Issue no. 267

Mar/Apr 2022

The Weaponising of Operating Leases

IN THE economic war between Russia and the West leased aircraft have been weaponised. The fall-out is widespread and complex. Sanctions imposed on Russia effectively terminated the leases of about 500 Western aircraft operated by the Aeroflot Group or independent Russian airlines (S7, Utair, Ural Airways and Nordwind). It is estimated that about 80 of these have been repossessed or were stored outside Russia at the time of the invasion.

The value of the Russian-leased fleet is estimated to be in the region of $11.5bn. The cost of this particular sanction is estimated to be between $5bn and $15bn, the lower figure assuming recovery of more aircraft from Russia and rapid resolution of legal issues, the higher figure including loss of rentals by the lessors while they continue to make finance payments on their lost aircraft (which might explain why AerCap is putting its Russian losses at $3.5bn while the value of the relevant aircraft would be around $2.5bn) The question is: who bears the cost?

Firstly, the market value of the aircraft remaining in Russia is depreciating precipitously. The Russian authorities have refused to return the leased aircraft to their owners, though it is difficult to see how this massive fleet transfer could have been made, and have placed them on the Russian registry. Previously the aircraft were on Irish or Bermudan registries, a legal process that dates back to the introduction of operating leases to Russia in the mid-2000s when lessors were concerned about the repossession rights the Russian legal system (ironically, the Russian airlines had, up to the Ukraine war, been reliable customers with very few defaults). With the Russian registered-aircraft no longer having internationally recognised AOCs, they cannot be flown legally outside Russia (plus Belarus and former Soviet states in the east).

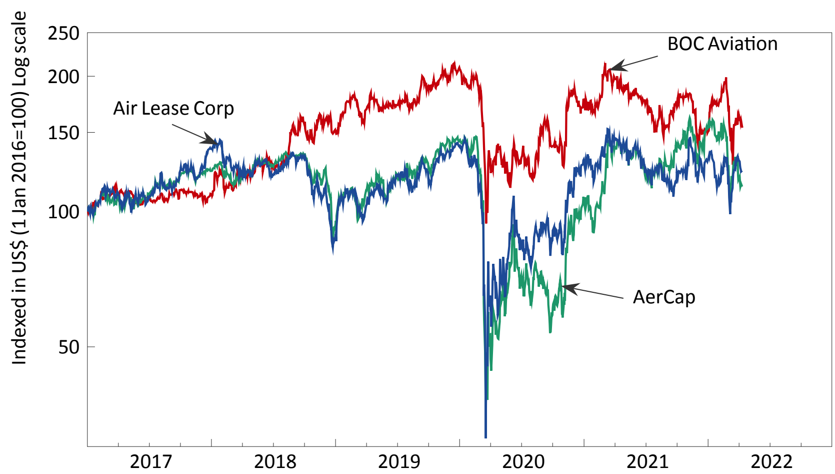
The value of aircraft depends on their maintenance manuals being correct and up to date. This cannot happen in Russia as the Western OEMs and lessors have withdrawn both the supply of parts and support from licensed engineers. Even if the war were to unexpectedly end and sanctions were removed, restoring the manuals and hence the fleet's airworthiness would be a lengthy and very expensive process.

This issue includes

	Page
The Weaponising of Operating Leases	1
Russian sanctions, aircraft seizures – Is there a way out?	3
Frontier Spirit: How scared should the Big 4 be?	5
Spirit-Frontier merger: Competitive network analysis	11
IAG: Delicately Balancing its Finances	15

To maintain domestic service Aeroflot and the other Russian airlines will have to cannibalise aircraft for parts. There are longer any viable

LESSORS FIVE YEAR SHARE PRICE PERFORMANCE



Published by Aviation Strategy Ltd

Aviation Strategy

ISSN 2041-4021 (Online)

This newsletter is published ten times a year by Aviation Strategy Limited Jan/Feb and Jul/Aug usually appear as combined issues. Our editorial policy is to analyse and cover contemporary aviation issues and airline strategies in a clear, original and objective manner. Aviation Strategy does not shy away from critical analysis, and takes a global perspective — with balanced coverage of the European, American and Asian markets.

Publisher:

Keith McMullan
James Halstead

Editorial Team

Keith McMullan
kgm@aviationstrategy.aero

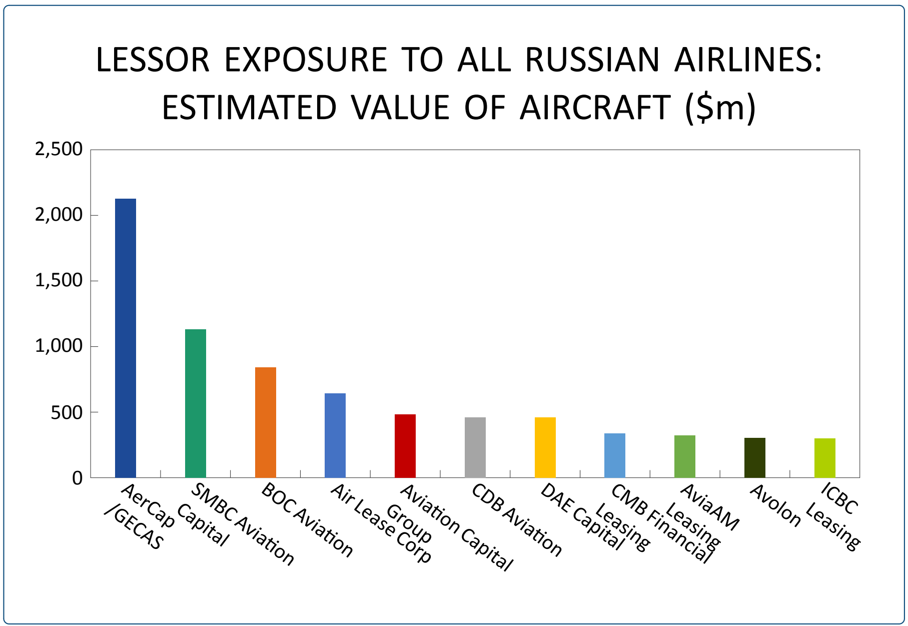
James Halstead
jch@aviationstrategy.aero

Subscriptions:

info@aviationstrategy.aero

Aviation Strategy Ltd
Registered No: 8511732 (England)
Registered Office:
6 Langside Avenue
London SW15 5QT
VAT No: GB 162 7100 38
ISSN 2041-4021 (Online)

Typeset in Calibri and Rockwell using XƎLATEX



Ilyushin or Tupolev or Antonov alternatives to the Boeings and Airbuses, though the Aeroflot group operates 76 Sukhoi SuperJets manufactured in Russia. The maximum current production rate for the SSJ is about 14 units a year.

The lessors have hull and liability insurance, as well as specific aviation war cover, and expect these policies to pay out on the expropriated aircraft. As independent leasing consultant Dick Forsberg put it in a recent HSBC webcast the lessors regard the case as simply "property stolen in Russia".

Most of these insurance policies are underwritten through the Lloyd's of London market, with 30%–40% of the premiums then reinsured. There are reports that the insurers are "pushing back", questioning for example whether the coverage would be still fully in place after the lessors in effect defaulted on their lease agreements (having being ordered to do so by the EU, the UK and the US). There are lots of convoluted issues here for the lawyers to get into (see following article for an independent legal view on the Russian situation).

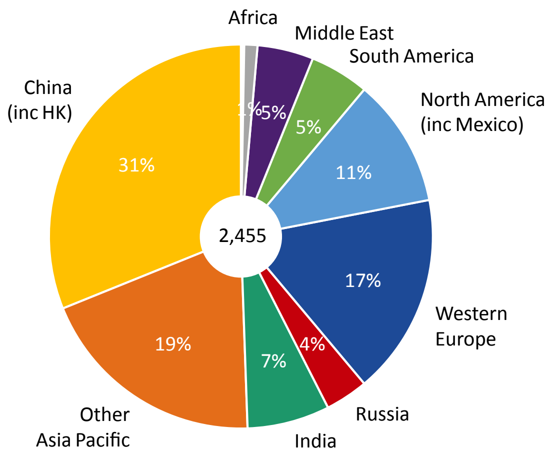
The stockmarket reaction to the Ukraine war's impact on the quoted lessors has been quite modest, at least in comparison with the first phase of the pandemic. There seems to be an assumption that the insurers will absorb most of the pain in the same way as state aid to airlines protected the lessors from widespread defaults.

The Russian jets only account for about 4% of the global operating leased fleet but the ramifications are broader for the sector. Increased insurance premiums are expected to push up lease rates at a time when dollar interest rates are also rising. On the other hand, lessors may try to rebalance their portfolios away from riskier markets to mainstream carriers, which might result in surplus capacity and downward pressure on rates.

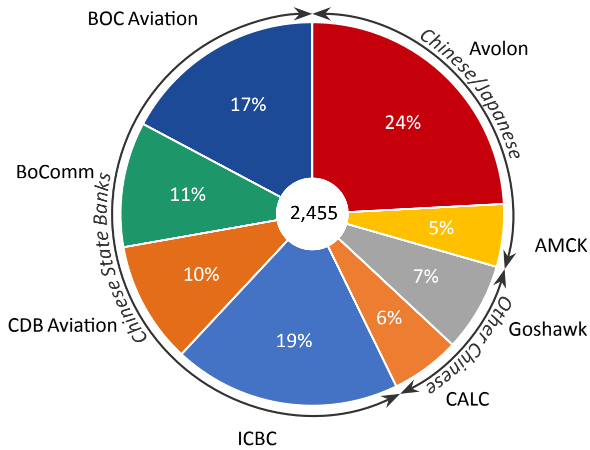
Chinese speculation

More generally, the Ukraine war has highlighted the global leasing industry's interconnections with geopolitics, and Putin's malign influence on President Xi of the PRC. Democracy has already been suppressed

CHINESE LESSOR FLEET BY REGION OF AIRLINE LESSEE



CHINESE OWNED LESSORS



in Hong Kong and the nightmare scenario is an attempt by the PRC to annex the ROC (Taiwan), a threat that is now being taken seriously by the West.

China is a major player in the aircraft leasing industry, with about 20% of the global operating fleet. Chinese state banks own leasing companies that own about 1,400 Western jets while Chinese majority-owned lessors have over 1,000 more aircraft. Of the total, 2,455 units as at the end of last year, about 31% were leased to Chinese airlines but 28% were leased to North American and European airlines. Could these 700 aircraft be weaponised like the 500 Western aircraft in Russia in the event of a China conflict?

