

The Cargo Boom: Containerlines refloat Airlines

CONTAINERLINES have just enjoyed the most profitable, by far, two years in their history while airlines suffered the worst two years, by far, in their history. Shipping companies have been using some of their surplus funds to make some significant investments in airlines — opportunistic tactics or a strategic trend?

IATA estimates that the airline industry globally made an operating loss of \$111bn in 2020 followed by \$54bn in 2021. The main containerlines returned an operating profit of \$40bn in 2020 followed by \$150bn in 2021 (estimates from HSBC and Alix-Partners). Maritime expectations are for a similar or slightly better operating profit in 2022 while the global airline loss may fall to a mere \$18bn.

The containerline industry is concentrated, dominated by the

ten companies shown below. Their combined 2021 revenue was \$265bn, about a third of that reported by the airline industry in its peak year of 2019. Consolidation in the maritime sector has been intensive over the past 15 or so years, unconstrained by the archaic national ownership rules of the aviation business.

To take some examples, CMA-CGM emerged from an amalgam of nationally owned French companies and expanded through the

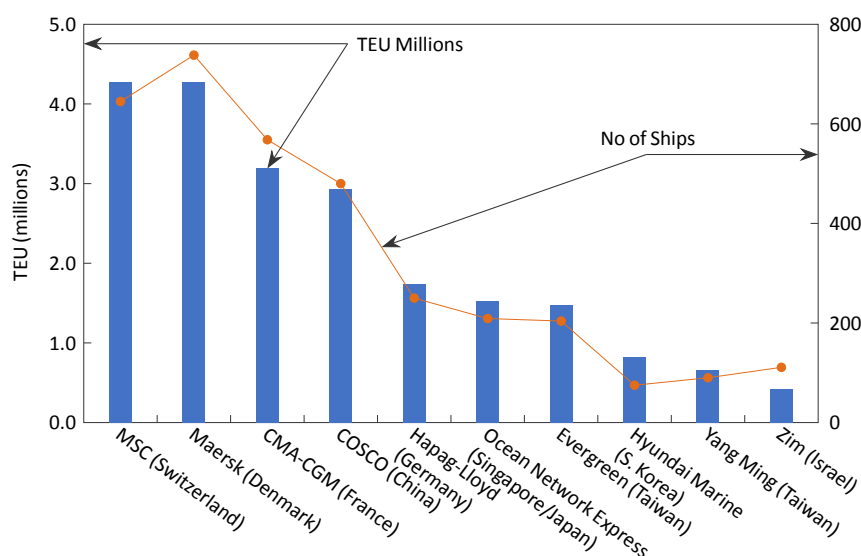
This issue includes

	Page
The Cargo Boom: Containerlines refloat Airlines	1
Emirates: New Competition, Geopolitics and Innovation	7
TAP Air Portugal: Sustainable Profitability by 2025?	13
Breeze: Creating the World's Nicest Airline	18

take-over of Neptune Orient (the former national line of Singapore) and American President Line (one of the six former major US lines). Maersk Line, part of the Danish AP Møller-McKinney group, has grown through the purchase of Safmarine (the South African national line) and SeaLand (another US major). Hamburg-based Hapag-Lloyd has absorbed CP Ships (once the leading Canadian carrier) and UACSC (a multinational line formerly owned by Arabian Gulf states). MSC (Mediterranean Shipping Company) by contrast has mostly grown organically into the world's largest containerline; it is headquartered at Geneva but owned and controlled by the Italian Aponte family. The industry is also characterised by a number of alliances; for example, Maersk and MSC have a vessel-sharing alliance on the transpacific, transatlantic and Asia-Europe routes.

However, despite the consoli-

TOP TEN CONTAINERLINES



Source Marine Insight

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

Copyright:

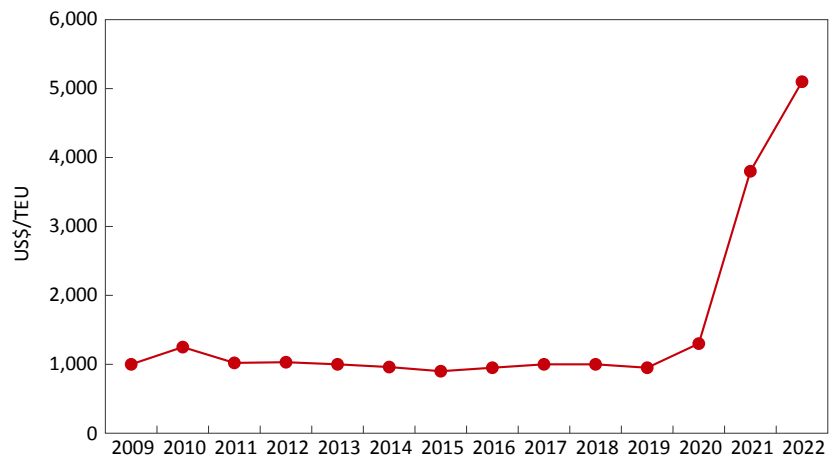
©2022. All rights reserved

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)

The opinions expressed in this publication do not necessarily reflect the opinions of the editors, publisher or contributors. Every effort is made to ensure that the information contained in this publication is accurate, but no legal responsibility is accepted for any errors or omissions. The contents of this publication, either in whole or in part, may not be copied, stored or reproduced in any format, printed or electronic form, without the written consent of the publisher.

Typeset in Calibri and Rockwell using X_qL^AT_EX

CONTAINER GLOBAL FREIGHT RATE INDEX



Source:Clarksons

dation the containerline industry in “normal” times has been no more profitable than the airline industry; indeed, the shipping sector has tended to follow a more extreme boom and bust pattern. The reasons for the 2020/21 boom are explored later in this article, but first a summary of the proposed maritime/aviation transactions.

CMA CMG and AF KLM

At the end of last year CMA-CMG firmed up an order for four A350Fs, adding to the five A330Fs currently operated or being converted. Then in May CMA-CGM announced that it was participating in the refinancing of Air France-KLM, in the process signing a 10-year strategic cargo partnership. The stated aim is to combine the maritime and airline cargo networks, giving CMA-CGM a rapid boost into airfreight, at the same time as securing Air France-KLM’s €2.3bn rights issue which is needed to redeem high-interest bonds taken on a part of the Group’s state aid package.

For an investment estimated at €400m CMA-CGM will acquire about 9% of the Air France-KLM Group, tak-

ing shares from the two joint-venture shareholders, Delta and China Eastern, rather from the French and Dutch states.

Air France-KLM and CMA-CGM will jointly operate the full-freighter capacity of the two companies (including Martinair), consisting initially of a fleet of 10 747 and 777 aircraft, with a combined 12 aircraft, 777Fs and A350Fs, on order. Importantly, the partnership also covers all of Air France-KLM’s belly cargo, which accounts for most of the group’s cargo capacity. Based at both Paris CDG and Amsterdam, the partnership plans to establish a single global and marketing operation.

For CMA-CGM the new joint venture promises to alleviate the problem of extensive sea-voyage delays to customers, allowing more freight to be expedited by air. For Air France-KLM there is the attraction of accessing CMS CGM’s global logistics operation, CEVA, and realising the long sought-after but rarely achieved synergies of multi-modalism.

However, as a reality check, it is worth remembering that CMA-CGM did not foresee the container boom

that enabled it to invest in Air France. On the contrary, at the beginning of the pandemic CMA-CGM applied for and received a €1.1bn French state-guaranteed COVID loan, which was repaid when the market unexpectedly soared.

MSC and ITA

The world's largest containerline, MSC, has emerged as the leading contender, in a joint bid with Lufthansa, for a majority stake in and management control of ITA Airways. Why would MSC/Lufthansa be interested in the latest incarnation of Alitalia when all previous attempts to rehabilitate the Italian flag-carrier have failed miserably?

Alitalia was renationalised in October 2021, replaced by ITA, an airline with a fleet of 52 passenger aircraft — a much smaller company than its predecessor, and with an 80% reduction in staff. Mario Draghi, the latest Italian prime minister — but significantly the well-respected ex-president of the European Central Bank (ECB) — appears to have made it his personal mission to finally deliver a successful privatisation of the flag-carrier.

The terms of the agreement reached with the European Commission last October, which freed ITA from the liability of Alitalia's state aid debts, gives the proposed privatisation some chance of success: essentially there has to be a genuine economic discontinuity between Alitalia and ITA, and, according to the EC, "ITA will have a more sustainable cost structure, in terms of fleet and labour contracts. It will hire a significantly reduced number of staff from the market, including from Alitalia, but under new labour contracts, based on market conditions. It will also modernise its fleet through

digitalisation and new-generation fuel-efficient aircraft".

All this is just another theoretical wishlist unless ITA gets a top-class, hands-on, politically-connected management team — which is where MSC might come in. Gianluigi Aponte, the founder of MSC is still, at 81 years old, the Executive Chairman of MSC, with two of his children holding the CEO and CFO positions. The company is 100% privately owned. The MSC story is remarkable: from a single ship operation in the early 70s the Aponte family has grown the company to the largest containerline in the world, overtaking all the famous names in the shipping industry. MSC has a reputation for rigorous cost control and price competition with established carriers, concentrating on expanding its own operations and mostly avoiding the merger and takeover activity that has characterised the rest of the industry (in some ways, a bit like a maritime Ryanair).

Gianluigi Aponte has stated clearly that he would not be interested in just a financial investment in ITA: MSC would need to control and manage ITA. MSC does, however, need Lufthansa technical aviation know-how. And Carsten Spohr, CEO of Lufthansa, has stated that his management are fully aware of the political complexities of ITA and has implied that Lufthansa would not have contemplated an investment in Italy without MSC. (incidentally, Lufthansa itself now has a 10% shareholding by Klaus-Michael Kuehne who is the controlling shareholder of the logistics giant, Kuehne+Nagel, and the 30% owner of Hapag-Lloyd.)

