

# What's Up in the Air?

Disruptive Forces in Investing

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**Anu Rajakumar:** Aerospace, particularly the airline sector, has experienced intense bouts of volatility as of late. Since the start of COVID shutting down air travel to then returning back to pre-pandemic levels, the airline sector is receiving its own fair share of turbulence, but as the aerospace market continues to grow with more interest in commercial travel than ever seen before, airlines are needing more lift for takeoff. And with the supply chain still stressed, the sector's landscape may be due for a reset, but what is the path forward? What route should the major players be taking? And of course, where are the opportunities ahead?

My name is Anu Rajakumar, and today I'm bringing back an old friend to the show, Michael Barr, senior research analyst covering aerospace and transportation, to uncover what's happening across the implicated industries and helping to answer – where do we go from here? Michael, it's great to have you back as always.

**Michael Barr:** Thanks for having me. I appreciate you letting me come back to talk a little bit more.

**Anu:** [chuckles] Yeah. So, Michael, lots to cover today, so let's get right into it. The last time we had you on the show, we were talking about global supply chains. It's now a couple of years later and, of course, demand for air travel is undeniable, but there are a number of headwinds. So, break it down for us, what's going on with airlines today?

**Michael:** I think first you want to make sure you realize people still want to fly again. You know, most people in this room and listening to this podcast probably have a ticket booked in the next couple of months. So, on the positive side, demand is back from pre-COVID levels.

And, you know, you've seen the headlines about that, but I think what's important for people to realize is that ignores almost 4% of growth that was supposed to occur during COVID. So we are still well off-trend, and the industry is expecting to still recover, but that is going to drive double-digit growth, in our opinion, for demand over the coming years just to get back to that trend level.

Now, how does the airlines [sector] deal with this? This is a very challenging aspect 'cause it really has accelerated quickly. On the positive side, they've come from a position of strength. The decade of the 2010s was actually a very good decade for deliveries. So the fleet was fairly young heading into this, although we all know we were trapped in our houses, there's a lot of things that weren't happening during COVID, and one of those things was aircraft delivery. And when you sit back and look at it, we have seen the global fleet basically age by two years during COVID.

That's a pretty phenomenal number. And to put it in perspective, if you think about it, aircraft older than 20 years has actually grown 50% over that time with "young aircraft," which think of it as 0% to 10% which has basically been flat during that period. So essentially what does that mean?

That basically means that the OEMs or the manufacturer of the aircraft have struggled getting aircraft to the airlines, and in such, the airlines have not been able to retire aircraft at the rate they really wanted to. And this is putting stress throughout the ecosystem. And the problem is, no one is telling consumers not to fly. So we're trying to service all of this demand with older aircraft, and it just creates pressure points throughout the entire ecosystem.

**Anu:** And of course, we've seen, you know, headlines of the last few weeks and months that could be distressing to airline flyers, of course, given that this fleet has not been able to retire, so there's been some issues. I guess the question for you is, Michael, how did it get this bad?

**Michael:** Yeah, and it's really basically, we went from 0 to 100 coming out of COVID. And if you think about the sheer size of the airline and aviation industry, so, for example, TSA checkpoint numbers in the beginning of 2020 at the onset of COVID—there were basically 100,000 individuals going through TSA checkpoints. In the beginning of 2021, that number was around 5, 6, 700,000. We are now back up to two million, per day, going through airports.

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So put that in perspective, that's two million people going through an airport in the US. That's a US number. So put that on the global scale. That used to be 100,000 just a few years ago. So, you're funneling all these people, all these aircraft, you're still dealing with COVID issues with, "Do pilots have COVID? Do flight attendants have COVID? What about the ramp workers? Can you service all of this? You know, how does that deal with your schedule?" So I'm sure we've all been at an airport where our plane got canceled or they've changed the time during COVID. So, the size of this industry and the impact of COVID has been basically unprecedented.

And I think the situation really boiled down to three core problems that we look at. One is because of COVID, because of labor availability, because of everything that's going on with some of the supply chain issues and with some of the companies that we've seen in the headlines, there was a struggle getting production out the door at aircraft manufacturers. And we talked about it earlier, they couldn't get the number of planes to the airlines that the airlines wanted.

A number that I've seen is, to kind of highlight this, is there's a study by AeroDynamic Advisory that estimated that last year, airlines received 19% fewer aircraft than they expected, and that number was 32% in the US alone. Think about that because the global fleet is about 20,000 aircraft, so that is a lot of aircraft that were supposed to come that didn't hit the system.

The second issue is inexperienced labor. The Boeing machinists union has highlighted in some of the releases that before COVID, the average experience of a machinist was over six years. Now, by their numbers, it's less than 25%. So, you lost a huge amount of intellectual institutional knowledge during COVID where obviously the older workers decided to retire. They don't want to come back.