Such speculation would have been dismissed as alarmist nonsense two months ago but since then we have learnt that governments can intervene to instruct lessors to terminate leases and take back owned aircraft. With the Chinese leased fleets, it could conceivably work in two ways — the Chinese could demand the return of their owned aircraft from Western airlines or Western airlines could be required to stop dealing with the Chinese owned lessors.

Russian sanctions, aircraft seizures – Is there a way out?

By Deborah Ruff, Head of International Arbitration,
Julia Kalinina Belcher, Counsel, Charles Golsong, Counsel,
and Charlotte Stewart-Jones, Associate,
at Pillsbury Winthrop Shaw Pittman LLP

A NEW LAW passed by Russia in retaliation for the sanctions imposed by the UK, the EU and the US would permit Russian airlines to retain the aircraft leased by foreign lessors, in contravention of the Cape Town Convention (which requires their return) and to re-register them in Russia. The new law would leave lessors between a proverbial rock and hard place: where sanctions require a lessor to terminate a lease, in so doing, the lessor will generally be able to rely on standard clauses in the lease on "illegality", which entitle a party to terminate if performance has become unlawful, and/or similar "change of law" and/or "force majeure" clauses, yet there is now a distinct possibility that they would not be able to retrieve their assets or re-lease them. The new law is presumed to be aimed at evading the suspension by the aviation authorities where the aircraft are currently registered of their certificates of airworthiness.

Is insurance the answer?

It may be possible for lessors to seek recovery of losses under insurance policies, subject to any exclusions. Check whether the insurance mandated by the aircraft lease agreement is still valid or even exists, as some Russian lessees have reportedly terminated the "Western" policies, replacing them with policies from Russian insurers. Here, the likelihood of recovery through the Russian courts applying Russian legislation will be low. Definitions of "war risk" or similar may vary from policy to policy and some may include seizure or nationalisation. However, insurers facing a massive number of claims will be looking for grounds to deny coverage, potentially including arguments that the new law falls short of nationalisation because re-registration is optional.

Bilateral Investment Treaties?

Bilateral Investment Treaties ("BITs") between Russia and the lessor's home state or multilateral treaties may provide a further option for potential recovery through a BIT claim against Russia.

States conclude BITs to encourage investment and offer some protection from political risk. Such treaties prohibit the "host" state from expropriating, nationalising or applying similar measures to foreign investments. Many BITs also require that the "host" state treat foreign investors fairly and equitably. If the recent actions of the Russian state are deemed to amount to expropriation the lessors may be able to rely on BITs to obtain compensation for the loss of their investment.

Russia has over 60 BITs in force with other states, which may include the states where the lessor is incorporated (for example, Japan, Singapore, the UAE). Once a dispute has arisen, however, transfer of assets or claims by a potential claimant to another entity incorporated in a country which has a BIT with Russia, or which has a more advantageous BIT with Russia (known as "forum shopping") is unlikely to succeed.

The first step is to check whether the lessor falls within the definition of "investor" under the relevant BIT. "Investor" is usually defined to include citizens of or entities incorporated in a given state. Some BITs cover only direct investments while others extend to indirect investments that may allow a lessor not based in a state which has a BIT with Russia to claim if the parent company or individual shareholders are incorporated in, or are citizens of, a country with a BIT covering indirect investments.

The lessor should also check whether it can show that it has made an "investment" under the BIT. The definition of "investment" is usually wide to include all kinds of assets — from property to rights over property; even if the aircraft is registered in a country that is not the lessor's place of registration, it may still be possible for the lessor to qualify but, depending on the wording of the BIT, a lease alone may not be sufficient to show an investment in the host country.

Also worth considering is whether the BIT contains a Most Favoured Nation clause, which may permit the investor to import more favourable terms contained in other BITs to which Russia is party.

While BIT claims are usually complex, requiring careful analysis from the outset, they could provide a remedy to lessors. BIT claims are usually heard in arbitration by an independent tribunal seated outside Russia that will apply rules of international law. They may also provide an incentive to settle.

Enforcement

Finally, lessors should consider enforcement from the outset before embarking on a BIT claim. Even if the lessor succeeds and obtains a monetary award from the tribunal, such an award would be difficult to enforce in Russia. Thought should be given not only to freezing Russian assets held outside Russia to satisfy the award (many such assets, if "non-commercial", would normally be protected by sovereign immunity, but it is possible that legislation might be introduced to change this if there is the political will to do so), but also to how this would interact with asset freezing due to sanctions.

The current sanctions (in that they involve freezing assets) could be a benefit to claimants — on the one hand, BIT claimants do not usually have the advantage of "pre frozen" assets (although many of the assets frozen to date are not directly government-owned and, as such, would likely not be available to a BIT award creditor unless new legislation is passed). On the other hand, there have been calls for the frozen assets to be sold off and the proceeds used to assist Ukrainians affected by the war, which would make them unavailable to BIT award creditors.

Frontier Spirit: How scared should the Big 4 be?

The proposed merger between Frontier and Spirit Airlines promises, or threatens, to create a new ULCC force, the fifth biggest airline in the US market. Here we take a look at the merger from a macro perspective while, in the following article, Skailark presents a unique analysis of the combined cost and market competitiveness on a route-by-route basis of the two airlines.

The merger agreement was announced in February, is currently being reviewed by the US DoT and DoJ, and is expected to be finalised by the end of this year. Under the agreement Spirit Airlines will be acquired by Frontier Group Holdings for $6.6bn, of which $2.9bn is Spirit's equity value and $3.7bn is the assumption of net debt and operating lease liabilities, with Frontier shareholders owning 51.5% of the new entity and Spirit shareholders 48.5%.

In term of traffic and revenues, Spirit is actually larger than Frontier — 2021 passengers totalled 30.8m and 20.7m respectively and revenues were $3.2bn against $2.1bn. Both companies have been recovering since the middle of last year but combined traffic in 2021 was still 10% down on 2019 while combined revenue was down 17% over the same period. The 2021 net results were both negative in 2021 — $473m at Spirit representing a margin on revenues of -14.6% and $102m at Frontier, equivalent to -5.0%.

In the depths of the pandemic (2020) the two airlines burnt through $(784)m in Operating Cashflow though this turned positive to the tune of $415m in 2021. Spirit in particular maintained heavy Capex through the pandemic with the result that combined Free Cashflow totalled $(1.3)bn during 2020 and 2021. However, the two airlines were able to raise $0.9bn in debt and $1.0bn in equity during these two years.

This has left both ULCCs with fairly solid balance sheets, with combined shareholders' equity of $2.6bn and combined long-term debt of $7.5bn as at the end of 2021. Liquidity was good — $2.4bn in cash and equivalents for the two companies.

Both carriers received substantial government support through the Payroll Support Program (PSP) which covered expenditure for furloughed employees but their participation in government loan schemes under the CARES Act was minimal; as at the end of December Frontier had just $66m in CARES loans outstanding.

Indigo-incubated ULCCs

Bill Franke, the Chair of Frontier's Board of Directors and the managing partner of Indigo Partners, which owns, through a fund, 82% of the airline, will be appointed Chairman of the Board of the combined company. It will be his responsibility to lead a committee that will establish the combined company's management team, location of the headquarters and the new branding (Frontier Spirit would seem to be the obvious choice).

Spirit and Frontier have an intertwined history linked to the ULCC specialist investment fund. Having set up Spirit in 2006 Indigo sold out in 2014 in order to acquire Frontier and transform it into a Ryanair-type airline. The CEO of Spirit, Ted Christie, was formerly CFO at Frontier and Spirit's COO, John Bandoraitis, held the same position at Frontier. Barry Biffle, CEO of Frontier spent eight years at Spirit, while his CFO, James Dempsey, came from Ryanair.

Both airlines strongly adhere to the key elements of the pure ULCC model — yield-driven demand, price leadership, high proportion of ancillary revenue (60% of total revenues), flexible asset location, modern same-family fleets, high productivity, rigorous cost control, clear decision-making processes, concentration on VFR and Leisure segments, etc. But they also have some unique US features — using loyalty programmes as part of the marketing strategy and selling connecting tickets.

As the map on the following page indicates, the two networks are mostly complementary, but with significant overlaps. Frontier is stronger in the west, particularly at Denver, its main base where 30% of its flights are operated; it also has a concentration in the Florida/Eastern seaboard markets. As well as Denver, Frontier has ten other bases, or "focus cities". Spirit too has a strong Florida presence linking into the Midwest. Its main base is at Atlanta, and it has eight other operating bases. Spirit has a substantial Central/South American operation and a Mexican base at Cancun linking to Florida, but neither carrier flies to Mexico

City, which is where Volaris, and its alliance with Frontier, fits in (see *Aviation Strategy*, February 2022).

