European Parliament.

In response to the changes in climate regulations, the aviation sector, as a carbon intensive industry, needs to adopt significant changes to its operations. The aviation industry has combined under a number of organisations so as to better coordinate, plan and lobby the process by which emissions are reduced. In 2021, the International Air Transport Association (IATA) passed a resolution committing its members to achieving net-zero carbon emissions from their operations by 2050. This pledge brought air transport in line with the objectives of the Paris agreement to limit global warming to 1.5°C. IATA represents c.300 airlines and 83% of total air traffic. This was quickly followed by the Air Transport Action Group (ATAG) adopting a long-term climate goal of net-zero carbon emissions by 2050.

In early 2022, the International Civil Aviation Organization's (ICAO) committee on Aviation Environmental protection published their long-term aspirational goal to achieve net zero CO2 emissions by 2050.

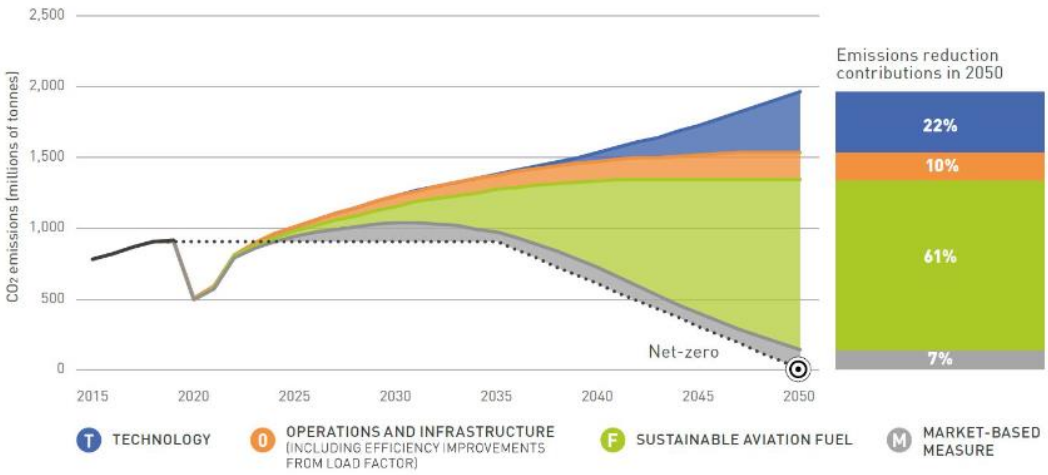
As a result of this the aviation sector has identified four main pillars to get to net zero outcome:

- the shift to sustainable aviation fuels (SAF);
- new aircraft and engine technologies;
- improvements in operation and infrastructure; and
- market mechanisms to deal with any residual emissions.

2) SAF – Scalability remains a question mark

In most of the net-zero scenarios that have been identified, SAF is the single largest contributor to reducing carbon emissions and as a result of this the scalability of the SAF industry is a major challenge for the aviation sector over the coming decades. EU regulators are leading the transition through setting SAF mandates with the ReFuelEU Aviation Initiative. Currently, blending is capped at 50% but engines have been tested using 100% SAF without any operational issues, although any maintenance issues arising from 100% substitution are not yet fully understood.