There might be an immediate opportunity in the airfreight sector for MSC. Northern Italy, specifically Lombardy, a highly industrialised and affluent region, lacks direct airfreight

connections to the rest of the world, following the closure of Alitalia's MD-11F operation. A new airfreight operation at Milan or Bergamo would be an alternative to congested road journeys to Frankfurt or Luxembourg from Lombardy. Another attraction is that the Italian market offers exports like luxury goods which would partly mitigate the trade imbalance from Asia. However, the main challenge would still be the passenger market, and competition from Ryanair and Wizz, which might just be beyond the capabilities of the MSC management.

A decision on the ITA investment is scheduled for the end of June, with the Italian government hinting, optimistically, that the airline would be valued at around €1.5bn.

Maersk Air Cargo

Maersk Line, for decades the world's largest containerline and always one of the most dynamic carriers in the container sector, also has announced aviation plans, this time of a more conventional nature. It is expanding its air cargo operations by setting up a new cargo airline — Maersk Air Cargo — based at Billund airport in Denmark, which will take over its existing cargo airline, Star Air, which operates 14 767Fs from Denmark, Germany and the UK, largely on behalf of UPS.

Maersk Air Cargo itself currently has a fleet of five aircraft — two new 777Fs and three leased 767-300Fs, and a further three 767Fs are planned for a separate US-China operation. The new airline is expected to be operational from the second half of 2022.

Launching the new airline, Maersk stated "Air freight is a crucial enabler of flexibility and agility in global supply chains as it allows our customers to tackle time-critical supply chain challenges and provides

Aviation Strategy

transport mode options for high value cargo. We strongly believe in working closely with our customers. Therefore, it is key for Maersk to also increase our presence in the global air cargo industry by introducing Maersk Air Cargo to cater even better for the needs of our customers”.

That statement takes a bit of un-tangling, but essentially Maersk is recognising the great contradiction of the container shipping boom. Financially, it has been excellent for the industry; operationally, it has been a disaster, with unacceptable delays causing pain for importers and ex-

porters. An expanded presence in air-freight is needed to help restore reliability to the sector, and regain customers’ confidence in containerlines.

Profiting from inefficiency

Moreover, a growing concern is that the shipping boom, that has led to this new interest in aviation, is not sustainable and will be reversed, as the containerline industry has in effect been profiting from inefficiencies that, sooner or later, will be cleared from the market.

The chart below breaks out price and volume trends in the container-

line business. Global container movements actually fell slightly in 2020 before growing by about 6% in 2021, good by historic standards but nothing remarkable; by contrast the global freight rate index soared by 37% in 2020 and 192% in 2021.

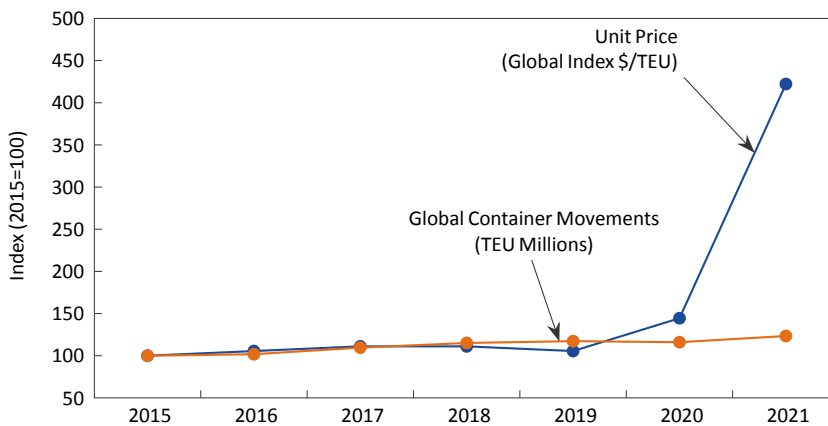
Although total container volumes only increased modestly there were surges in key routes — from China and SE Asia to the North America and, to a lesser extent, Europe. COVID changed consumption patterns, shifting demand away from services (travel, restaurants, etc) to goods (electronics, DIY, etc). Seaports — Los Angeles in particular — could not cope, ships queued for berths, COVID-impacted workforces were unable to secure the land transfer of containers at anything like standard efficiency, supply chains were stretched to the limit. And then there was the *Ever Given* grounding in the Suez Canal, underlining how exposed maritime trade routes are to disruption in the Suez and Panama Canals, or though the Straits of Hormuz and Malacca.

This year the global maritime industry has experienced 12.5m TEU waiting-days; this is a measurement of inefficiency, developed by Kuehne + Nagel, using the TEU (20 foot equivalent unit) capacity in a containership multiplied by the number of days the ship is waiting for a berth. In normal times, the number of TEU waiting-days would be under 1m.

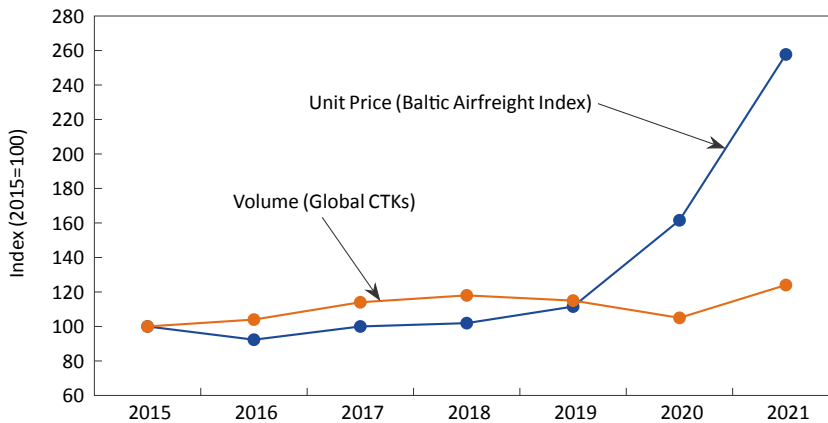
The airfreight price/volume graph shows a similar, is slightly less dramatic, pattern to the maritime sector. CTKs globally fell in 2020 by 9% before rebounding by 18% in 2021, but unit prices are estimated to have risen by 45% in 2020 and 60% in 2021. This was caused by the global shortage of bellyhold capacity as widebodies were grounded or flown

PRICE AND VOLUME TRENDS

MARITIME CARGO



AIR CARGO



Sources: UNCTAD, IATA, Baltic Exchange, Clarksons

Aviation Strategy

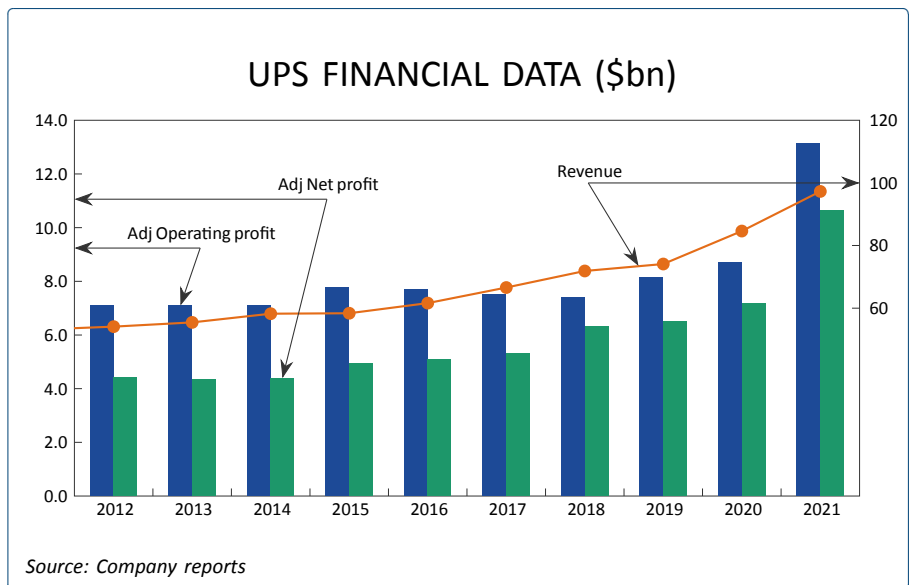
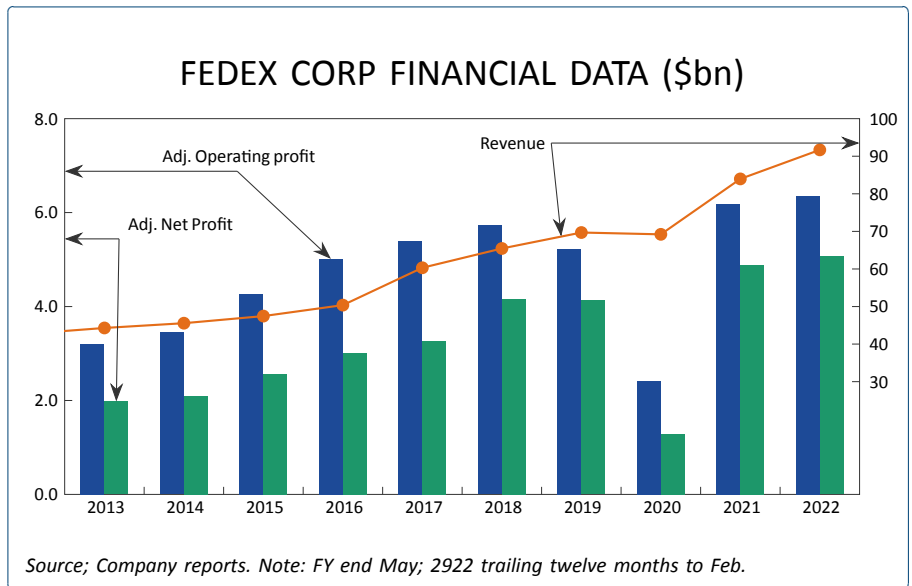
at low utilisations. And airfreight in many cases became competitive with sea containers as a result of the unprecedented boom in maritime freight rates.