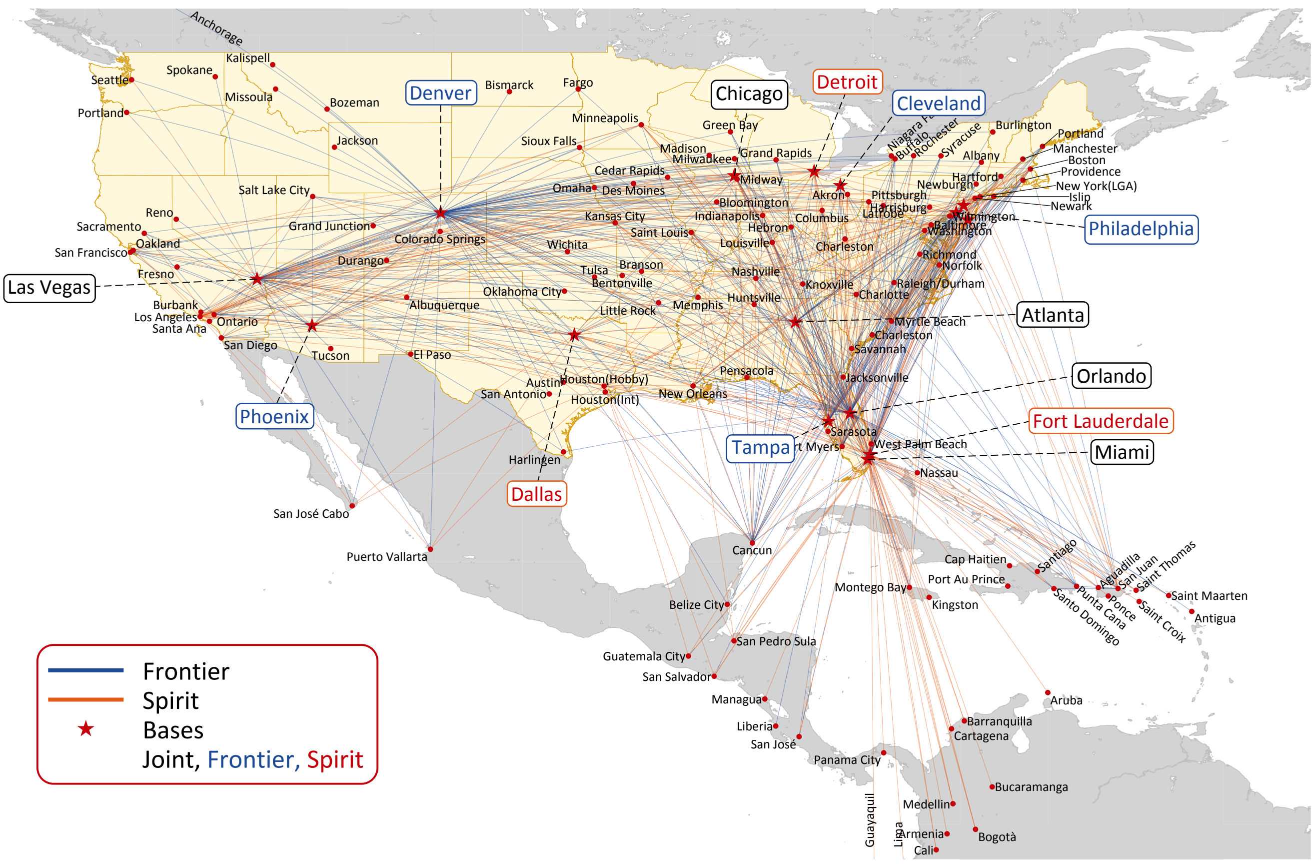
The merger will result in five Frontier Spirit joint bases — at Miami, Orlando, Atlanta, Chicago and Las Vegas. Whether this is enough to raise concerns about the joint airlines' enhanced pricing power at the regulatory authorities is not yet clear. Having allowed through, even encouraged, the series of mergers that resulted in the Big Four, it is difficult to see how the Frontier Spirit merger could be refused, but nothing is certain.

The merged Frontier Spirit will compete in all sizes of markets but with a bias towards the large segment (500+ daily passengers) — 61% of the combined airline's capacity against a national average of 46%. In the mid segment (200-499 daily passengers) it will deploy about 22% of capacity, roughly the same as the 23% national average; and the small segment (10-199 daily passengers) will account for 17% against 31% nationally. (By contrast, the other ULCC, Allegiant, concentrates predominately on small markets: 88% of its operations.) There are, according to the merger presentation, 2,000 market opportunities in the US waiting for Frontier Spirit to exploit.

As a leisure carrier (96% of traffic is estimated by management to be leisure or VFR), Frontier Spirit does not have to rely on frequency but the merger should improve its attractiveness just through providing more options to travellers. For example, on Baltimore-Orlando, the Big Four currently have nine daily departures but post-merger Frontier Spirit will be able to offer five (two from Frontier, three from Spirit).

There are also the international links to the other Indigo ULCCs. Volaris, the leading Mexican carrier, has an extensive codeshare agreement with Frontier. Longer-term there has been speculation about Wizz eventually deploying its A321XLRs on the Atlantic; however, the immediate future might involve cross-leasing spare capacity as Wizz's expansion plans are being thwarted by the war in Ukraine. (There are no obvious connections to JetSMART the Chilean ULCC in which American Airlines has just taken a minority stake.)

SPIRIT/FRONTIER ROUTE MAP



FRONTIER FINANCIALS

$m	2019	2020	2021	$m	End 2021
Revenues	**2,508**	**1,250**	**2,060**	Fleet assets (inc lease rights)	2,872
Net result	**251**	**(225)**	**(102)**	Investments etc	326
Operating Cashflow	**171**	**(557)**	**216**	*Cash*	*918*
Capex	(62)	12	(63)	Other current assets	119
Other Income (Expenditure)		(1)	(4)	**Total Assets**	**4,235**
Free Cashflow	**109**	**(546)**	**149**		
Increase (decrease) in debt	120	156	125	Long term debt	2,379
Equity raises (Dividends)	(159)		266	Other current liabilities	1,326
Total Cashflow	**70**	**(390)**	**540**	**Total Liabilities**	**3,705**
				Shareholders' Equity	**530**

Costs versus the Legacies

Frontier Spirit's ULCC model provides it with a unit cost advantage that the network carriers cannot begin to match because of the complexity of operating hub and spoke systems, having multi-type fleets and, feeding intercontinental services plus having legacy employment and IT issues. But Frontier Spirit also makes Southwest, the great LCC innovator, almost look like a Legacy in cost terms.

In the merger presentation, Frontier Spirit's combined adjusted CASM was contrasted with the rest of the US industry (see chart on page 9). These unit costs were normalised to a 1,000 mile sector, and net interest was added to operating costs). The three network carriers were over 70% more expensive than Frontier Spirit; Southwest was 34% more expensive.

Frontier Spirit's pricing is based on what it describes as "an ultra-low base fare of only $54" with ancillaries doubling the revenue per passenger to around $108 (see chart on page 9). Again comparing with the three network carriers, their revenue per passenger would be around 80% higher than Frontier Spirit's; Southwest would be about 20% higher.

Fleet plan and market implications

The proposed merger will bring together two ambitious fleet plans, based around a shift to larger capacity 230-seat A321 neos, which should reinforce Frontier Spirit's unit cost advantage.

As at the end of 2021 Frontier had 234 aircraft on order, all A320/21 neos while Spirit had an orderbook of 156 neos, which will be split among A319s, A320s and A321s, with delivery schedules out to 2027 and 2028 respectively. The Frontier orderbook mostly results from Indigo's mega-order in 2017 for 430 A320 Family aircraft to be allocated among Frontier, Wizz Air, JetSMART and Volaris. The combined Frontier Spirit fleet plan envisages a growth in total aircraft from 283 units at the end of 2021 to 493 by the end of 2026, a CAGR of 12%

SPIRIT FINANCIALS

$m	2019	2020	2021	$m	End 2021
Revenues	**3,831**	**1,810**	**3,231**	Fleet assets (inc lease rights)	6,292
Net result	**335**	**(429)**	**(473)**	Investments etc	405
Operating Cashflow	**551**	**(225)**	**209**	*Cash*	*1,535*
Capex	(455)	(553)	(351)	Other current assets	308
Other Income (Expenditure)	(2)	(1)	(1)	**Total Assets**	**8,540**
Free Cashflow	**94**	**(779)**	**(144)**		
Increase (decrease) in debt	(120)	1,295	(664)	Long term debt	5,150
Equity raises		367	376	Other current liabilities	1,276
Total Cashflow	**(26)**	**882**	**(432)**	**Total Liabilities**	**6,426**
				Shareholders' Equity	**2,114**

FLEETS AND ORDERBOOKS

	In fleet (End 2021)			On Order		
	Frontier	Spirit	Total	Frontier	Spirit	Total
A319 ceo		31	31			
A320 ceo	16	64	80			
A321 ceo		30	30			
Sub-total	**16**	**125**	**141**			
A319 neo						
A320 neo	73	48	121	76		
A321 neo	21		21	158		
Sub-total	**94**	**48**	**142**	**234**	**156**	**390**
TOTAL	**110**	**173**	**283**	**234**	**156**	**390**

Note: Spirit's order allocation between A319, A320 and A321 TBD

pa. The proportion of neos in the fleet is set to increase from 43% to 79% over the same period.

What does this imply for Frontier Spirit's position in the US market? Using pre-pandemic utilisations and factoring in probable seat capacity growth, the combined airline would be on target to carry close to 120m passengers in 2026 compared to the pre-pandemic peak of 58m. Impressive growth, but Southwest in 2019 carried 163m passengers and Ryanair's pre-pandemic medium term forecast was for 200m-plus passengers. It doesn't yet tie in with Barry Biffle's prediction that "ULCCs will dominate US airspace".

A comparison of the structure of the US domestic market and the intra-European market is interesting. In 2019, the last normal year, Frontier and Spirit had gained about 8% of the US market; the ULCC total, adding in Allegiant, was around 10%. In Europe the two main ULCCs — Ryanair and Wizz — had some 20% of the market, twice the US proportion.

Moreover, post-pandemic the ULCCs will inevitably gain market share as the result of relative scale of the fleet expansion plans. In an even more price-conscious era this could pose a threat to the LCCs — Barry Biffle has suggested that Southwest might have to "migrate up". Southwest and JetBlue account for 29% of the US market while easyJet and other smaller carriers have only about 17% of the European market.

The three major network carriers have about 54% of the domestic US market while the three European carriers have about 39% of their internal market, shares which are likely to be eroded in the upcoming years though any significant incursion into the main hubs on either side of the Atlantic still looks very difficult and probably not worth the risk.

One of the issues the Frontier Spirit has to address if it is to achieve a European-scale market penetration is passenger approval. The graph on the next page, which comes from DoT surveys, and was definitely not included in the Frontier Spirit merger presentation pack, reveals that in 2021 the two airlines received by some margin the most complaints per passengers carried of all the US airlines. Spirit's record was worse than Frontier's but both ULCCs fared badly on most measures — refunds (a particular problem during the pandemic), delays timeliness, reliability, misplaced luggage.

Ryanair of course receives a fair amount of abuse from its customers, but on key service metrics like dispatch reliability and on-time performance it can claim to be at the top of European rankings. So the service aspect does have to be improved at Frontier Spirit. However, on other ESG criteria, Frontier can boast of being the US's greenest airline while Spirit picks up awards for employment conditions and diversity.