SAF is expected to be the biggest contributor to emissions reduction



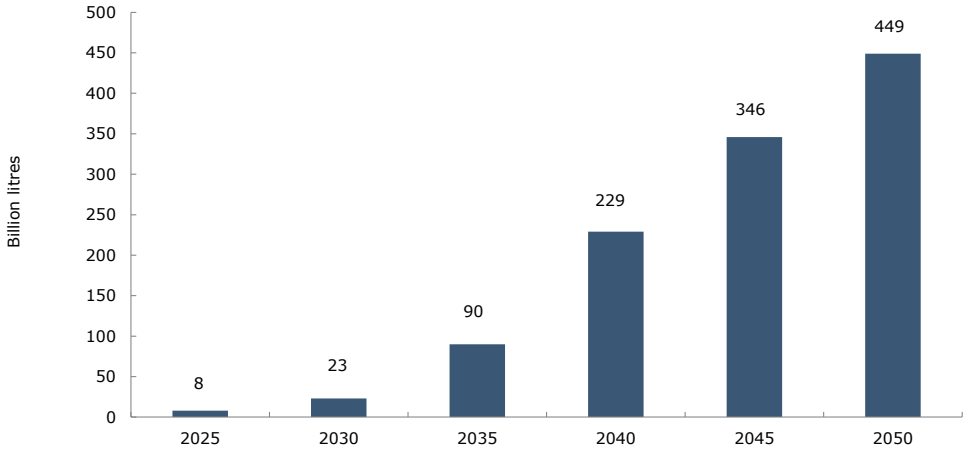
Source: ATAG Waypoint 2050 report

Depending on the type of SAF, it can reduce lifecycle CO2 emissions by up to 99% when compared to fossil-fuel jet kerosene. Most biofuels available today come from the processing of fats, oils, and greases. They reduce CO2 emissions compared to conventional jet fuel by between 50% and 80% over the lifecycle of the product. The next generation of SAF is derived from biomass and municipal solid waste. These have the potential to reduce greenhouse gas emissions by 85% to 95% over their lifecycle compared to traditional fossil-based jet fuel. Biomass includes algae, crop residues, animal waste, sludge waste, and forestry residue. The fuel itself is derived from the carbon-based materials contained in living organisms that can be gasified. However, both first and second-generation biofuels are limited in their availability because of the nature of their feedstock.

The Power-to-Liquid conversion of renewable energy into "synthetic fuels" through electrolysis (99% reduction in greenhouse gases) looks the most promising technology for SAF although it is very much still in its infancy and there are major question marks over the availability of enough sustainable electricity. Indeed, Carsten Spohr, CEO of Lufthansa Group, was speaking at an aviation conference in late September. While Lufthansa has introduced green fares and has been buying SAF, Mr Spohr commented that switching the airline to green fuels could come at a big price. He suggested that Lufthansa could require around half of Germany's electricity to create enough fuel and that the likelihood of having enough electricity to produce enough fuel is low. As well as the technical challenge as seen above, the challenge of developing enough capacity and distribution infrastructure should not be underestimated.

While a lot of commentary focuses on the current price of SAF versus kerosene jet fuel, ultimately we believe pricing will reflect the economies of scale as production ramps. However, the ramp-up required is huge and that will involve very significant investment. Production of SAF tripled to 300m litres in 2022 but this is a drop in the ocean when compared to the 449bn litres IATA estimates will be required in 2050 if the net zero transition is to occur. This is equivalent to a c.30% CAGR to 2050. While offtake agreements have grown rapidly over the last few years, IATA continues to call for production incentive to support aviation's energy transition. It is also calling for the diversification of SAF research and investment to include already certified SAF pathways, to accelerate R&D for SAF production pathways that are currently in development and to scale up feedstock conversion technology.

IATA forecasts a requirement for c.450bn litres of SAF by 2050



Source: IATA, Goodbody

3) Technology – Delivering the impossible yet again

Over the last 120 years aerospace engineers have at times seemed to have the ability to deliver what looked to be the impossible. Over that period we have gone from the first successful powered flight to the ability to fly something as large as an A380. Looking forward, these same engineers will be looking for further fuel efficiency improvements and emissions gains by challenging what is known about both airframes and propulsion systems. While some recent developments such as geared turbofan engines, very high bypass ratio engines and wingtip devices will drive a further 15%-25% fuel efficiency improvements over the next two decades, to deliver the scale of benefits required will require some radical solutions.

Commercial aviation currently operates with two engine concepts, the turbofan and the turboprop. Each can run on blended or pure SAF fuel, which offers a significant improvement in emissions. However, to eliminate emissions in the propulsion system will require new technologies, with the industry focusing on both electric and hydrogen propulsion systems to achieve the net zero target.

Electric propulsion: Electricity stored in batteries or fuel cells is used to drive propellers or fans. CO2 emissions during operations are zero for fully electric aircraft while the lifecycle emissions will depend on the primary energy mix for electricity generation. There are also the additional benefits in terms of the eradication of contrails and nitrogen oxides emissions. Electric motors are also quieter than combustion engines, reducing noise pollution which would possibly allow for increased operational hours at airports. Small fully electric aircraft are already flying. Electric aircraft with up to 19 seats are planned for the later 2020s, and regional aircraft in the 2030s. The major issue with electric propulsion is the weight of batteries. This needs to be brought down so as to use them in planes of up to 100 seats. One example given in the Waypoint 2050 research suggested that 70-seat turboprop aircraft flying 200 nautical miles (1 hr) would require a battery that weighted more than the design payload of such an aircraft. Furthermore, designers face the technical difficulty of aircraft needing differing discharge rates for flight phases such as take-off.