The network carriers with major airfreight operations — Qatar, Emirates, Korean, etc — have been to some extent protected by cargo during the pandemic, but again they have benefitted from the yield effect rather than from structural change in trade volumes or modes. To take two examples:

THY managed to improve its profitability throughout the pandemic, despite a collapse in international passenger traffic, by boosting its cargo revenue from \$0.8bn in 2019 to \$4.1bn in 2021. It now has the target of establishing itself as one of the top three cargo airlines in the world. In 2021 THY owned a fleet of 20 widebody freighters, and also used up to ten passenger widebodies in cargo roles, but its increase in CTKs between 2020 and 2021 was fairly modest, up about 18%, while the real boost to revenues came from a near doubling in unit prices.

Cathay Pacific has had to reinvent itself as a cargo airline following the clamp-down on travel to and from Hong Kong. In 2021 Cathay Pacific operated a fleet of six 747-400Fs and six 777 “preighters” while Air Hong Kong operated 12 A330Fs, generating US\$466m in revenues out of a total of \$630m, and allowing the Group to get close to break-even. The 2021 cargo revenue increase, 32%, was entirely due to increases in yield, up 33%, not volume, down 1%.

The two major integrators — FedEx and UPS — have seen their profitability improve over the past two years, though perhaps not to the full extent that might be expected. For 2021 UPS reported a net profit of



FREIGHTER BACKLOG: CARGO SPECIALISTS AND OTHERS

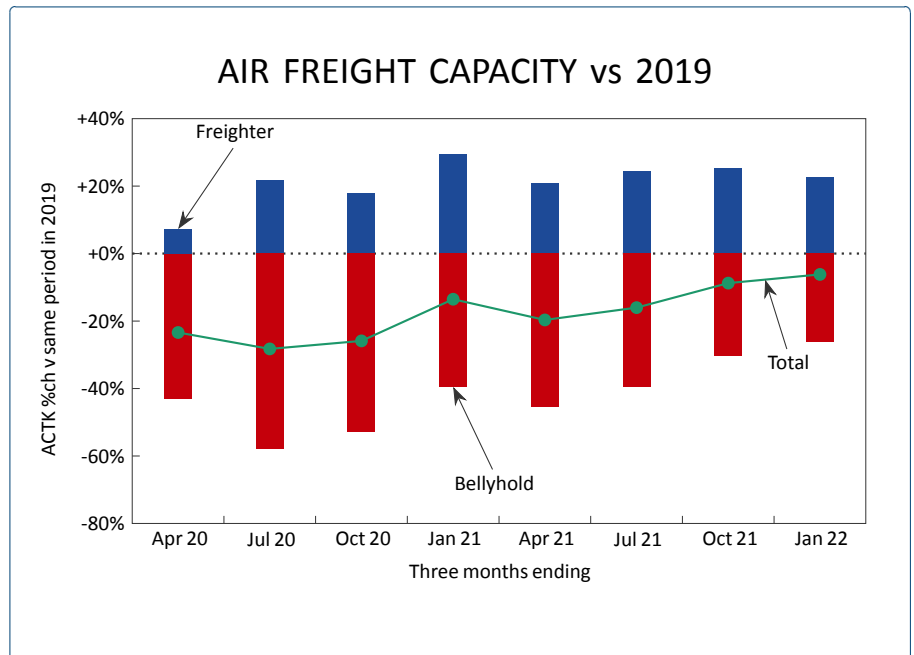
	747F	777F	767F	A350F	Total
Maersk		2			2
CMA		2		4	6
Atlas	4	4			8
DHL		13			13
FedEx		6	36		42
UPS			19		19
All Other Airlines and Lessors		58	6	18	82
Total	4	85	61	22	172

Aviation Strategy

\$12.9bn, a 13.2% margin on revenue, while FedEx for the 12 months to the end of February 2022 produced a net profit of \$6.1bn, 6.4% of revenue. In the US domestic market they are facing intense ground competition, and Amazon Air has now built up its fleet to nearly 100 freighter aircraft, mostly 767s operated by Atlas and other contractors.

Overall, the air cargo industry could be facing a difficult combination of events in the short term (2023 probably) — increased capacity with the return of widebody bellyholds to the market, rapid deflation in maritime and airfreight rates as COVID-related congestion dissipates, and maybe a softening in demand (AAPA recorded an 8.5% year-on-year fall in its members' CTKs in April)

Still, in the longer term it seems likely that there has been a structural shift benefitting airfreight, prompted



by the performance of the maritime sector during the pandemic. Certainly, this is Boeing's view: in its 2021 World Air Freight Forecast, it predicts a 4% CAGR in air freight volumes

up to 2039, equating to 2,260 new freighters, half for growth and half for replacement.

Aviation Strategy

Aviation Strategy in recent years has produced special analyses for our clients on a wide range of subjects. Examples include:

- ✈ Implications of Virtual Mergers on the North Atlantic
- ✈ The Future of Airline Ownership
- ✈ Air Cargo in the Internet Era
- ✈ LCC and ULCC Models
- ✈ Intra-European Supply and Demand Scenarios
- ✈ Super-Connectors: Financial and Strategic Analysis
- ✈ Key Trends in Operating Leasing
- ✈ Business Jet Operating Leasing Prospects
- ✈ Widebody Jet Demand Trends

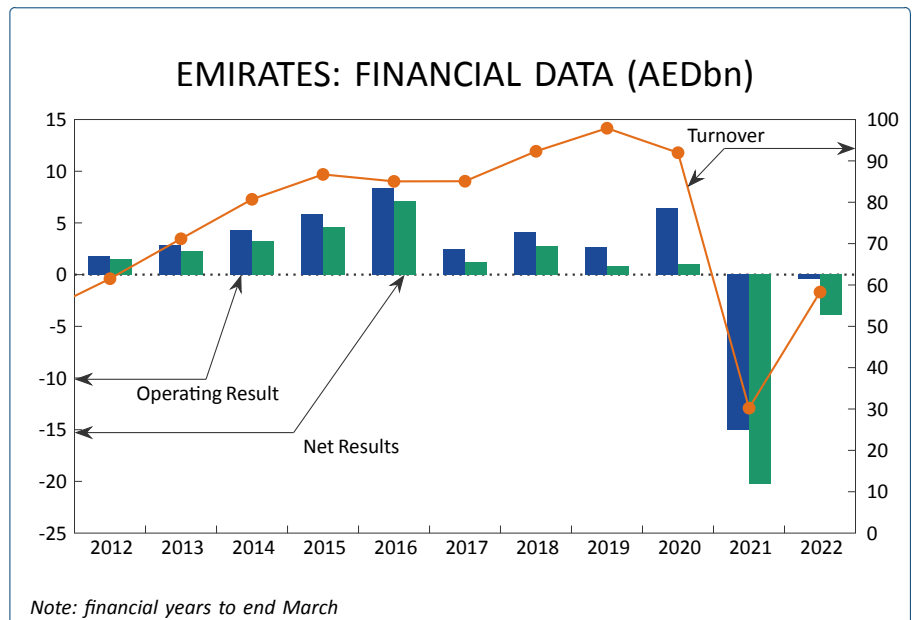
For further information please contact: info@aviationstrategy.aero

Aviation Strategy

Emirates: New Competition, Geopolitics and Innovation

EMIRATES was a great innovator, building a global hub at Dubai capturing traffic from traditional flag-carriers and offering a huge range of new intercontinental connections. It will emerge from the pandemic in good shape but facing a new competitive environment and having to innovate again.

Emirates reported results for FY 2022 (year to March 31st) that showed a marked improvement on the previous year, though it remained in the red. The net loss was AED3.8bn (US\$1.1bn) compared to AED 20.3bn (\$5.5bn) in FY 2021. Revenue increased by AED28bn to AED58.3bn, mostly due to returning passengers (up by a factor of 6.5 to 19.6m), cargo revenue having surged in the previous year (because of an increase in unit rates rather than volume). The increase in operating costs was kept to AED13.7bn, almost all DOCs like fuel, handling and airport charges related to increased flying, which



brought the 2022 total to AED59.6bn. At the EBIT level Emirates lost AED 0.4bn (after accounting for other operating income of AED 0.9bn), AED 15.5bn better than 2021. Net finance costs totalled AED3.4bn, down by AED2.2bn from 2021.