Synergies etc

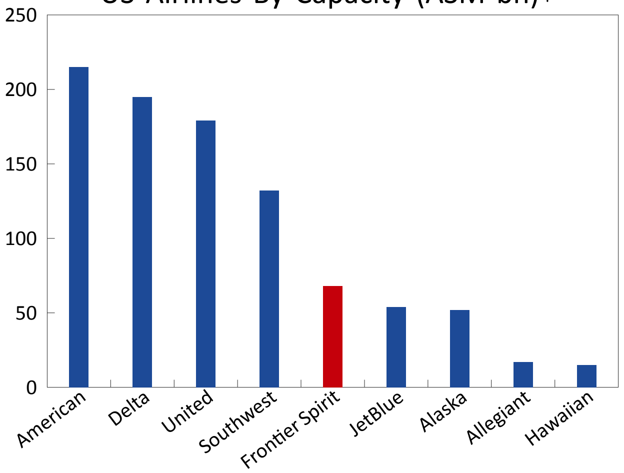
Coming out of the recession, Frontier Spirit confidently asserts that it will win because it has the lowest costs. It points to the experiences of Southwest post the Gulf war in 1991/92, Ryanair post 9/11 and Spirit after the Financial Crisis, which all boosted their margins and grew rapidly while the industry as a whole continued to suffer.

In claiming $500m of "run rate operating synergies" from the merger, management have been able, unusually for the industry, to give some concrete examples of improved efficiencies. Amalgamating the schedules will free up spare aircraft, ie aircraft needed to assure the schedule but which are not fully utilised — the equivalent of five aircraft in total. Another six aircraft will be freed by removing inefficiencies in the joint schedule mix and improving aircraft utilisation. Savings are estimated at $145m (or $12m per aircraft which seems reasonable). Another $35m is expected to come from additional traffic through new connecting possibilities.

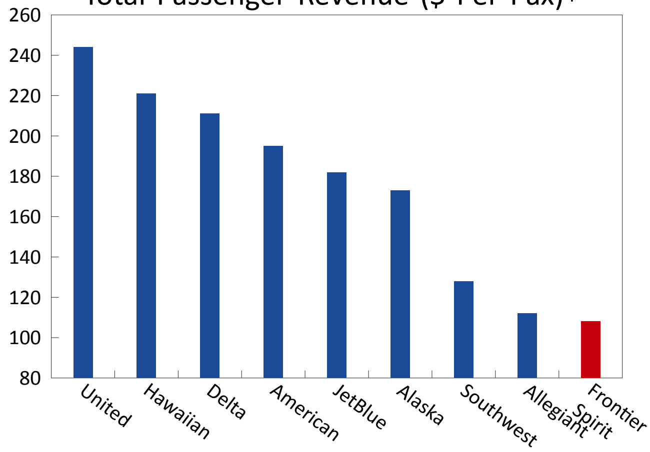
There is also the opportunity af-

THE FRONTIER SPIRIT COMBINATION

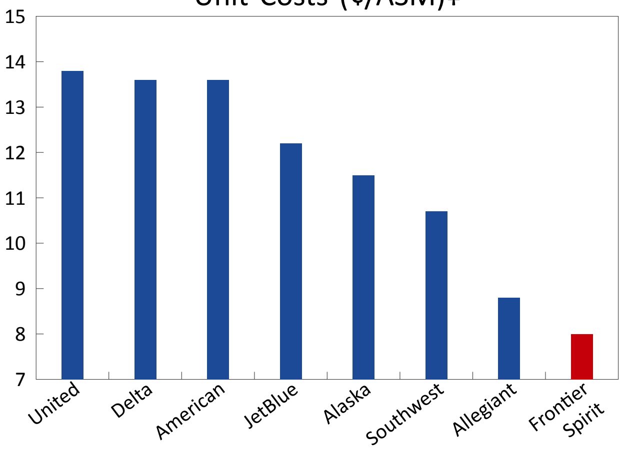
US Airlines By Capacity (ASM bn)∗



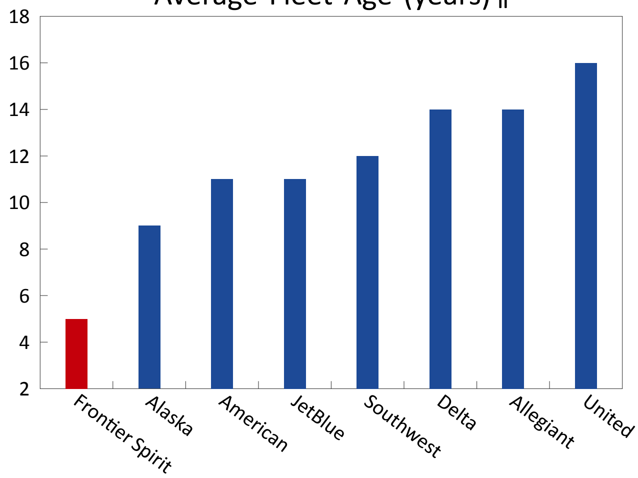
Total Passenger Revenue ($ Per Pax)†



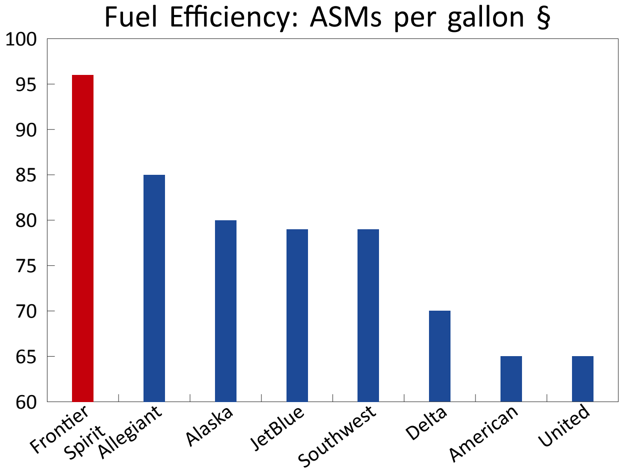
Unit Costs (¢/ASM)‡



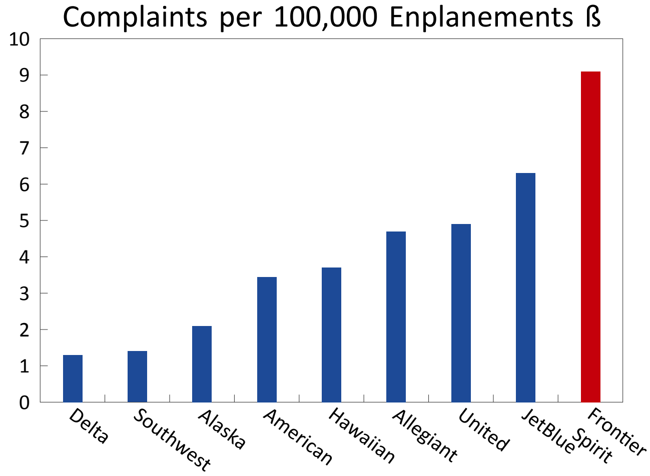
Average Fleet Age (years)¶



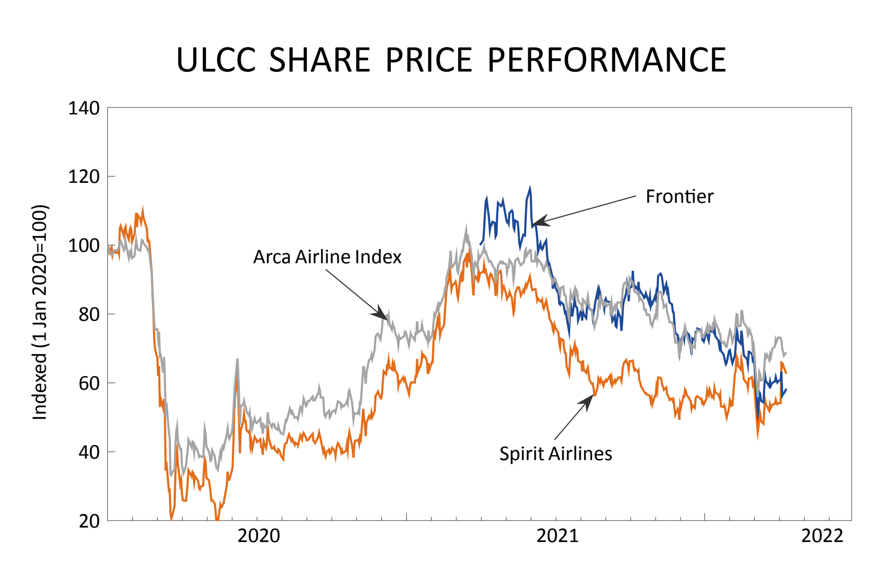
Fuel Efficiency: ASMs per gallon §



Complaints per 100,000 Enplanements ß



Notes:∗ 2021 System Data; † 2021 EstimatesI ‡ 2019 data Adj CASM adjusted for stage length + Net Interest; ¶ as at end 2021; § 2021 Data; ß US DoT 2021 Consumer Report



forded by the merger to match capacity more closely to demand. Interestingly, management notes that its airlines underperform on load factor compared to global ULCC benchmarks. In 2019 Frontier's load factor was 86% and Spirit's 84%, significantly below Ryanair's 96% (though calculated on seats sold rather than actual passengers). Pushing up the joint load factor by 2-4 points would generate $220m of revenue synergies.

The remaining $100m comes from procurement savings and overhead efficiencies (a suspiciously round number). Nothing, the company admits, is included for dis-synergies.

IT integration is frequently a big headache when merging two companies. Frontier and Spirit both use the standard Navitaire reservation system, which is important, but their yield management systems may not be compatible. Both airlines are unionised — over 80% of employees — and are in the middle of five-year contracts with ALPA and other bodies. These contracts will probably have to be renegotiated, leading to the perennial issue of integrating seniority lines. Then there is the ultimate merger question — whose name goes on the door of the CEO's office?

"Win-win" is an expression beloved of management consultants and investment bankers, which often proves to be a delusion. Nevertheless, Frontier Spirit puts forwards a convincing risk analysis of revenue and cost risks to the merged airline compared to the Big 4. This is summarised as:

✈ If both leisure and business traffic fail to recover to pre-pandemic trends, the Big 4 will have to cut excess capacity and/or raise fares, which means that Frontier Spirit relative fare advantage widens, plus the revenue synergies from the merger.

✈ If leisure traffic recovers but business traffic doesn't, the Big 4 will be forced to increase leisure fares to compensate for the loss of essential premium revenue, again increasing Frontier Spirit's relative fare advantage.

✈ If the crude oil price remains at over $100/bbl, Frontier Spirit's cost advantage over the Big 4 increases because it uses 10 gallons to fly one seat 1,000 miles whereas the Big 4 need 15 gallons (an alternative view would be that ULCCs' fuel costs are a higher proportion of the total cost pie than network carriers').