Hydrogen engines: Hydrogen is a carbon-free fuel that can be used to replace jet fuel in conventional engines or in fuel cells as an electrical power source. As a zero-emission fuel, hydrogen is sometimes seen as the 'Holy Grail', especially if the hydrogen is 'green' as in it is extracted from water using renewable electricity such as solar and wind power, with the by-product, oxygen, released into the air. However, this process accounts for only a tiny fraction of today's total production with the vast majority extracted from lignite coal, releasing CO2 emissions into the air. Additionally, a shift to hydrogen has many technical hurdles yet to be addressed. In terms of weight, hydrogen it is roughly one third of the weight of jet fuel but with the same energy content. However, its volume even in liquid (cryogenic) form, is four times larger. As such, much larger tanks as well as fundamental changes in the aircraft fuel system would therefore be needed, especially given that for hydrogen to remain in a liquid state, it needs to be stored below its boiling point of minus 253 Celsius.

4) Improvements in operations and infrastructure

The European aviation industry often quotes a 10% improvement in operational efficiency and reduced emissions based on proposed improvements in operation and infrastructure. The Single European Sky (SES) ATM Research (SESAR) project is seen as an important driver of this outcome. SESAR contributes to the targets of the SES by designing, developing and deploying innovative technological and operational solutions for managing air traffic in a more efficient manner. SESAR aims to contribute to the SES 10% CO2 reduction target by reducing fuel burn by between 250kg and 500kg per flight by 2035. This corresponds to between 0.8 to 1.6 tonnes of CO2 emissions per flight.

On the ground: SESAR works with airport operators on solutions to optimise taxi and runway usage to avoid unnecessary fuel burn. Trials at Paris Charles de Gaulle airport show that this solution can result in a c.10% reduction in taxiing time and an average reduction of c.20% in waiting time at the runway threshold during peak hours. This represents fuel savings of approximately 10% per flight.

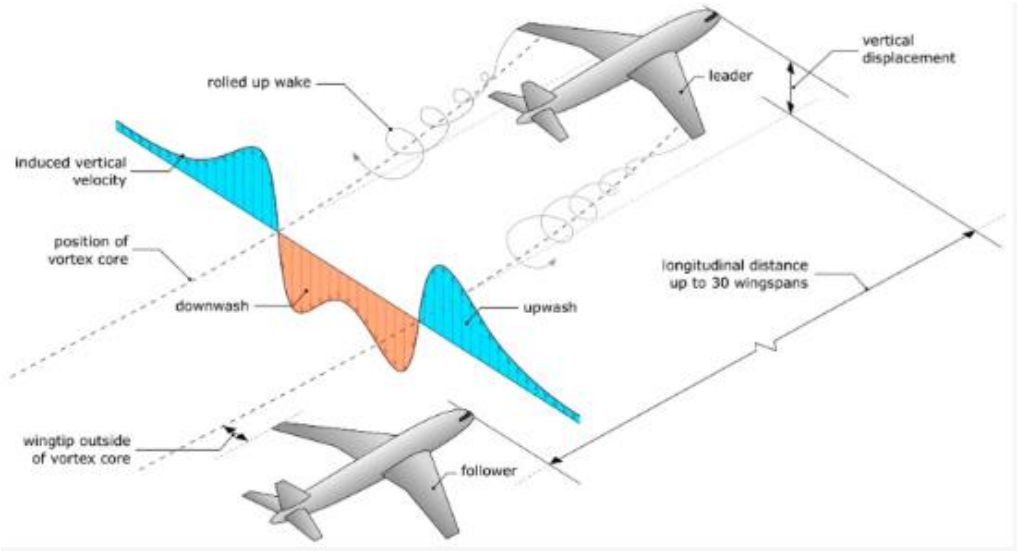
In the air: SESAR is working on making it possible for airlines to freely plan and fly the most efficient routes providing a contribution to emission and fuel efficiency by reducing flown distances and flight times. Recent trials have shown that "free routing" could reduce flight distances by c.5%, while flight times could be shortened by c.2 minutes, leading to a reduction in fuel burn ranging between 6% and 12%.

Take-off and landing: SESAR also looks at fuel inefficiencies during the takeoff, approach and landing phases of the flight. Solutions include continuous climb and descent operations, time-based separation and extended arrival management. Trials of extended arrival management have shown that early sequencing of aircraft can reduce holding times by up to one minute resulting in fuel savings, lower CO2 emissions, as well as reducing noise for communities.