Sir Tim Clark, President of Emi-

rates and the avuncular voice of cautious optimism throughout the pandemic, has predicted a return to profit in FY2023 as traffic returns, with pre-pandemic capacity being restored sometime later this year. But with uncertainty over yields and unit revenues, the airline, according to its

EMIRATES AIRLINE FINANCIALS (AED bn)

FY to March 31	2018	2019	2020	2021	2022		Mar-22
Revenues	91.2	96	100	30.2	58.3	Fleet assets (inc lease rights)	112.8
Net result	3	1.1	1.4	-20.3	-3.8	Investments etc	6.8
Operating Cashflow	14.1	10.5	22.8	-4.5	24.4	Cash and short term deposits	20.9
Capex	-3.5	-4.8	-10.7	-4.3	-7.5	Other current assets	9.5
Other Income (Expenditure)	-7.5	3.4	0.5	1.7	-5.6	Total Assets	150
Free Cashflow	3.1	9.1	12.6	-7.1	11.3	Long term debt	85.5
Net increase (decrease) in debt	-6.2	-8.5	-9.3	-8.4	-14.8	Other current liabilities	44.2
Equity injection from owner				11.4	3.5	Total Liabilities	129.7
Dividends	-0.2	-1.2	-0.1	-0.1	-0.1	Shareholders' Equity	20.3
Total Cashflow	-3.3	-0.6	3.2	-4.2	-0.1		

Aviation Strategy

FY2022 accounts, is only planning on a recovery to 95% of pre-pandemic revenues, which were AED98bn (\$26.5bn) in FY 2019, by FY2025.

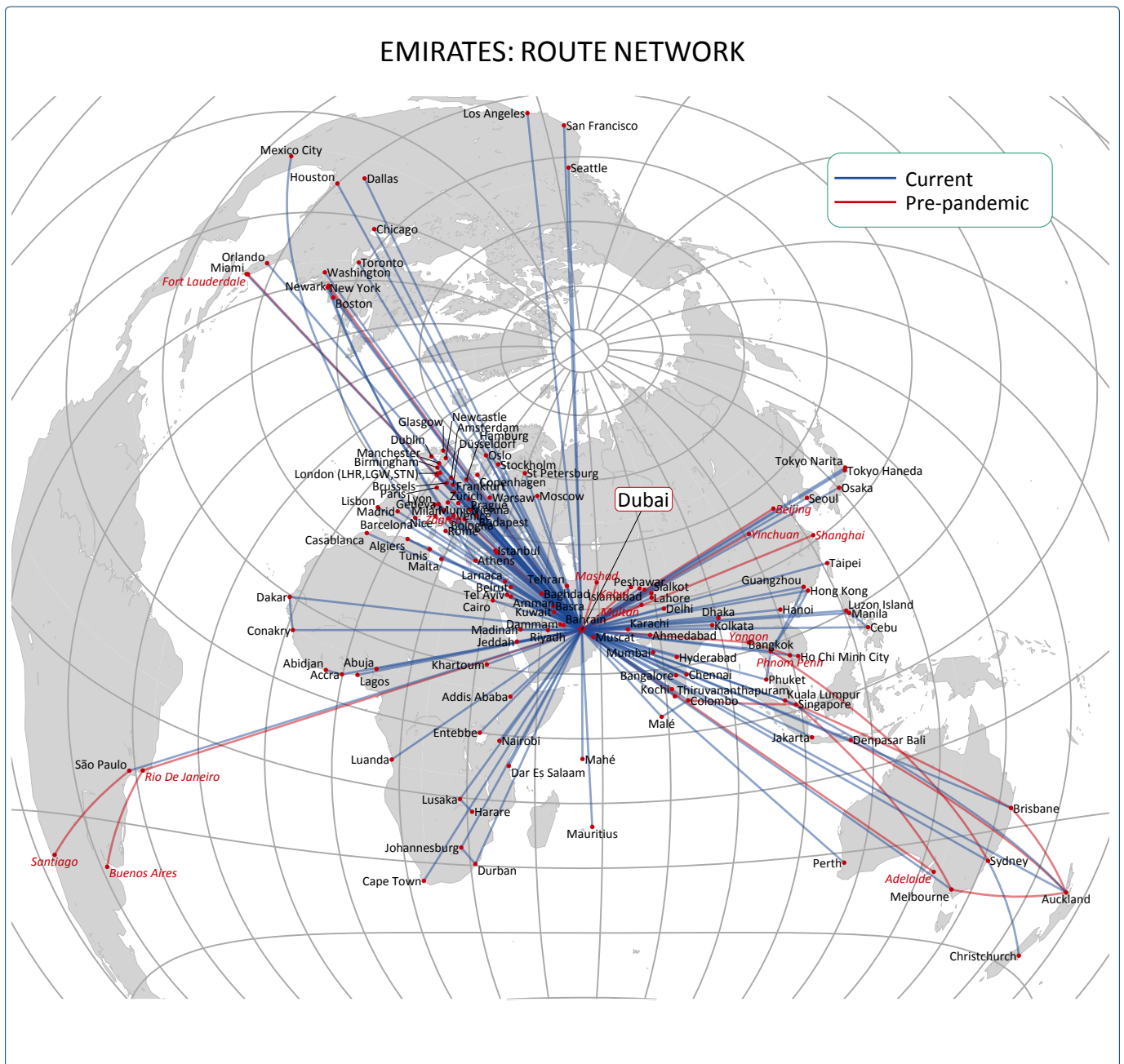
Restoring capacity to pre-pandemic levels would imply more than doubling the volume of ASKs from FY2022 levels, through rebuilding frequencies and resurrecting suspended routes. Emirates' average passenger load factor in FY2022 was only 58.6% compared to a normal

level of 78-79%, so the airline would have to be very confident about the resilience of travel demand. There is also the issue of operational efficiency — Emirates Airline cut its workforce from around 48,000 pre-pandemic to about 36,000 last year, and, as various airlines, have found re-establishing optimal staffing levels and retraining employees, can prove very problematic. One of the reasons that only about 70 of

Emirates 118 A380 fleet are currently flying, is a shortfall in the 10,000 cockpit and cabin flying crew needed for this operation.

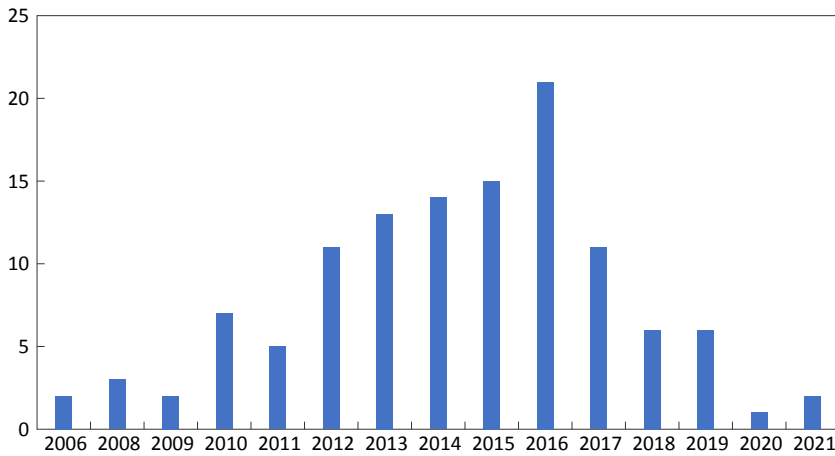
Emirates has always claimed that it can be profitable with oil at \$100/barrel, partly because demand for air travel to the Middle East is boosted when the oil market is strong. But the current price is around \$120/barrel which has meant increased fares that might threaten

EMIRATES: ROUTE NETWORK



Aviation Strategy

EMIRATES A380 FLEET: AGE PROFILE



the recovery in traffic. Emirates, however, claims that demand is solid despite the fare increases.

Balance sheet unaffected by pandemic

Emirates' financial management throughout the pandemic was enabled by its 100%-owner, the Emirate of Dubai, but nevertheless has been astute, maintaining the balance sheet at pre-pandemic strength. At the end of March this year Emirates' balance sheet showed shareholders' equity of AED20.3bn and total liabilities of AED129.7bn, a debt/equity ratio of 6.4/1. At the end of March 2020, just at the beginning of the pandemic, the balance sheet showed slightly more equity, AED 23.5bn, but significantly more liabilities, AED 148.4bn, a ratio of 6.3/1.

The cashflow table on page 7 traces what has happened throughout the five-year period to FY2022. Emirates has never been particularly profitable and had one horrendous year during the pandemic, but its operating cashflow (adding back in depreciation, creditor/debtor balances, and other non-cash items) has been generally strong, again apart from the

one year. The company has been able to maintain capex through the pandemic. Free cashflow again has been positive except for FY2021.

Remarkably, in each of the five years Emirates has been able to pay down its debt, even during FY2021 and FY2022, but in these years it received cash injections, in the form of additional equity, from the government totalling AED14.9bn (\$4.0bn). This is compatible with the sums received by the US and European Legacies and significantly less than, for instance, the state support SIA has needed. Emirates has stated that it in-

tends to pay its owner dividends as soon as it returns to profitability. It has paid the Emirate of Dubai dividends in the past, AED1bn in FY2019 for example, but it is difficult to see how the airline will be able to generate the surplus cash required to make substantial dividend payments in the short/medium term.

Fleet dilemmas

Airbus terminated the A380 production line last December and delivered its final A380 to Emirates at Hamburg. This leaves Emirates with a dilemma — how to manage and gradually replace its ageing A380 fleet, by far the largest in the world. It may be regretting having cancelled in early 2019 its order for 20 units. That year Emirates revealed its A380 retirement plan: gradually retiring aircraft — two have gone so far — and using them for parts for the remaining aircraft until the entire fleet disappears in 2035. A similar programme is being applied to the 777 fleet.