And three, we've talked about the supply chain issues and taking an industry that has a lead time of at some points over two years and trying to spool that up exceptionally quickly is a very challenging endeavor. And also there's a lot of smaller companies at the beginning parts of that, that really struggled through COVID. So spooling everything back up has been a huge challenge getting these aircraft out of production.

You've seen the airlines respond to this, and last year we saw some of the largest amount of what I like to call 'mega orders' or orders over 100 aircraft. We saw more than we've ever seen in my experience done last year. And it's not like they're getting these planes tomorrow or next year, they're getting in the back of the queue which is later in this decade, '28, '29, '30 in some instances and that is just a highlight that the airlines know they need more capacity.

And the only way to get it, they have to just get in the queue and figure out a way and eventually they're going to get the aircraft. In our opinion, that just highlights the pressure that the airlines know that they're under based on what the fleet looks like and for the foreseeable future, they're probably going to have to service all this demand with older aircraft which is going to be more costly to them.

And I think one of the key points to think about going forward is you're seeing airlines trying to handle this pressure with increased maintenance cost. And one of the ways that you look at, if you just look at some of the financials, you have higher maintenance costs now than you did pre-COVID. It's very obvious. The aircraft are older. So, your costs are exacerbated at the airline factor, plus you have less capacity 'cause you're having a hard time getting aircraft. So basically, how does an airline solve for that? They have to either make less money or charge more dollars, and I think everybody's seen what's happening on the ticket prices, and until we kind of get capacity into the system, we think that's probably going to stay elevated for a while now.

**Anu:** All right, so you've outlined, obviously, a massive imbalance here for the airlines. When we put this all into perspective, how are the airlines preparing to accommodate for this demand in commercial air travel given there is supply issues from the OEMs, you know, the original equipment manufacturers, while also maintaining safety for passengers?

**Michael:** Yeah, so there's obviously been headlines that everyone has seen. I think we would still stress the fact that it's a percent of the overall flying, it's still a very, very small percent. It's just with everything that's been happening, it's getting a lot of airplay. But that doesn't mean that it's acceptable, and you've seen the regulators be much more aggressive with one Boeing that we've seen the headlines there and we've also seen it which is not very normal.

We've seen the FAA get more aggressive with an airline, that headline hit. So, you have the regulators in there trying to kind of reestablish the safety culture, even if the mass shows that it's still exceptionally safe, they want it even safer than it is. So we're seeing an effort to kind of solidify that from the FAA and the regulators.

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The other point that we would make is there has been an institutional change in labor, and labor's basically gotten younger and less experienced coming out of COVID. And what you're seeing is capacity and the flight offerings coming out of airlines is just not as robust. And it is basically because they don't have the equipment, they don't have the labor to service it all and that's coming from a lot of different directions, but right now, we do not have the growth in capacity from an airline perspective that we would've had if COVID never existed.

**Anu:** Okay. So, it sounds like it may be expensive to travel for a while, yet for the foreseeable future, so I'll prepare myself for that. But, Michael, talk a little about the innovation happening in this space, right? These companies, they're obviously receiving pressure to produce and focus on safety, but are we seeing any changes from these airlines or from the OEMs to kind of give comfort to what we should expect in the future?

**Michael:** Yeah, [chuckles] I think the first thing I would say, everyone's trying to get their house in order first. So the innovation is probably getting pushed to the right, and the most recent innovation was Boeing 787 which is a metal plane turned into a carbon fiber plane. The next step in innovation from an aircraft is probably going to be the engine, and when we see the next innovation on the engine is hard to tell right now.

There's a lot of work being done with some of the engine manufacturers such as GE and RTX, so I think in the next decade, or maybe by the end of this decade, we should probably see at least some inklings of what the next generation of the aircraft would be. I would specifically highlight fuel efficiency, carbon footprint, things like that I think are going to be top of mind for both the manufacturers and the airlines from a carbon footprint point of view.

We are hearing situations like there's a trust wing, which is basically where you're going to put the wing. Some people think it's going to go back on the top of the plane, which allows more air to flow under the wing and through the engine, you can make the engine bigger. That leads to more fuel efficiency. So I think there's a lot of movement afoot. This is a very challenging industry, and so I don't think we should see anything next year. I think it's more the end of the decade, but I think it is coming and there have been talks and there are definitely highlights and it's fun to talk about going back to, you know, a Concorde-esque aircraft. But, in our opinion, it's more going to be size of the aircraft. So, we think the aircraft will continue to get a little bit bigger and more fuel efficiency over speed. Speed will be a niche here and there, but I think the real focus for both the aircraft and the manufacturers is going to be efficiency. But I think for now, we should expect to keep getting on the same types of plane we've been getting on for the past decade-plus.