Other ideas include the requirement for all aircraft to operate Automatic Dependent Surveillance - Broadcast coverage over the North-Atlantic, using space-based receivers, which relay signals to Air Navigation Service Providers on both sides of the Atlantic. This allows for more accurate management of optimal weather driven routes. Historically, given the issue of tracking aircraft out over the Atlantic, flights used the so-called North-Atlantic Tracks which were a number of fixed routes that can be changed twice a day depending on weather conditions.

Another area of potential fuel and emission savings that is being investigated is the concept of wake energy retrieval. Also known as cooperative trajectories or extended formation flight, this is where an aircraft following another aircraft could benefit from reduced air resistance and free lift enabling them to reduce engine thrust and fuel consumption. Studies by Boeing and Airbus have shown a 5-10% benefit in terms of fuel burn for the following aircraft and the original research by Germany's Technical University of Braunschweig proved the concept in flight in 1984 achieving a 15% power saving. However, significant issues over separation safety, the sharing of benefits and related scheduling mean that this development remains some time away from being adopted by the commercial aviation industry.

Formation flight offers the promise of 5-10% lower fuel burn



Source: MDPI, Goodbody

5) OEM production issues

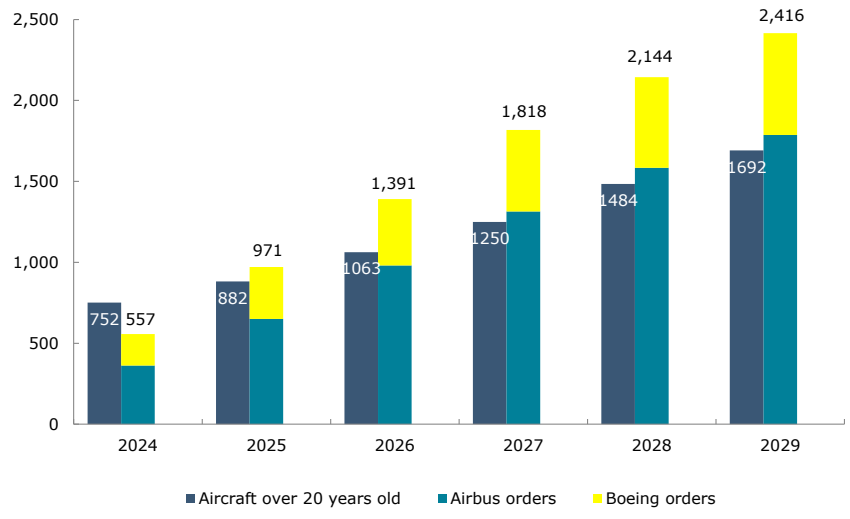
Over the last few years there has been a lot written about the supply chain issues which has hampered the post-Covid recovery in production rates for both Boeing and Airbus and the knock-on implications for capacity growth in the commercial aviation sector. On top of this we now have the Pratt & Whitney GTF engine issue which is expected to result in an average of 350 aircraft being out of service at any one time between now and 2026. Aviation analytics firm, Cirium, estimates that this is almost one quarter of the current fleet or to put that number into a wider context, it is c.2% of the global narrow body fleet which will be unavailable at any one time through to the end of 2026. It is this enforced capacity constraint, in a period when air travel has still not fully recovered to pre-pandemic levels and ongoing economic growth is driving increased demand for air travel, which underpins our short to medium-term positive view on pricing for airlines.

Taking a longer-term view on the situation it is our opinion that capacity constraint is likely to remain a topic for the commercial aviation sector for the next decade as it grapples with the trade-off between retiring older, less fuel efficient and less environmentally friendly, aircraft versus deploying new aircraft for growth. This also has to be viewed in the context of the ability of Boeing and Airbus to deliver new aircraft.

Looking at the European fleet, we estimate that there is c.1,700 aircraft which will have reached 20 years of age by the end of 2029. This compares to an average retirement age of c.16.5 years for aircraft in the European fleet. While we estimate that European carriers could have up to c.2,400 aircraft on order this analysis suggests that a large proportion of the aircraft that will be delivered by Boeing and Airbus out to 2030 will most likely be used to replace older less efficient aircraft rather than for capacity growth as the fuel savings, the ETS savings and lower airport charges (see challenge 6 below) tilt the economics significantly towards flying newer more efficient aircraft.