✈ Ex-fuel inflation is more manageable at Frontier Spirit than at the Big 4 because of the ULCC's skill in cost control, plus the costs synergies resulting from the merger.

✈ Finally, "Covid Debt" is much lower at Frontier Spirit relative to the whole US airline sector — $4 per passenger versus $21 per passenger.

Will JetBlue spoil the party?

At the beginning of April JetBlue made an unexpected $3.6bn bid for Spirit, valuing the airline at approximately $700m more than in the Frontier deal. The key question for Spirit shareholders is whether JetBlue's extra cash upfront compensates for the increased implementation risks of the merger.

There would appear to be nowhere like the same degree of compatibility between operating models. JetBlue's CASM (adjusted) would be 50% higher than Frontier Spirit's. Its focus is on transcontinental operations and preparations for entry onto the North Atlantic. With its MINT premium product, it is orientated towards business travellers. Unit revenue per passenger is 70% higher than at Frontier Spirit. Moreover, JetBlue is entangled in an antitrust case with the DoJ over its alliance with American in the northeast of the US, which the DoJ contends is leading to market control and higher fares.

Whereas the Frontier Spirit message is pretty clear — "Creating America's most competitive ultra-low fare airline", the rationale for the takeover given by Jet Blue's CEO, Robin Hayes seems slightly nebulous: "What we want to do is create a bigger JetBlue".

Spirit-Frontier merger: Competitive network analysis

Following on from the strategic review of the planned Frontier Spirit merger, this analysis by Skailark focuses on the all-important detail, quantifying how the merger will impact individual route competitiveness.

Approach

The three images on pages 12–14 have been taken from skailark's route competitiveness dashboard: Frontier's route network, Spirit's route network and the combined airline.

First, let's understand the dashboard layout: the **x-axis represents market positioning — Relative Market Share** or **RMS** (which is presented on a logarithmic scale). For the selected carrier, this measures the market share against its strongest competitor on each route, by number of seats.

If RMS > 1, the selected airline is the leader in that market. The higher the RMS, the wider the market share gap to the second largest competitor on the route. If RMS < 1, there is another competitor with a higher share of seats on that route. The lower the RMS, the wider the market share gap to the largest competitor on the route. Research and management experience have shown that a high RMS (being a leader) on a route strongly correlates with the profitability on that route, with enhanced ability to control prices and offer more options to customers.

The **y-axis represents cost positioning — Relative Cost Competitiveness** or **RCC**) The unit cost (CASM or CASK) of the selected carrier is benchmarked against the lowest cost competitor on the route, using the actual unit costs of the aircraft type (s) flown on each route.

If RCC >1, the selected airline is the cost leader in that market. The higher the RCC, the wider the cost gap to the second lowest cost competitor in that market. If RCC<1, there is another airline competing with lower cost on that route. The lower the RCC, the wider the cost gap to the lowest cost competitor on the route. Again here, a high RCC correlates strongly with profitability in that market.

The top right quadrant (green) displays routes where the respective carrier has both cost and market leadership. The bottom left quadrant (red) highlights routes, where the carrier has neither cost nor market leadership. On routes allocated to the top left and bottom right quadrants (yellow), the airline has either cost or market leadership, not both. Monopoly routes are listed on the bottom right of the dashboard and normalised to 1 (blue dot in the centre).

All data is based on Q3 2021 and the output is shown by city-pair, segment-based. (Note: to view the name of every route with additional information, please refer to the interactive dashboard at https://tinyurl.com/skailark.)

Output and findings

Image 1 divides the network of Frontier (pre-merger) into the four quadrants, while image 2 displays the network of Spirit airlines (pre-merger). Image 3 displays the two carriers combined, modelling a theoretical merged network and assuming no network adjustments.

Let's pick one example to clarify the output: the city-pair Orlando to San Juan, Puerto Rico (ORL-SJU), which is operated by both airlines. This route is leisure focused so the market share has a lower impact on overall route profitability, but it still nicely illustrates the strategic network impact of the merger.

For Frontier (Image 1) the route ORL-SJU sits in in the top-left quadrant (share lag), meaning Frontier operates with lowest unit costs on the route, while there is another carrier with a higher market share. The left side of Table 1 on page 13 shows the details, revealing that Southwest is the carrier with the largest number of seats on this route pre-merger.

For Spirit (Image 2) ORL-SJU sits in the bottom-left quadrant (share and cost lag), meaning Spirit operates with slightly higher unit costs compared to Frontier and also that there is another competitor with more seats in this market (again it is Southwest — see Table 1 on page 13 for confirmation).

In Image 3, representing the Frontier-Spirit merger, the ORL-SJU circle has moved to the top-right quadrant (winning routes and costs — RMS> 1, RCC >1). The reason is that the newly formed Spirit-Frontier carrier surpasses Southwest as the largest carrier with the most seats on the route, and it also has the lowest unit costs. The circle is also larger, as it combines the total number of seats for Spirit and Frontier on the route.

Image 1: FRONTIER ROUTE COMPETITIVENESS

Image 2: SPIRIT ROUTE COMPETITIVENESS

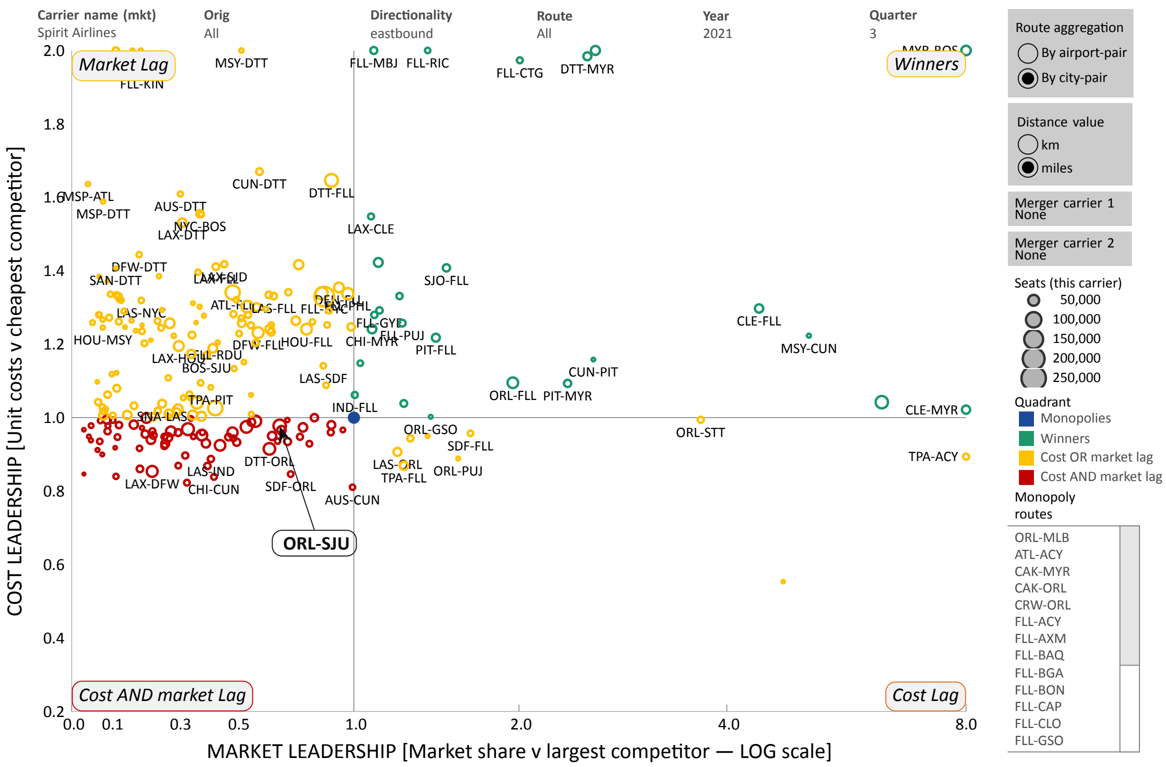


Table 1: Seats and CASM on ORL-SJU pre- and post-merger

Pre-merger

Route: ORL-SJU
RCC: 0.9777
RMS: 0.7

	Acft	Seats	CASM†	CESM‡
Frontier Airlines	32A	1,644	9.3	9.1
	32B	8,280	8.4	8.4
	32N	23,808	9.3	9.3
	320	900	9.6	9.3
	Total	**34,632**	**9.1**	**9.1**
JetBlue Airways	32A	3,672	13.0	10.7
	320	56,346	12.7	10.9
	E90	9,200	18.9	16.6
	Total	**69,218**	**13.5**	**11.6**
Southwest Airlines	7MB	5,075	10.1	8.4
	7S8	79,625	9.9	9.2
	73H	6,125	10.0	9.3
	73W	6,435	10.9	10.5
	Total	**97,260**	**10.0**	**9.3**
Spirit Airlines	32A	22,386	9.8	9.6
	32B	31,920	8.7	8.7
	32N	2,366	9.4	9.2
	319	145	10.1	9.4
	320	8,008	10.1	9.9
	Total	**64,825**	**9.3**	**9.1**

Post-merger

Route: ORL-SJU
RCC: 1.4
RMS: 1.088

	Acft	Seats	CASM†	CESM‡
JetBlue Airways	32A	3,672	13.0	10.7
	320	56,346	12.7	10.9
	E90	9,200	18.9	16.6
	Total	**69,218**	**13.5**	**11.6**
Southwest Airlines	7MB	5,075	10.1	8.4
	7S8	79,625	9.9	9.2
	73H	6,125	10.0	9.3
	73W	6,435	10.9	10.5
	Total	**97,260**	**10.0**	**9.3**
Spirit Airlines–Frontier Airlines	32A	24,030	9.7	9.5
	32B	40,200	8.7	8.6
	32N	26,174	9.3	9.3
	319	145	10.1	9.4
	320	8,908	10.0	9.8
	Total	**99,457**	**9.2**	**9.1**

Notes: †CASM = cost per seat mile in US¢; ‡CESM = cost per equivalent economy seat mile, CASM adjusted to maximum design seating density;

The right-hand side of Table 1 shows the details post-merger. In summary, the newly formed merger will have cost and market leadership on that route.