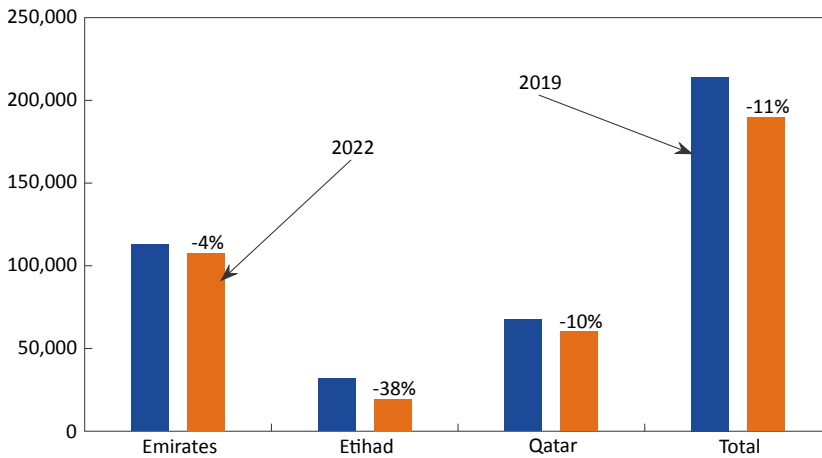
Unfortunately, Emirates is experiencing problems with all the replacement widebody types.

Emirates has firm orders for 115 Boeing 777Xs, plus 61 options (see fleet table right), which were orig-

EMIRATES FLEET AND ORDERBOOK

	In fleet (March 2022)	On Order	Options
A380-800	118		
777-200 ER/LR	134		
787-9		30	
777-X		115	61
A350-900		50	
Total Passenger	252	195	61
777F	10	2	
Total Freighter	10	2	
TOTAL	262	197	61

SEATS IN ME3 FLEETS: PANDEMIC REDUCTIONS



Note: Fleets as at End 2019 and April 2022

Network challenges and trends

As the global market re-opens Emirates will face a new set of competitive challenges from expansionist airlines and new hub systems, linked to geopolitics in some cases. It is not at all clear how the global connecting market will evolve — just as it wasn't clear when Emirates started out in the 2000s — but some of diverse trends might be as follows.

The Middle East super-connector (ME3) system was under pressure long before Covid-19, with state-funded competition in the form of Qatar and then Etihad causing structural over-capacity in the order of 10%, according to our estimates, and this surplus was set to increase as a result of planned net deliveries. The pandemic has at least partly solved this situation.

As the graph above indicates, just over 11% of seat capacity has been removed from the ME3 fleets, mostly as the result of Qatar and Etihad ceasing A380 operations. Etihad has been rationalised by about 39%, in effect re-

inally contracted for delivery from mid-2020, but technical issues and directives from the FAA have delayed Boeing, which has already built some of the aircraft for Emirates. Now it seems that the earliest delivery date will be mid-2025. Sir Tim is clearly not happy, noting that Emirates will in effect be offered second-hand aircraft by Boeing.

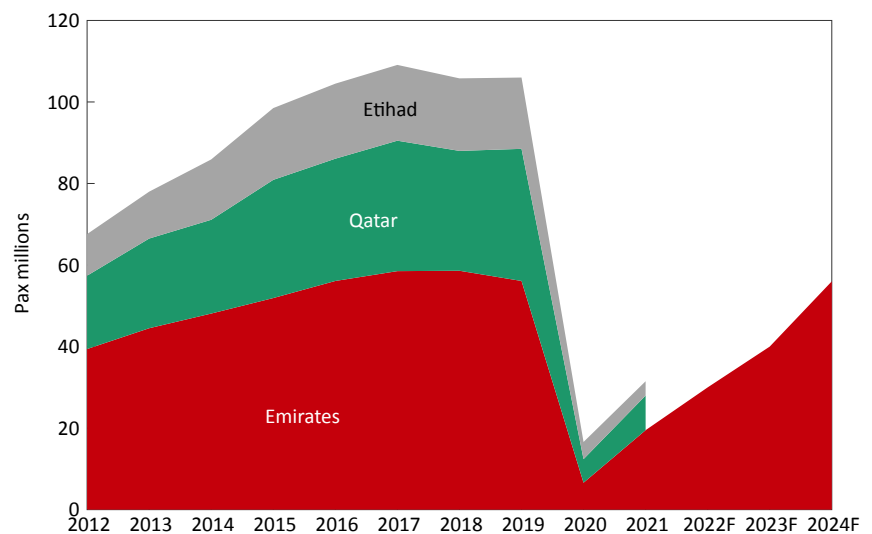
The 787 situation is, if anything, even more problematic, with production delays that are unacceptable to Emirates. Sir Tim has indicated that the order for 30 787-9s may be cancelled.

That leaves the A350-900 for which Emirates has a 50-unit order. It might be able to pick up some more A350-1000s if relations between Airbus and Qatar Airways continue to deteriorate, though Emirates has also stated that it would not accept any A350s until the paint peeling issues associated with Qatar's A350s are solved.

In response to a more price-sensitive business market and an upscaling leisure market, Emirates is putting its faith in Premium Economy

and is starting to refit its fleet. An 18-month programme, scheduled to begin at the end of 2022, at Emirates Engineering Centre in Dubai, will see 52 A380s and 53 Boeing 777s fitted with the new cabin class. The 777s will have 24 and the A380s 56 Premium Economy seats laid out in 2-4-2 configuration with a 40-inch pitch.

MIDDLE EAST SUPERCONNECTOR TRAFFIC



Aviation Strategy

versing the years of ill-advised over-expansion; a merger with Emirates might have been the logical solution, but local sensibilities prevented that. With the cutbacks in orders, whether planned or not, the super-connector system is more realistically sized for the post-pandemic world.

But competition from the fourth super-connector is likely to intensify. Largely thanks to its cargo operation and domestic market, THY was able to minimise the financial damage from the pandemic, and has relocated all its hub operations to İGA, Istanbul's new airport, which has a potential capacity of 200m passengers a year.

And what is happening in Saudi Arabia? At the GACA-sponsored "Future of Aviation Forum", held in Riyadh in April, the Saudi civil aviation authority announced a strategy to rapidly build global hub infrastructure and airline networks based at the capital. The explicit aim is for Saudi Arabia to transport 330m passengers, to/from more than 250 destinations, plus 4.5m tons of cargo, by 2030.

This \$100bn-plus project — which would at least double Middle East connecting capacity — sounds highly improbable. Still it is endorsed by Saudi Arabia's de facto ruler, Crown Prince Mohammed bin Salman, and, as GACA emphasised, has "the unlimited support that the civil aviation sector in the Kingdom enjoys from the Saudi leadership."

India has been Emirates' largest national market, providing the core of its VFR demand as well as being very important for high-yielding business travel to/from Europe. Emirates has stated that it will restore full capacity to the Indian market in this year, but Tata Group's take-over of Air India and the development of Indigo into a powerful international carrier have

changed the competitive dynamics.

The Tata Group has a great deal of restructuring to do, but combining Air India's historical traffic rights with Vistara's premium product offering and SIA's reputation and network economics could create a carrier that would compete with Emirates by capturing increased volumes of long-haul traffic overflying Dubai and the other Middle Eastern hubs. Potentially this new entity could offer premium products comparable to Emirates.

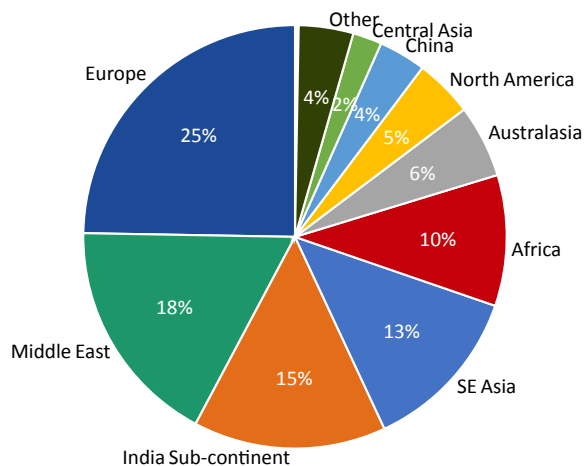
Europe has now reopened but with China and large parts of South-east Asia still pursuing Covid Zero policies the Europe-Asia connecting market has not been tested fully. The perceived risk for Emirates is that passengers, especially premium passengers, will try to avoid connecting hubs, preferring non-stop services where possible. Dubai International and Dubai World airport management will have had the opportunity to observe the mistakes of Heathrow and other airports in being unprepared for a post-pandemic surge in passengers. If the Dubai airports are able to handle passenger flows

smoothly and efficiently, resistance to connecting at such mega-hubs will probably disappear.

Following the imposition of Western sanctions Dubai has been left as one of the two main gateways to the rest of the world for Russians (the other being Istanbul). Emirates operates twice daily to Moscow (plus there is a daily flydubai flight) and daily to St Petersburg. Moreover, multinational companies have relocated key staff from Moscow to Dubai. One can imagine that yields on these services are very lucrative, though the airline does point out that it is also carrying "humanitarian" supplies (medicines, etc) in its bellyholds.

Emirates has also resumed operations to nearly all its North American points. It is ironic that Covid-19 brought an end to US complaints about the Middle Eastern state aid as US carriers received their own support funds. But there appears to have been no progress on establishing an alliance between Emirates and a US Major, a development which Emirates stated, two years ago, would be a priority post-pandemic.

EMIRATES: ESTIMATED SEAT DEPLOYMENT PRE- PANDEMIC



Aviation Strategy

China was a relatively small market for Emirates pre-pandemic but one that seemed to offer strong potential — for example, connections from China to African cities, supporting the massive Chinese investment in the continent. But Addis Adaba and Ethiopian Airlines have emerged as a competing intercontinental and intracontinental hub operation. Terminal 2 of Bole Airport was completed last year, constructed by China Communications Construction Company and financed by the EXIM Bank of China. This will more than double capacity to 25m passengers a year. Chinese language signage throughout the shiny new facility is a good indication of where the target market is.