If we were to assume that all aircraft over 20 years old are replaced with newer aircraft, then based on our estimate of the European orderbook position, the number of aircraft in operation could increase by c.1.6% CAGR over the period to 2030. While there will undoubtedly also be an element of upgauging, which will increase the growth rate somewhat, we would note that this is all based on the assumption that Boeing and Airbus will be able to deliver the aircraft on time, while production rates have been improving, this is still a somewhat debatable assumption.

As the fleet continues to age, older aircraft will need to be replaces with newer, more efficient aircraft. This suggests that capacity growth will remain constrained



Source: Apex, Airbus, Boeing, Goodbody

6) Airport congestion

The Worldwide Airport Slot Guidelines is a document that is published by Airports Council International, the International Air Transport Association and the Worldwide Airport Coordinators Group. It defines a Level 3 airport as one where:

- Demand for airport infrastructure significantly exceeds the airport's capacity during the relevant period;
- Expansion of airport infrastructure to meet demand is not possible in the short term;
- Attempts to resolve the problem through voluntary schedule adjustments have failed or are ineffective; and
- As a result, a process of slot allocation is required whereby it is necessary for all airlines and other aircraft operators to have a slot allocated by a coordinator in order.

According to IATA there are over 200 Level 3 airports globally, 50% of all passengers depart from a Level 3 airport and 35% of all flights operate between Level 3 airports. In the context of a doubling of passenger numbers from 2019 to 2040 this represents a major challenge for the aviation industry.

In response to slot constraints, airlines will upgauge to larger aircraft and in some cases airlines will use widebody aircraft on short haul routes into airports which are very constrained. However, the impact of airport congestion is felt in terms of higher ticket prices, slower passenger growth and reduced network connectivity as airlines focus on the more profitable routes. On the issue of slower passenger growth this is not just an issue for the slot constrained airport, it can be an issue for the city that the airport is located in. A study by McKinsey & Co. found that as airports approach maximum capacity passenger growth stalls. However, the lost passenger growth does not fully transfer to neighbouring airports, some of the passenger flow is lost to hubs in other countries.

On top of the expected increase in passenger numbers, airports will have to deal with the increasing pressure from the sustainability agenda. The Dutch government recently confirmed its plans to cap the number of flights at Amsterdam's Schiphol airport to reduce noise. Dutch Transport Minister Mark Harbers commented that "Aviation can bring the Netherlands a lot that's good, as long as we pay attention to the negative effects for people that live near the airport". Flights will be capped at 452,500 per year. This is 9.5% below 2019 levels and lower than a previous proposal of 460,000. In response, Schiphol Airport has proposed a reduction in the number of private jets allowed to land at Schiphol by 40%, it has also moved to ban 87 of the noisiest aircraft types as well as encouraging the use of quieter aircraft by way of airport charges,

In the short term, airport coordination involves the allocation of constrained capacity to airlines to ensure a "viable airport and air transport operation". It is in effect, a process to maximize the efficient use of airport infrastructure. However, airport coordination is not a solution to the fundamental problem which is a lack of airport capacity. It is an interim solution used to manage congested airports until a longer-term solution can be put in place.

7) Pilot shortages

As air travel has continued to recover post Covid, the reality of an impending pilot shortage has come firmly back into view. According to work undertaken by Oliver Wyman, demand for pilots will outstrip supply in most regions globally between 2022 and 2024 and this will continue to worsen over the next decade. Unless there is a downturn in demand or strenuous efforts by the aviation industry, Oliver Wyman expects global aviation to be short nearly 80,000 pilots by 2032.

In the US the supply of pilots is being challenged by a wave of early retirements at the height of the pandemic, a mandatory retirement age of 65 and a shrinking pool of potential pilots from the military. Training bottlenecks are also hampering efforts to increase the number of new pilots joining the workforce. The supply of new commercial pilots is expected to pick up over the next few years but according to most commentators it does not look like this will be enough to cover increasing demand and the wave of retirements that the industry will face over the next decade. As a result, Oliver Wyman expects that North America will be short nearly 17,000 pilots by 2032. The pilot shortage is expected to hit regional airlines the hardest, especially those flying smaller aircraft.

Outside of the US, Oliver Wyman estimates that Europe is currently in surplus and expected to remain so until the middle of the decade. However, driven predominately by increased demand, a shortage of 19,000 pilots is forecast by 2032. The Middle East is expected to be the region affected soonest, driven by the projected sharp increase in air travel demand over the next few years. The region could face a shortage of 3,000 pilots by 2023 and 18,000 by 2032. Asia is expected to begin to see a shortage of pilots toward the end of the decade as demand growth resumes. Demand is not expected to outpace supply in Latin America, and a small shortage of pilots in Africa is expected to shrink over the decade, as pilot availability increases.