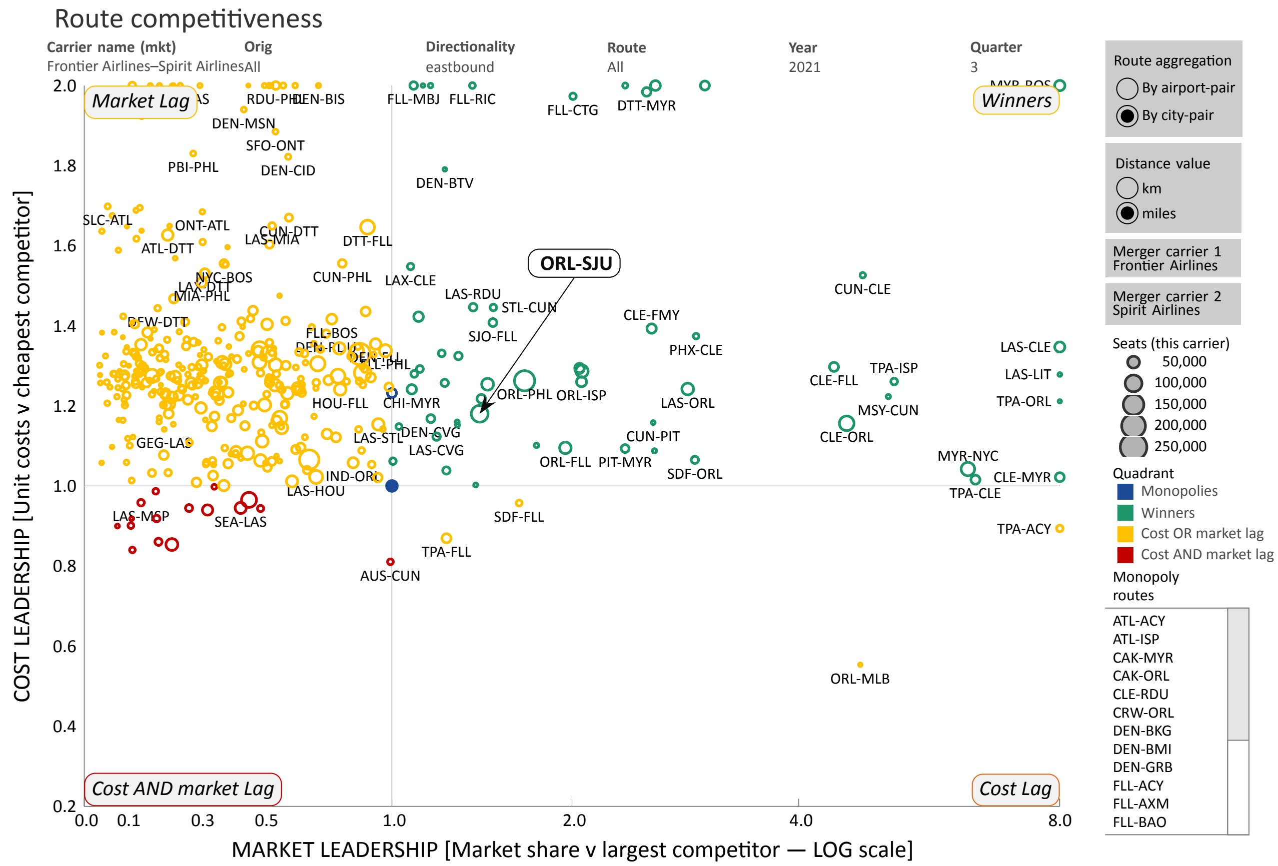
This analysis is automatically computed by skailark for every single route and provides an overall picture of the effect of the planned merger.

Table 2 on page 13 summarises the total share of city-pairs in each quadrant, pre- and post-merger. The highlighted fields are of the most interest. Pre-merger about 10% of routes were in the "winning" quadrant, while post-merger, they rise to 13%, meaning that the combination increases the number of routes with highest market share and lowest cost by about 30%. Equally interesting is the opposite part of the spectrum: the percentage of routes in the bottom-left quadrant (cost and share lag) is significantly reduced from 17% to 3%. This is driven by the elimination of competition between the two carriers. Finally, the number

Table 2: Share of routes in each quadrant (pre- and post-merger)

		Winners	Cost lag	Share lag	Cost, share lag	Monopolies
Pre merger	Frontier (Image 1)	9%	0%	75%	9%	6%
	Spirit (Image 2)	10%	3%	46%	26%	15%
	Average	10%	2%	61%	17%	11%
Post merger	**Frontier-Spirit (Image 3)**	**13%**	**1%**	**70%**	**3%**	**13%**

Image 3: FRONTIER-SPIRIT COMBINED ROUTE COMPETITIVENESS



of monopoly city-pairs increases, but only slightly from 11 to 13%. This might be relevant from a regulatory perspective.

The bottom line

The networks of Spirit and Frontier can be classified as largely independent with only limited overlap. The network combination will rather expand the carriers' reach to more customers across the continent. Nonetheless, on those routes where both carriers are competing today, the joint offering results in market advantages, and is likely to drive higher returns. In general, most overlapping routes shift from the bottom-left towards the top-right highlighting the strategic network synergies. At the same time, other carriers operating on those routes should anticipate the increased competition and could consider strategic adjustments. Furthermore, the number of newly formed monopoly city-pairs is quite low, an angle that is likely to be reviewed by regulators. Of course, this assessment has its limits as it does not consider the O&D-view. However, this is less relevant to an ULCC business model which focuses on point-to-point operations.

skailark

The analysis is available for every airline and network to help management understand the impact of any merger (eg JetBlue-Spirit) on their own network — available with a few simple clicks. Obviously, all airlines aim to have most routes in the top-right quadrant (market and cost leadership) and least in the bottom-left quadrant (market and cost laggers). Even airlines with relatively high unit costs can identify their sweet spot on each route depending on the aircraft deployed by their competitors and the related unit costs. The founders of skailark welcome any feedback from *Aviation Strategy* readers. Live demonstrations of the dashboards can be arranged.

Please contact the team through contact@skailark.com or visit https://skailark.com

IAG: Delicately Balancing its Finances

IAG's policy throughout the pandemic has been to rely on private finance rather than seeking huge amounts of state aid. Where does this leave IAG now?

Over the two years (2020-21) IAG has produced total underlying operating losses of €7.4bn and net losses of €7.8bn — including exceptional items that loss totals nearly €10bn — while it only recognised an average of €8bn in revenues a year, 30% of its 2019 peak.

IAG had entered the crisis with a relatively healthy balance sheet: a net debt to EBITDA ratio of 1.4x, well below its target ceiling of 1.8x, liquidity of €9bn (36% of 2019 annual revenues), and investment grade ratings. And, importantly, it had built in a high degree of flexibility with only one third of its 598 strong aircraft fleet owned and two thirds on operating lease.

It paid for the losses by raising both debt and equity. Total debt at the end of 2021 stood at €19bn, €5.4bn (37%) higher than at the end of 2019. It raised €2.7bn from shareholders in an emergency, and dilutive, rights issue in the second half of 2020.

It benefited from generally available government support through the crisis. These included the various job retention schemes in the UK, Ireland and Spain giving a benefit to the wage bill of €558m, as well as state backed loans and loan guarantees from Ireland's Strategic Investment Fund, Spain's ICO, and under the UK Export Development Guarantee.

But, unlike its arch rivals Air France-KLM and the Lufthansa Group, it managed to survive without the need to request specific state aid from any of its airlines' governments (not that any help would realistically have been likely to have been forthcoming from the UK for British Airways) and as such avoided the concomitant management, operational and competitive restrictions.

Future size and shape

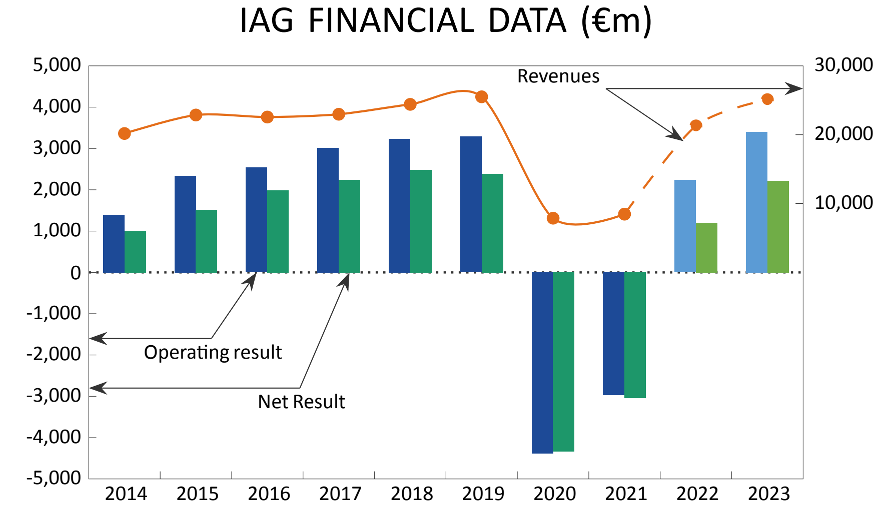
Two years on from the onset of the Covid-19 pandemic and the Group is a lot smaller.

IAG disposed of 85 aircraft over the two years, including an accelerated retirement of British Airways' remaining 32 ancient 747s and Iberia's 15 fuel-guzzling A340s (the other four-engined aircraft, BA's 12 A380s, were put into storage temporarily — they will still be needed at the slot-constrained Heathrow).