LCC incursion and the dual role of flydubai

Over the past ten years the short/medium-haul markets within and to/from the Middle East have been inundated by LCCs. As well as Emirates' associate LCC, flydubai (not part of the Emirates Group but having the same owner), the innovator Air Arabia is based at Sharjah airport, very close to Dubai, and has diversified into Abu Dhabi in partnership with Etihad. Wizz also flies from Abu Dhabi in a joint venture with ADQ, the state development fund. Flyadeal has emerged as the leading Saudi LCC while Jazeera is expanding from its base in Kuwait. Oman Air has recently launched its own LCC, Salam Air. Then there are the Indian LCCs — Indigo, SpiceJet and the new Tata LCC which may be amalgamated from Air India Express and AirAsia India — plus two potential new ULCCs — Go First and Akasa.

All these airlines are A320 operators (with the exceptions of Akasa and Air India Express) whereas flydubai is

a 737-800 and MAX operator, which meant that it suffered from the MAX grounding in 2019 as well as the pandemic.

Flydubai staged a recovery in 2021 carrying 5.6m passengers, up 76% on the previous year and reporting a profit of AED841 million (\$229m) on revenues of AED 5.3bn, reversing the loss of AED718m in 2020. (Flydubai's accounts are not as transparent as Emirates, and it may be that the 2021 result, showing a profit margin of 15.8%, has been inflated by an extraordinary item.)

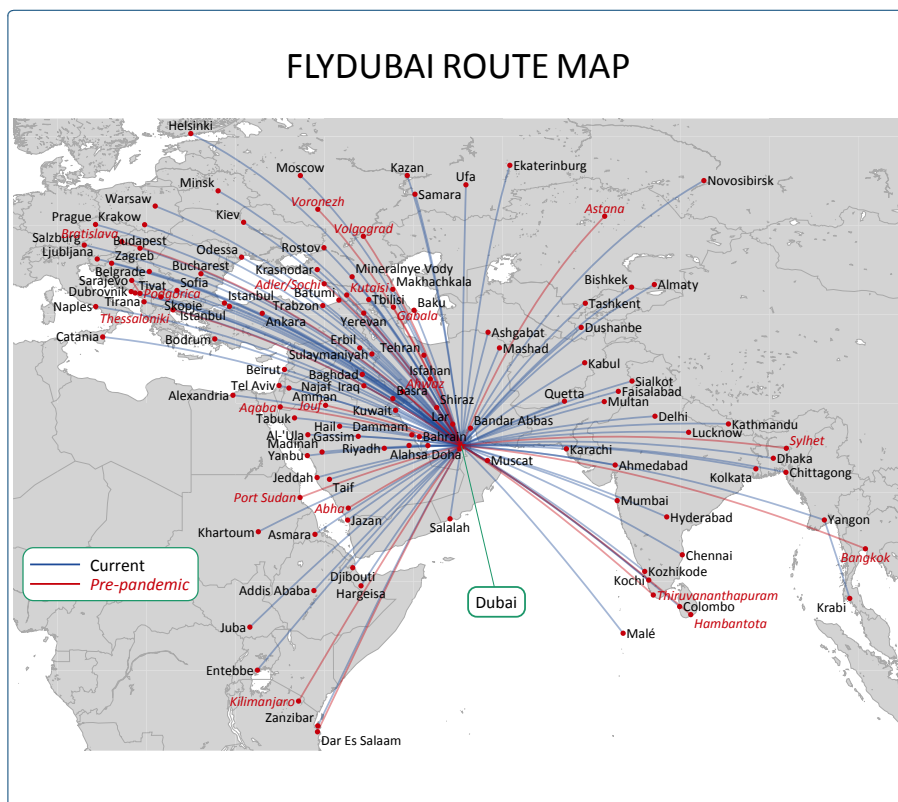
Its 25 MAXes have been gradually returning to service since April last year, and the fleet now totals 59 aircraft including 34 737-800s, with 20 MAXes scheduled for delivery in the rest of 2022. A further 141 MAXes are on firm order, following an agreement reached with Boeing last year that removed 65 aircraft from the previous backlog.

Flydubai has a heavily modified

LCC model, operating all its aircraft with a premium class and offering a full-service connecting facility at Dubai, both for its own network and on most of Emirates' routes; last year 34% of its passengers were connecting. Emirates' loyalty programme, Skywards, is applicable on Emirates/flydubai connecting flights, as is lounge access for higher-tier Skywards members flying on the flydubai network.

For Emirates, flydubai has a dual strategic role: providing feed onto its own flights and securing a defence against the influx of LCCs into the Middle East market. Given flydubai's massive 737MAX orderbook and Emirates' orderbook frustrations, it seems very likely that more of its shorter-haul flights will be shifted from the mainline carrier to its lower cost associate.

FLYDUBAI ROUTE MAP



TAP Air Portugal: Sustainable Profitability by 2025?

PORTUGAL'S national flag carrier, TAP Air Portugal, having had a rough time during the pandemic, is again seeking private capital.

TAP was founded in 1945, privatised in 1953 (albeit with majority state-ownership), and nationalised in 1974 in the wake of the Carnation Revolution that deposed Salazar's dictatorship of Portugal. Since then it remained state owned but has been up for sale and privatisation on and off for the past 30 years (see *Aviation Strategy* March 2003, June 2011 and April 2015).

The policy of privatising the airline was almost forced on the Portuguese state as part of the terms of a bailout in 2011 by the ECB and IMF following the fallout from the 2009 global financial crisis. It then took until 2015 before TAP was successfully privatised.

The state sold 61% of the equity (for €10m plus a commitment to inject €350m in new capital) to the Atlantic Gateway consortium. This had been formed by David Neeleman (a fluent Portuguese speaker then running Azul, and also conveniently holding Cypriot citizenship, so able to prove he was European) and Portuguese magnate Humberto Pedrosa, owner of the ground transport operator, the Barraqueiro Group. The state retained a 34% stake (with the intention to sell down further within two years) and the remaining 5% set aside for employees.

The airline's new owners said at the time that they intended to expand operations to ten more destinations in the US and eight more in Brazil. The

consortium also committed to supply TAP Air Portugal with 53 new planes and keep the carrier's hub in Lisbon for at least 30 years.

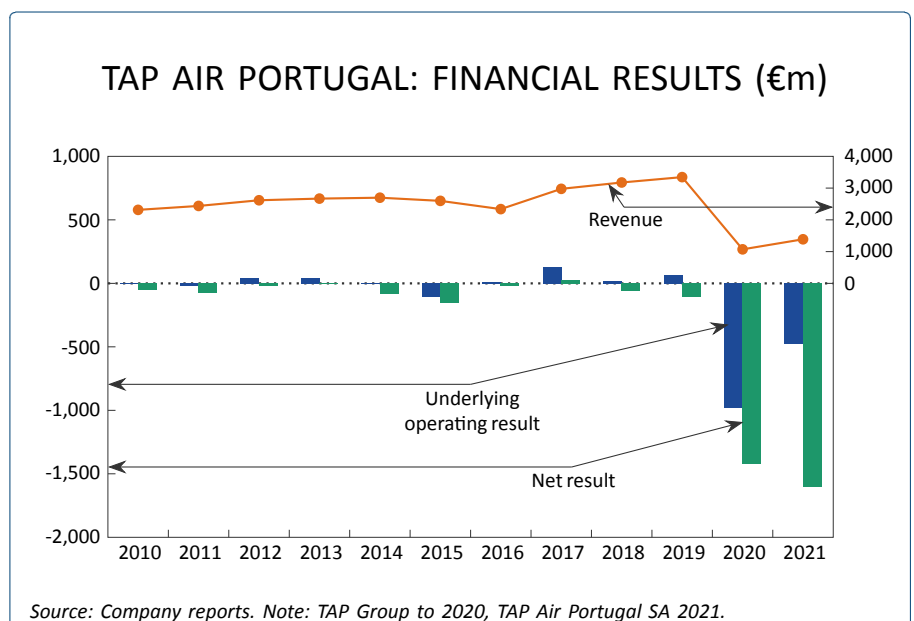
In its 2015 accounts, the newly privatised airline laid out a six-point strategic plan to turn the company around (TAP was perennially loss-making having lost a total €380m in the preceding six years):

- ➔ renewal and expansion of the fleet;
- ➔ evolution of the business model to what was described as a "customer choice model";
- ➔ increase automation and improve customer experience;
- ➔ consolidate growth and increase focus on the hub in Lisbon;
- ➔ improve operational efficiencies;
- ➔ reposition the (loss-making) MRO businesses in Portugal and Brazil.

In 2016 there was a change of government, change of political philosophy, and a change of heart.

The state regained a 50% stake of the shares, leaving the consortium with 45% (but 90% of the economic rights). Nevertheless, under the Atlantic Gateway management, the company grew strongly for four years.

The fleet increased by a net 40% from 75 units in 2015 to 105 by the end of 2019 (see fleet table on page 15). The regional fleet was completely replaced, new generation A320neos and A330neos brought on board (the latter with help from spare capacity at Azul), and the fleet of four-engined A340s disposed of. Total capacity increased by an annual average 8.5%: services to Brazil hardly changed, but adding handful of new routes to the USA and Canada — prior to 2015 it only operated to Newark from Lisbon and Porto, and Miami from Lisbon — produced a doubling of capacity to North America. The total number of passengers carried had increased



Aviation Strategy

by 50% to 17m by 2019, an annual average growth of 10%. Revenues grew by 27% to €3.3bn (a CAGR of 6%).

In 2017 the group registered a reasonable operating profit of €107m (a 4% margin) and managed to produce its first net profit of the decade, of €23m. But it then went on to lose another €160m in the following two

years. Unit costs at the airline fell by nearly 15% between 2015 and 2019, mostly through long haul growth, but this did not translate into profitability. The Brazilian MRO business still struggled to make positive returns.