The tangible impact of the shortage of pilots can be seen in the recent round of pay deals in the US. American Airlines pilots recently ratified a new four-year agreement which will result in a 46% increase in cumulative pay and retirement contributions over its term. The agreement also includes improved scheduling and benefits. This is estimated to add some US$10bn in costs to American Airlines over the four years. United Airlines pilots voted to approve their new four-year contract which will deliver a c.40% increase in compensation over the life of the agreement. This contract was also worth c.$10bn.

8) Industry consolidation, government intervention and new entrants

In order to meet these challenges a logical assumption is that the global aviation industry will continue to consolidate and the pace of that process will most likely speed up. However, the aviation industry is essential to the global and local economies and as a result the level of government intervention has tended to be high. At the same time there is an almost insatiable appetite among both equity and debt investors to invest in start-ups within the sector so new entrants will continue to be a feature.

In recent years a lot of attention has been focused on the state support for airlines during the Covid pandemic. According to OAG, the top ten airlines in receipt of state support during Covid received a total of $62.5bn. However, a common form of government intervention in the commercial aviation sector is subsidies for airlines or airports to "promote competition" or to support regional economies. This has a distorting effect on the market by giving certain airlines or airports an unfair advantage which can reduce efficiency and reduce competition which may lead higher fares over time. It will also ultimately delay consolidation in the sector. Another form of intervention can be seen in the TAP sales process with the Portuguese government looking for "large-scale investors from the aeronautical sector, alone or in consortia headed by them, that are aligned with our strategic goals." These strategic goals include a commitment to TAP's growth, development of the national hub, investment in high value activities in the aviation sector and "the growth of end-to-end operations that enable the untapped capacity at national airports to be used, with a focus on Porto airport".

At the same time, despite how difficult it is to develop a winning business model in the aviation sector, there has always seemed to be a very strong desire amongst investors to invest in the space with a particular focus on start-up airlines with new planes. In the first nine months of 2023, allplane estimates that at least 14 new airlines had commenced operations globally. Traditionally these start-up airlines have been set up by experienced aviation executives backed by private equity although there has also always been a number of "new" flag carriers with government backing. While over the last few years we have seen an increase in the number of sovereign wealth fund backed start-up airlines with a particular focus on the Middle East. The steady stream of start-up airlines presents an opportunity for both debt and equity investors to back new companies and new business models, however, it can also have an impact on existing investments as the level of competition in certain markets increases as new businesses enter the market.

Conclusion – The aviation sector offers a significant investment opportunity

The scale of the investment required in the aviation sector over the next decade and beyond is phenomenal. Based on commercial aircraft forecasts by Airbus and Boeing, the fleet investment alone could be over $1.1tn. On top of that there will be significant investment required into airport infrastructure as well as the commercialisation and distribution of SAF and new technologies. While the larger airlines will look to fund fleet investment through cashflow and there will be further investment by private equity, sovereign wealth and governments, there is no doubt that there will also be a significant need for funding from both the equity and debt capital markets.

Issuer & Analyst Disclosures

Recommendation History

Air France-KLM	Current Rec: **Hold**	Date of First issue: **13/07/2022**
	Previous Rec: **Sell**	Date of First issue: **13/05/2021**

easyJet	Current Rec: **Buy**	Date of First issue: **26/01/2021**
	Previous Rec: **Sell**	Date of First issue: **08/09/2020**

IAG	Current Rec: **Buy**	Date of First issue: **04/10/2022**
	Previous Rec: **Hold**	Date of First issue: **24/02/2021**

Lufthansa	Current Rec: **Buy**	Date of First issue: **22/09/2023**
	Previous Rec: **Hold**	Date of First issue: **12/10/2021**

Ryanair	Current Rec: **Buy**	Date of First issue: **26/01/2021**
	Previous Rec: **Hold**	Date of First issue: **08/09/2020**

Wizz Air	Current Rec: **Buy**	Date of First issue: **26/01/2021**
	Previous Rec: **Hold**	Date of First issue: **08/09/2020**

Jet2	Current Rec: **Buy**	Date of First issue: **13/07/2022**
	Previous Rec: **n/a**	Date of First issue: **n/a**

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