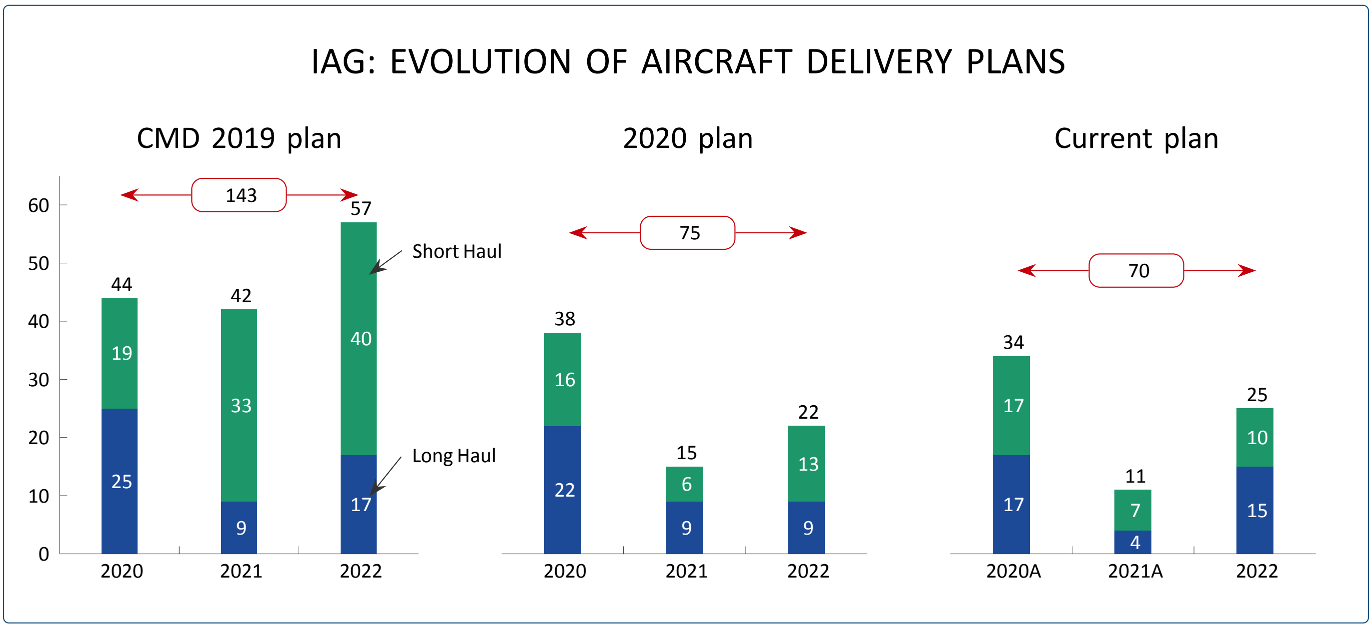
It also got rid of a lot of employees: 25% of the workforce at BA and 10% at Aer Lingus (Iberia and Vueling were restricted from laying people off under the terms of Spain's ERTE wage support programme). Total employees, in manpower equivalents, fell by a quarter from 66,034 in 2019 to 50,222 in 2021.

It had been planning its fleet renewal process as part of its necessary path to net-zero. At the group's last Capital Markets' Day (CMD), which was way back in 2019, the group highlighted its then fleet plan, suggesting it had ironed out the spikes in aircraft replacement that had been a traditional feature of the old British Airways and had in place a smooth transition to next generation aircraft.

For 2020-22 it had at that time anticipated taking delivery of 92 short haul and 51 long haul aircraft to provide replacement and growth, and from 2023 it foresaw a need for 217 short haul units (including an early re-



Source: Company reports; forecasts Bernstein

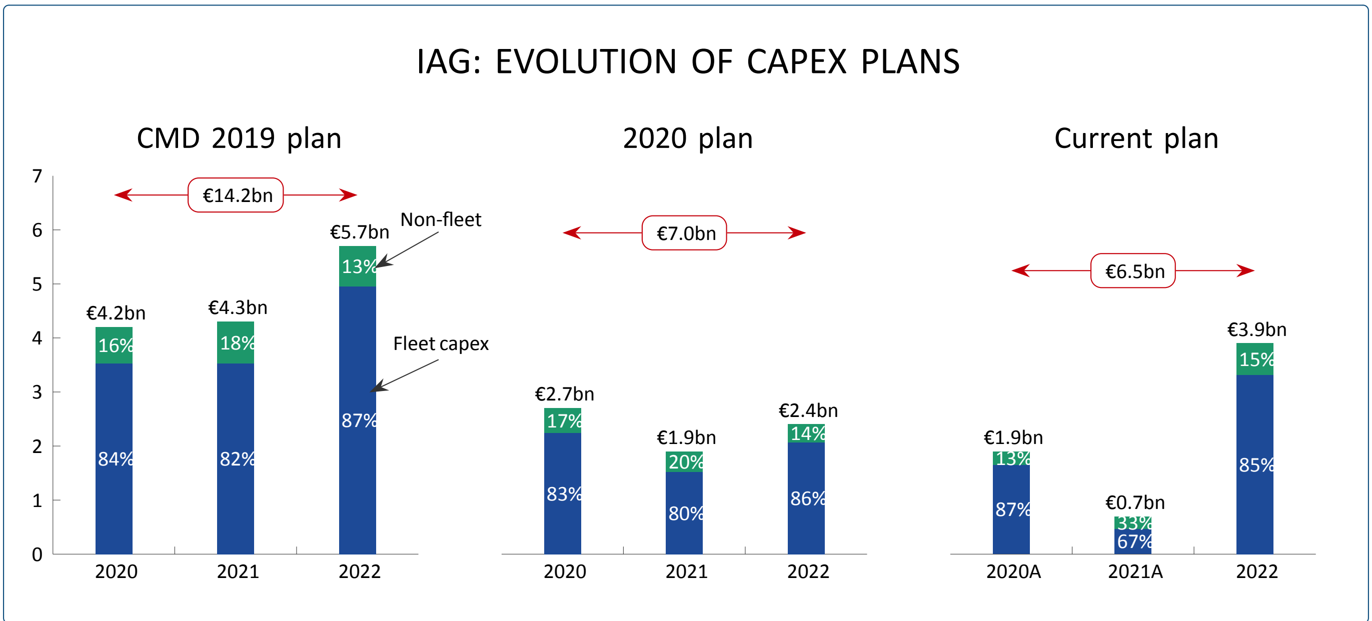


placement of A320ceos) and 66 long haul aircraft for replacement, evenly spaced over the years to 2029.

It was inevitable that IAG renegotiated scheduled deliveries during the crisis — not merely to halt the arrival of aircraft with nowhere to fly, but more importantly to stem the outflow of cash in capex. The chart on page 16 shows the evolution of those plans from the CMD projections, through those promulgated at the time of the capital raising in 2020, to the current plans presented at the announcement of the 2021 full year results in February 2022. In the end IAG took delivery of 45 aircraft in 2021 and 2022, half that originally planned leaving a group fleet at the end of 2021 (see table on the facing page) some 20% smaller than two years previously.

The chart below shows the associated data for group capital expenditure. Gross capex turned out at €2.6bn, 70% less than that planned for the years in 2019. Net of asset sales, capex in 2021 fell to a mere €200m (partly as a result of delivery delays from both main manufacturers).

This reduction in capex helped. Some recovery in operations had already been experienced in the second half of 2021. This was particularly so for Iberia and Vueling, both having the benefit of a substantial domestic market and fewer restrictions on travel. For 2021 as a whole Iberia op-



IAG FLEET

	Dec 2019	Δ	Dec 2021	Orders	Options
E170	6	(6)			
E190	18	5	23		
Regional	24	(1)	23		
A318	1	(1)			
A319	57	(18)	39		
A320	254	(14)	240	22	76
A321	66	7	73	34	14
Narrowbodies	378	(26)	352	56	90
A330-200	24	(6)	18		
A330-300	16	2	18		
A340-600	15	(15)			
A350	9	8	17	26	52
A380	12		12		
747-400	32	(32)			
777-200	46	(3)	43		
777-300	12	4	16		
777-9				18	24
787-8	12		12		
787-9	18		18		
787-10		2	2	10	6
Widebodies	196	(40)	156	54	82
TOTAL FLEET	**598**	**(67)**	**531**	**110**	**172**

erated capacity at 65% of 2019 levels and Vueling at 63%. By contrast BA, with the Atlantic then still effectively closed, operated at 28% of its 2019 capacity and Aer Lingus at 24%.

In the fourth quarter IAG reported the first quarterly positive EBITDA result (of €250m) since the start of the pandemic, despite the impact of the omicron variant of the virus (Iberia even posted an operating profit of €82m in period, a margin of 8%). For the second half of the year as a whole the group achieved positive operational cashflow of €1bn.

The group ended 2021 with a high level of liquidity at €12bn (including €4bn in undrawn facilities) up by nearly €2bn over the year and the highest since the start of the pandemic. CEO Luis Gallego expressed some satisfaction that net debt had fallen to a mere €11.7bn from €12.5bn at the end of September 2021.

At the results announcement in February the group indicated that there would be a ramp-up in capacity as markets opened, aiming to recover capacity in 2022 to 85% of that flown in 2019. By the peak third quarter it expected to be flying only 10% less than pre-pandemic levels, with operations on BA's key Atlantic routes back to the levels of three years ago, and South Atlantic operations out of Madrid back to 95% of former capacity by the fourth quarter.

IAG GROUP AIRLINE BRAND PERFORMANCE

	British Airways (£m)		Iberia (€m)		Vueling (€m)		Aer Lingus (€m)	
	2021	Δ v 2019	2021	Δ v 2019	2021	Δ v 2019	2021	Δ v 2019
Passenger Revenue	2,316	-81%	1,724	-58%	1,011	-59%	308	-85%
Cargo Revenue	1,097	+54%	394	+35%			65	+20%
Other Revenue	281	-59%	666	-49%	5	-72%	4	-64%
Total Revenue	3,694	-72%	2,784	-51%	1,016	-59%	377	-82%
Costs	5,594	-51%	3,018	-41%	1,278	-42%	724	-61%
Operating result	(1,900)	(3,821)	(234)	(731)	(262)	(502)	(347)	(623)
Margin	-51%	-66pts	-8%	-17pts	-26%	-36pts	-92%	-105pts
ASK(m)	52,633	-72%	40,606	-45%	20,355	-47%	7,380	-76%
RPK(m)	30,698	-80%	27,976	-56%	15,554	-53%	3,545	-86%
Load Factor	58%	-25pts	69%	-18pts	76%	-11pts	48%	-34pts
Sector length (km)	3,205	1%	2,620	-8%	986	4%	1,800	-11%

With encouraging forward bookings, the company guided to a "significant" operational cash flow and operating profit for the full year (although the first quarter would be strongly negative because of seasonality and the cost of ramping up operations).

War risk

But that was before the Russian invasion of Ukraine, the resulting economic war of sanctions pursued by the US and Western Europe against the aggressor, closure of Russian airspace to "unfriendly nations" and the pressure on fuel prices.

IAG as a group has relatively little exposure to the removal of the right to overfly Russian airspace. Its operations into Russia (or Ukraine) are a minuscule part of its network. It (through British Airways) is the fifth largest operator on the markets between Europe and Asia Pacific (well behind Lufthansa and Air France-KLM) with less than 6% of total market revenues in normal times. Furthermore, less than a third of its operations to the Asia Pacific region involve flights to North East Asian destinations which would be subject to the longest diversions away from Russian airspace.