Maybe the strategic plan put in place by the Atlantic Gateway consortium just did not have enough time to produce its full results.

Covid pain

The first two months of 2020 had started well, with a 13% increase in the number of passengers and 18% growth in RPKs. Then the full force of the pandemic and associated travel restrictions left the company with full year traffic and capacity down by two-thirds. Full year results showed rev-

TAP: ROUTE NETWORK



venues down by 70% to €1bn, operating losses of €(1)bn and net losses of €(1.4)bn.

In 2021 there was some recovery. But with the continuing travel restrictions as new variants emerged, while passenger traffic was up by a quarter on prior year levels to 5.8m, this was still only a third of the level in 2019. Revenues came in at €1.4bn, underlying operating losses (before exceptional items) at €(478)m and net losses of €(1.6)bn.

TAP had entered the pandemic with only €426m in cash at the beginning of 2020, equating to 13% of the prior year's annual revenues. By June 2020, it was close to running out of cash, and turned to the government for help.

However, there seems to have been a disagreement among shareholders over the terms of the €1.2bn six-month emergency loan offered: the State apparently wanted to impose a condition that the loan be converted into equity, which could significantly dilute consortium's stake.

An agreement was reached. Neeleman bowed out of the Atlantic Gateway consortium, selling his 22.5% stake in TAP Group to the Portuguese Ministry of Finance and waiving conversion rights on his (and Azul's) outstanding loans.

On the announcement of the agreement the Government outlined the reasons for the effective re-nationalisation, saying: "The importance of tourism as an essential sector for economic activity is now widely accepted as being responsible for over 10% of the national GDP, with the TAP Group taking on a role central in respect to the growth of national tourism... The Government's mission is to ensure the preservation of the value of the national airline and safeguard its strategic position so

TAP AIR PORTUGAL FLEET

	2015	Δ	2019	Δ	2021	On Order	Avg Age (years)
A340	4	-4					
A330	14	-7	7	-4	3		14.1
A330neo		+17	17	+2	19	3	3
A319	21	-3	18	-11	7		21.5
A320	19		19	-4	15		16.4
A320neo		+7	7	+4	11	12	2.4
A321	3	+1	4	-1	3		20.3
A321neo		+8	8	+2	10	9	
A321neoLR		+4	4	+4	8	5	2.4
E190		+9	9		9		10.7
E195		+4	4		4		10.1
ATR72		+8	8		8		6.6
F100	6	-6					
E145	8	-8					
Total	75	30	105	-8	97	29	8.2

as to avoid insolvency of a company crucial for the development of the country..."

The bailout loan was approved by the European Commission on the 10th June on condition that it be repaid within six months of its decision, and could only be extended if the Portuguese State submitted a restructuring plan for the TAP Group before the end of that period. This they duly did (on 10th December 2020, the last possible day) as a draft for discussion and approval. The plan envisages a transformation of TAP's operations "to ensure economic viability in 2023 and sustainability in 2025".

Restructuring plan 2021

In December 2021 the Commission gave approval to the plan and the granting of a total €2.55bn restructuring aid (including that emergency loan) along with €640m "Covid damages compensation". It imposed conditions:

- ✈ disposal of 18 daily slot pairs at Lisbon's congested airport (from the Winter 2022/23 season);
- ✈ a cap on fleet size;

- ✈ disposal of non-core activities;
- ✈ a ban on acquisitions;
- ✈ and a ban on using the fact that it was in receipt of state aid in its advertising.

The approval paved the way for the full re-nationalisation of the airline. The state loans having been converted to equity, the Ministry of Finance is now the sole shareholder. TAP has been partially recapitalised showing negative shareholders' funds of €(0.5)bn at the end of 2021 (up from a negative €(1.2)bn in the prior year — see balance sheet table on the next page). This compares with total debt (including operating lease liabilities) of €3.6bn, down from the €4.6bn at the end of 2020, but on a par with the level at the end of 2019. TAP is due to receive the final €0.9bn tranche of the total €2.55bn restructuring aid during 2022.

In June 2021 the government brought in new management under Christine Ourmières-Widener as CEO. Having started her career at Air France, she went on to head up CityJet and Flybe and has a good record of running loss-making airlines (though

Aviation Strategy

not necessarily for turning them round). In her presentation on the full year 2021 results she outlined the main elements of the restructuring plan. The core focus will be on the airline, with progressive disposal of maintenance, catering and ground handling. The transformation to achieving a profitable and sustainable aviation business by 2025 is based on five main pillars:

➔ **Customer:** enhancing the customer experience, and protecting the hub and slots by network optimisation,

➔ **Revenue:** sales, ancillaries and loyalty initiatives to boost revenues; target cargo sales growth balanced with passenger demand (two of the A330-200s have been converted to freighters),

➔ **Costs:** renegotiations with lessors and suppliers; reduce third-party costs; fleet strategy focused on flexibility and efficiency, with a simpler aircraft mix, increase use of A321LR on thin Atlantic routes

➔ **People:** labour flexibility; modernise collective labour agreements (currently suspended until 2024); implement digital roadmap (whatever

that means).

This all sounds good: increase revenues and reduce costs. Many airlines in attempting such a transformation rely on growth. TAP, with an effective restriction on capacity for the next three years, does not have that luxury.

Strengths and weaknesses

TAP is the 16th largest European airline (pre-pandemic and depending on which measures you are used) with passenger traffic in 2019 of 17.1m and a fleet of around 100 aircraft.

It has a niche position in its links with the former Portuguese colonies of Angola, Mozambique, Cape Verde, São Tomé y Príncipe and, most importantly, Brazil. With a small domestic market it is regarded as providing an essential national service in ensuring links to Portugal's autonomous regions of Madeira and the Azores.

It has a leading position on routes between Europe and Brazil (and Brazil accounts for half the capacity between Europe and South America). Serving ten destinations pre-pandemic (predominantly from Lisbon, although it also served

Rio and São Paulo from Porto), it accounted for 27% of the total seat capacity — well ahead of nearest rival Air France-KLM (three destinations and 17% of the market) and LATAM (seven routes to Europe from São Paulo and 14% share). Interestingly the northern Brazilian destinations should be easily reachable with TAP's new A321LRs.

There is natural O&D demand on its extensive network to Brazil, although it may not be particularly high yielding. But to make those routes work, it also needs good feed into its hub in Lisbon. TAP has a commanding position in Lisbon — in normal times continental Europe's busiest single-runway airport — with 55% of the slots (50% after the required slot disposals).

Portugal is a strong tourist destination with 27m international visitors in 2019 (compared with a population of 10m). Five countries account for one third of tourists arrivals: the UK, Spain, France, Germany and Brazil. Lisbon is the most popular destination, accounting for a third of visitors, but nearly half are heading for holidays in northern Portugal (served by Porto, Portugal's second largest city) or the Algarve (served by Faro).

Portugal has been a prime target for LCC incursion. After TAP, the next three largest airlines at Lisbon were Ryanair, easyJet and Vueling, between them accounting for 25% of (pre-pandemic) intra-European seats at the airport. Ryanair, easyJet, Jet2 and Transavia accounted for 70% of capacity in Faro. Ryanair, easyJet and Transavia provided 60% of the seats at Porto.

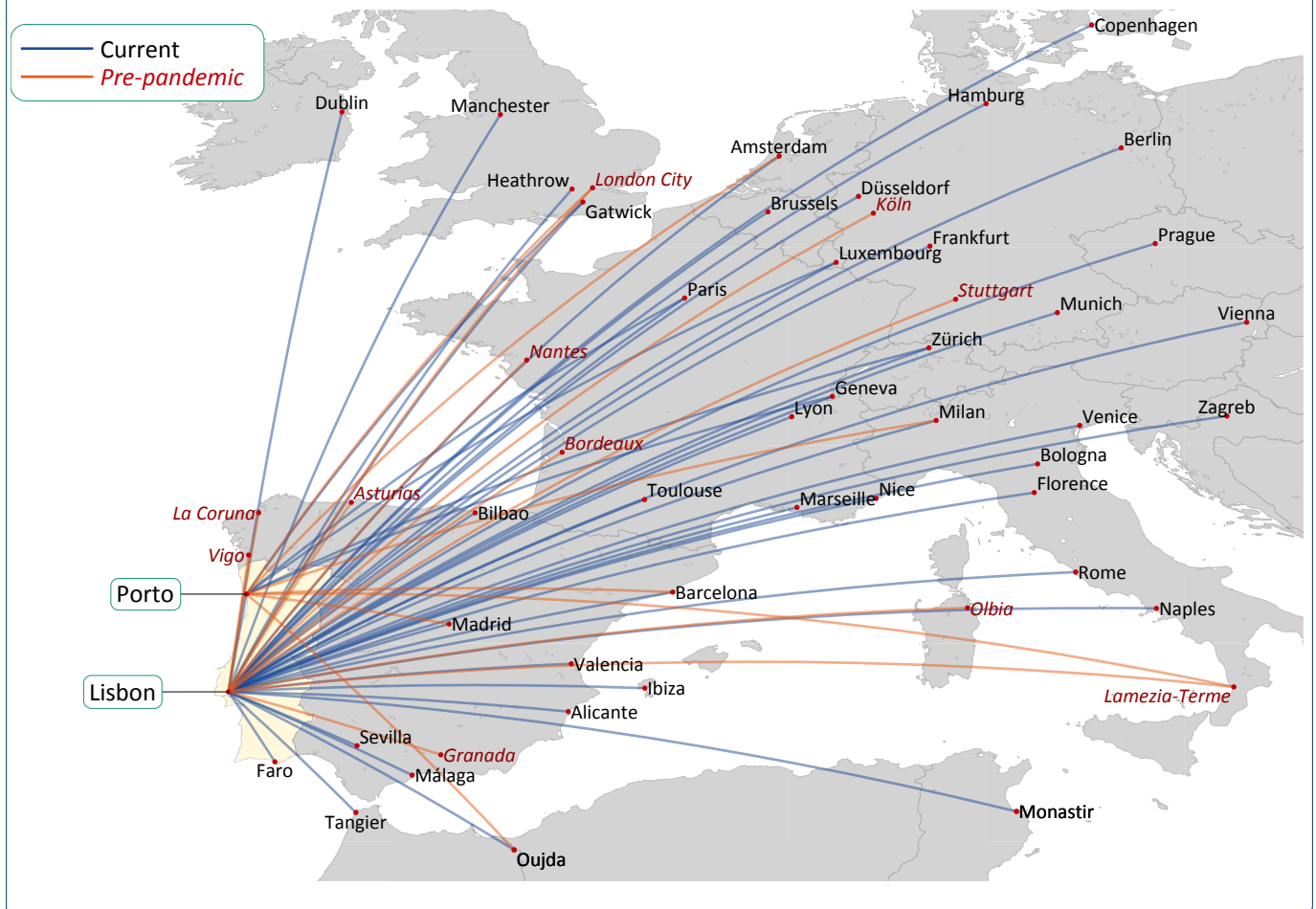
TAP will be required to surrender 18 daily slots in Lisbon. This is being done through bids to an independent adjudicator who will score the proposals on merits of proposed plans,