**Anu:** So, is it, just to clarify, do you think that we will see the revival of the Concorde, then, at some point in the near future, perhaps?

**Michael:** So, the Concorde specifically, no. There are some companies out there that are working on supersonic aircraft that, you know, can get from New York to LA or London in three hours or whatever the-the data is. They will be working on it and there is a niche market for that, but the mass market is still going to be, in our opinion, size and efficiency.

**Anu:** Yeah, makes sense. All right, Michael, well, as we start to wrap up here, why don't you share any other considerations you think that investors and consumers should keep in mind as we look ahead?

**Michael:** So I think when we sit back and look at it, one thing that stands out, it's kind of the changing demographics of the fleet. It's fine now because on absolute numbers, young aircraft still are more plentiful than the older aircraft, but it's still at the age of the fleet. We don't think it's sustainable for the demand scope that we see coming forward. So, this is going to take a long time to turn and a long time to re-adjust. But we think, basically, it's inevitable when we look at the fleet that, one, we're going to see traffic growth continue into 2026, 2027 number, probably growing at double digits.

Two, we think airlines are going to continue to purchase new aircraft and eventually the manufacturers will get production back up to pre-COVID levels and start delivering it. And once that happens, we actually see retirements going back to a normal trend. So, the age will eventually come back down. This is just going to take a while. And, in the meantime, we think the companies that are exposed to basically servicing these older aircraft are going to be exceptionally well positioned going forward, at least for the next couple of years. And we think unless there's some reason that the general public decides to stop flying, which apart from COVID, I'm hard-pressed to see, they are probably going to be the most well-positioned in the near term. And then there's going to be a transition once we get production out.

The wildcard is how to think about the airlines, 'cause the airlines are in a really interesting spot right now. Their costs are going up, but their demand is going up exponentially and the way they price and the way they handle this cost profile is going to really determine it. And I think one of the things that's helping them is the lack of aircraft being able to be delivered is

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actually keeping their capacity low and unfortunately keeping consumer prices for those tickets high. So, it's pretty much a sweet spot for them and how they manage the influx of once deliveries start ramping, how they handle that and how they handle the cost is one thing that's a bit of an uncertainty, but it could be very beneficial to them going forward. You just have to watch it a little closer.

**Anu:** So another maybe just question, just 'cause you said that. Do you think there's likelihood for any mergers, like big mergers, any of these big airline companies, given some of the dynamics at play here?

**Michael:** Right, so we just saw JetBlue and Spirit attempt it-

**Anu:** Yep.

**Michael:** -and it was blocked. Those were two of the smaller in the US. So if they're blocking those smaller airlines, I don't see how they're going to allow the larger airlines to kind of do anything they, you know-

**Anu:** Yep.

**Michael:** -they might be as big as they need to get on the timeframe, over time a different administration or something like that anything could change. But in the near term, I think the JetBlue, Spirit kind of sent a signal that, you know, look inward instead of outward-

**Anu:** Yeah, absolutely.

**Michael:** -for the airlines.

**Anu:** Great. Thank you very much, Michael. Before you go, I'm going to ask you a quick bonus question, which I know is your favorite part of these episodes. [laughter]

You know, we've talked a lot about challenges for airlines and, as we all know, things can go wrong when you travel. So, I would love for you to share your worst travel story, Michael. [chuckles]

**Michael:** Wow. My worst travel story. I'm really hesitant to say this because, famous last words, but my worst travel story really only has to do with my luggage. I've heard all of it about a plane issue or a touch and go takeoff or something like that. My literal worst issue is losing a bag or, you know, last second cancellation. So, I've been quite lucky. Now, that probably means the next flight I'm taking is going to be very uncomfortable, but I luckily have not had too many flight issues. I'm the average. I'm not that 1% of 1% that we see in the headlines luckily.

**Anu:** So you've never had a newborn throw up upon you upon landing, which may or may not have happened to me more than once. [laughter]

**Michael:** I have not had that luckily.

**Anu:** [laughs] Consider yourself lucky. Well, Michael, as always, my conversations with you are both fascinating and always very applicable to everyone's lives. You know, you've highlighted that despite being four years on from the pandemic, there are still major challenges for the airline industry. We talked about production, labor, pressure on supply chain, et cetera, but as you've explained, there will be winners and losers. So having someone like yourself here to break it all down is massively insightful. So, Michael, thanks again for being here.

**Michael:** Thank you for having me. This was great.

**Anu:** And to our listeners, if you've enjoyed what you've heard today on *Disruptive Forces*, you can subscribe to the show from wherever you listen to your podcasts, or you can visit our website, [www.nb.com/disruptiveforces](http://www.nb.com/disruptiveforces) for previous episodes, as well as more information about our firm and offerings.

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