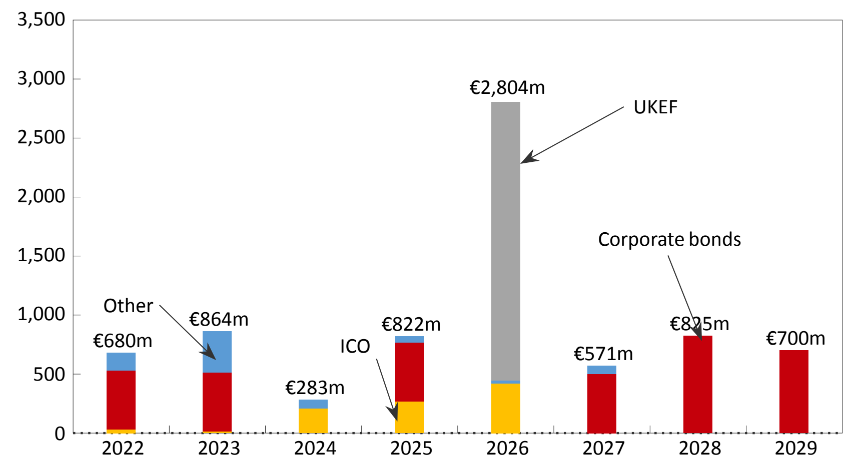
The war in Ukraine could affect peak summer season passenger traffic demand on the Atlantic just at the time that the market reopens after two years of effective closure: outbound US leisure travel tends to be affected by such geopolitical events.

Of perhaps more concern is the economic impact. Significant inflation in fuel, commodities and food prices will add pressure to economic growth and personal incomes: not a good environment for encouraging air travel growth, however much the level of pent-up demand may be.

Another rights issue needed?

On the publication of the full year results in February, the stock markets appeared unimpressed, worried that capital expenditure plans were too high. IAG said it was targeting spend of €3.9bn in 2022 up from the €2.4bn it had earlier earmarked. In fairness,

IAG DEBT REPAYMENT SCHEDULE



IAG FINANCIAL DATA

€m	2019	2020	2021
Revenues	25,506	7,806	8,455
Operating result	3,285	(4,390)	(2,970)
Net Result	2,387	(4,337)	(3,038)
Operating cash flow	4,002	(3,432)	(141)
Net Capex	(2,554)	(806)	(200)
Other income	(1)	2	(72)
Free cash flow	1,447	(4,236)	(413)
Increase in debt	49	1,053	2,552
Equity raised/(dividends)	(1,308)	2,621	(24)
Total cash flow	188	3,810	2,235

IAG BALANCE SHEET ITEMS

At Dec 31 €m	2019	2020	2021
Fleet	16,675	15,365	15,116
Other Fixed Assets	4,224	3,903	5,500
Intangible Assets	3,442	3,208	3,239
Current Assets	11,327	7,840	10,551
of which Cash	*6,683*	*5,917*	*7,943*
Total Assets	35,668	30,316	34,406
Current liabilities	12,748	11,516	13,278
of which debt	*1,843*	*2,215*	*2,526*
Long term debt	12,411	13,464	17,084
Other liabilities	3,389	3,726	3,198
Total Liabilities	28,548	28,706	33,560
Equity	7,120	1,610	846
Net debt/Equity	1.1	6.1	13.8
Net debt/EBITDA	1.4	-4.3	-11.3

the increase is probably a natural consequence of the delivery delays experienced in 2021 and a restart of predelivery payments for rescheduled aircraft delivery programmes. It is also, as the group states, "reflecting the need to re-build capacity towards pre-pandemic levels".

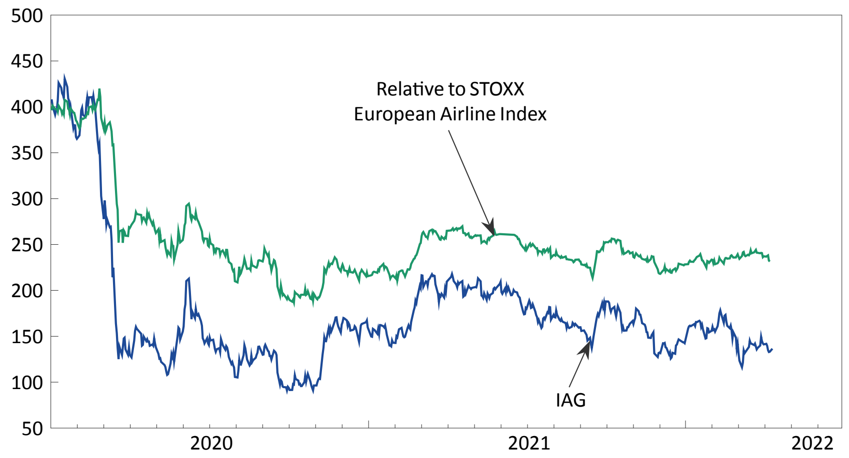
Along with a build-up of capital expenditure, there has been a massive increase in long term debt — to €17.1bn at the end of 2021. IAG's CFO, Steve Gunning, appeared relaxed with the €12bn in liquidity he has secured (equating to nearly 50% of what had been 2019's annual revenues) and sanguine about the debt repayment schedule (see chart on page 18), saying it was "manageable". But with the publication of the results in February he stepped down from the role and the group, leaving the headache for his successor.

A large portion of the repayment schedule relates to unsecured corporate debt, and repayments average €600m a year over the next three years. But the 70% state-guaranteed €1bn ICO loan organised by Spain's Official Credit Institute in May 2020 in favour of Iberia and Vueling (repayable 2023-2025) has non-financial restrictions against "upstreaming" of cash to other IAG Group companies, and the 80% guaranteed UKEF organised £2bn loan to British Airways becomes fully payable in 2025 (there is an additional undrawn £1bn facility available).

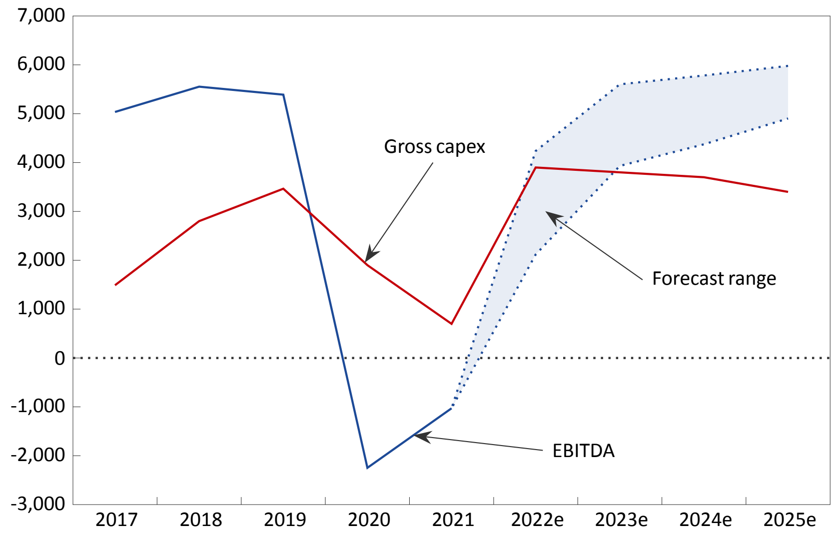
In the chart below we show an estimate of the level of capex in the next few years along with a range of estimates from two respected equity analysts for EBITDA as a proxy for cash generation. The latter relies on underlying assumptions on restoring revenues and suggests that 2022 and 2023 could still be difficult years on the path to recovery.

The emergency rights issue in 2020 was done *in extremis.* Ideally IAG might want to wait until there is a clear path to profitability before calling on shareholders again so that it doesn't impose further dilution. But if it doesn't raise new funds, it might take a very long time to restore the balance sheet to a healthy state. At the end of 2021 net equity officially stood at only €846m. Excluding intangible assets, it would be negative to the tune of €(2.15)bn.

IAG SHARE PRICE PERFORMANCE



IAG: EBITDA AND CAPEX (€bn)



Notes: Capex forecast Bernstein. EBITDA forecast range Bernstein and HSBC

Aviation Strategy

The Principals and Associates of Aviation Strategy apply a problem-solving, creative and pragmatic approach to commercial aviation projects.
Our expertise is in strategic and financial consulting in Europe, the Americas, Asia, Africa and the Middle East, covering:

- Start-up business plans
- Due diligence
- Antitrust investigations
- Credit analysis
- IPO prospectuses
- Turnaround strategies
- Privatisation projects
- Merger/takeover proposals
- Corporate strategy reviews
- Antitrust investigations
- State aid applications
- Asset valuations
- Competitor analyses
- Market analyses
- Traffic/revenue forecasts

For further information please contact:

James Halstead or **Keith McMullan**

Aviation Strategy Ltd

e-mail: info@aviationstrategy.aero

Subscription Form

Enter my Aviation Strategy subscription for: 1 year (10 issues – Jan/Feb and Jul/Aug are combined)

- UK: £475
- EU: €610 (+VAT where applicable)
- USA and Rest of world: US$780

starting with the ______________ issue.

❏ I enclose a Sterling or Euro cheque made payable to Aviation Strategy Ltd

❏ Please invoice me

❏ I wish to pay by credit card or PayPal.

❏ I am sending a direct bank transfer of the the relevant sum net of all charges to Aviation Strategy's bank account:
Metro Bank Ltd, 1 Southampton Row, London WC1B 5HA
IBAN: GB04 MYMB 2305 8013 1203 74
Sort code: 23-05-80 Account no: 13120374
Swift: MYMBGB2L

Delivery Address

Name ______________
Position ______________
Company ______________
e-mail ______________
Telephone ______________
VAT No ______________

Invoice Address

Name ______________
Position ______________
Company ______________
Address ______________
____
____
Country ______________
Postcode ______________

DATA PROTECTION ACT

The information you provide wil be held on our database and may be used to keep you informed of our products and services or for selected third party mailings

PLEASE RETURN THIS FORM TO:

Aviation Strategy Ltd, 6 Langside Avenue
London SW15 5QT, UK
e-mail:info@aviationstrategy.aero
VAT Registration No: GB 162 7100 38