TAP AIR PORTUGAL BALANCE SHEETS

	2019	2020	2021
Tangible Fixed Assets	3,026	2,944	2,955
Other fixed assets	271	272	524
Current assets	1,855	1,741	1,239
of which cash	426	519	813
Current liabilities	(1,735)	(3,024)	(1,745)
of which debt and leases	(588)	(2,021)	(632)
Long term debt	(1,197)	(993)	(1,285)
Operating Lease liabilities	(1,852)	(1,611)	(1,683)
Total debt	(3,049)	(2,605)	(2,968)
Provisions and other	(234)	(420)	(473)
Equity	135	(1,154)	(468)

Aviation Strategy

TAP: EUROPEAN ROUTE NETWORK



and among other things will give preference to an airline that offers the largest seat capacity of Lisbon-based aircraft and serve the largest number of destinations from Lisbon until the end of 2025. (Interestingly if there is more than one bidder with the same “score”, TAP will get to choose its competitor). The successful bidder will probably be an LCC, and possibly one that could make life even more difficult for TAP at its home base. A decision is due in June.

Opportunities?

Christine Ourmières-Widener will have her work cut out to get the Portuguese flag-carrier to break-even by 2023, but she appeared to

be cautiously optimistic to be able to do so. Whether it can get to a sustainable level of profitability by 2025 is equally questionable. The question of ownership however is unlikely to go away. Portugal is unlikely to be able to inject more funds into its airline — adhering to the one-time-last-time principle of EU state aid. Prime Minister António Costa (who won a surprising majority in January’s national elections) has said that TAP “will be in a position to sell 50% of the capital as soon as possible, and fortunately there are already other companies interesting in acquiring it”.

Who? IAG might be interested in order to give it, through Iberia,

a commanding position on the South Atlantic (even with only a 50% shareholding). But that would mean overcoming the traditional Portuguese-Spanish rivalry. Air France-KLM might have been interested, if it weren’t going through its own reformation. Lufthansa could be a contender, strengthening ties with fellow Star Alliance member. Or Portugal could again find its own unique solution.



Aviation Strategy

Breeze: Creating the World's Nicest Airline

CRISES in the aviation industry can create opportunities for new airline start-ups and new business models. Breeze Airways, the latest offering from serial airline entrepreneur David Neeleman, started operations a year ago in the midst of the pandemic, with the differentiating aim of being “The World’s Nicest Airline”. Where is it now?

Neeleman’s plans for a new startup predate the pandemic, and were forged in 2018 for the creation of an airline initially called Moxy. (The name had to be abandoned in favour of Breeze apparently because of trademark issues, although Breeze retains the IATA code of MX and a MOXY call-sign).

The rationale was based on analy-

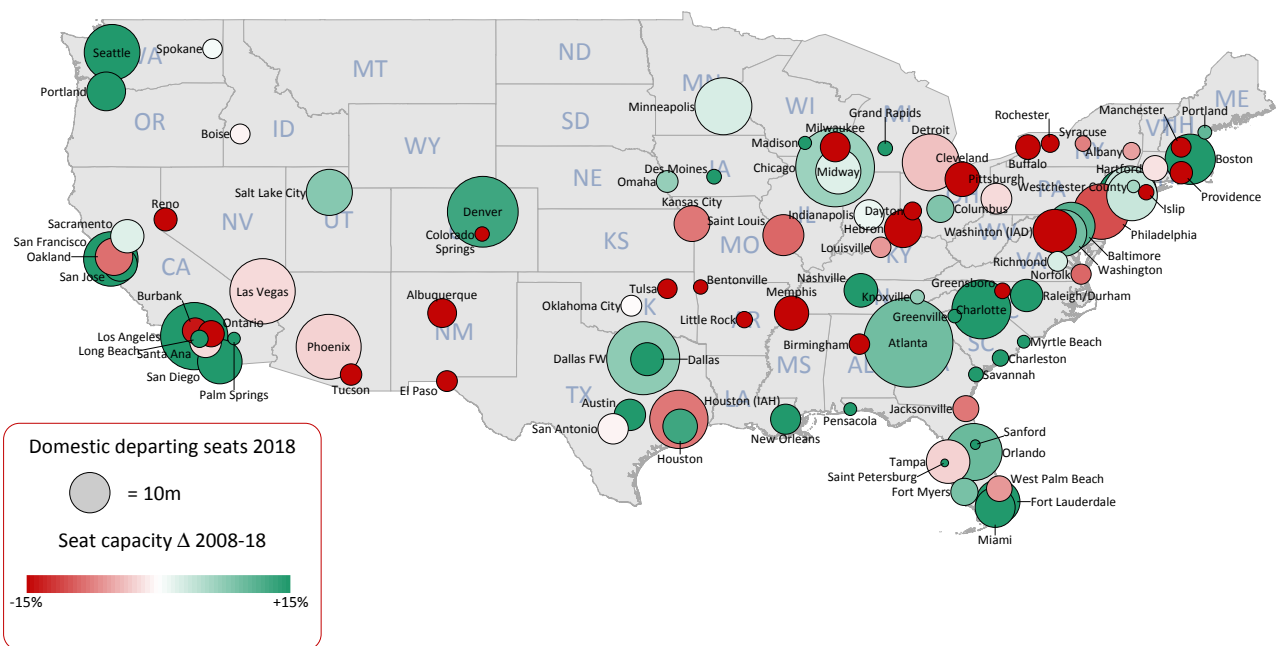
sis of the domestic US market over the preceding ten years. As the major airlines consolidated, they concentrated their efforts at their fortress hubs, removing non-stop connectivity from smaller airports; Neeleman observed that “entire segments of the country have seen their air travel options diminish — reachable only through connections and the corresponding increase in travel times”.

The map below shows the impact on the top 100 airports in the US. Between 2008 and 2018, total domestic departing seats from these airports increased by 7.25%, or a compound average growth rate of 0.7%. For those that had been the top ten in 2008, including the mega hubs of Atlanta, Chicago, and DFW the growth

had been 9.2% (an annual rate of 0.9%), although this masks declines at former hubs and bases such as Houston Intl, Phoenix and Las Vegas. The top 30 — those with over 9m domestic departing seats in 2008 — experienced overall growth of over 10% (a 1% CAGR), while the following 70 airports displayed no growth as a whole. Out of the top 100 airports, 21 saw total domestic departing seats decline by more than 15% over the period.

In its application to the DoT in 2020, Breeze set out that it would bring low-cost, non-stop services to mid-size markets “abandoned by our current air transportation network” and would do so by flying smaller aircraft with correspondingly low trip costs. Many of its initial target

EFFECTS OF CONSOLIDATION ON THE TOP 100 AIRPORTS



Aviation Strategy

markets it described as secondary leisure markets that have “favourable costs for value conscious travellers or second-home owners” and ones that would “support once a day services or service a select few days of the week”.

Breeze started operations in May 2021 with a fleet of 13 E190/195 aircraft (leased from Azul, another of Neeleman’s successful creations) operating between four airports: Tampa (FL), New Orleans (LA), Charleston (SC), and Norfolk (VA). It expanded relatively quickly to operate 42 routes between 18 destinations mostly east of the Mississippi on a north-south focus (see the routes marked in blue on the map below).

The next phase of development is the introduction of A220s into the fleet. At the beginning of 2019 the company confirmed an order of 60 aircraft of the type from Airbus with 60 options (and has since confirmed conversion of 20 of the options to firm orders). The first A220 was delivered in December 2021, with deliveries av-

eraging one a month up to 2028. In the spring of this year the company generated a slew of announcements of new routes to showcase the arrival of the longer range aircraft — including transcon services to Los Angeles, San Francisco and Las Vegas — to be gradually introduced throughout 2022 as the fleet grows.

As the chart on the following page shows, the majority of the destinations Breeze has chosen fit well into a description of small neglected markets.

Breeze inaugurated A220 services on the 25th May, just before celebrating its first year of operations, with a flight from Richmond (VA) to San Francisco.

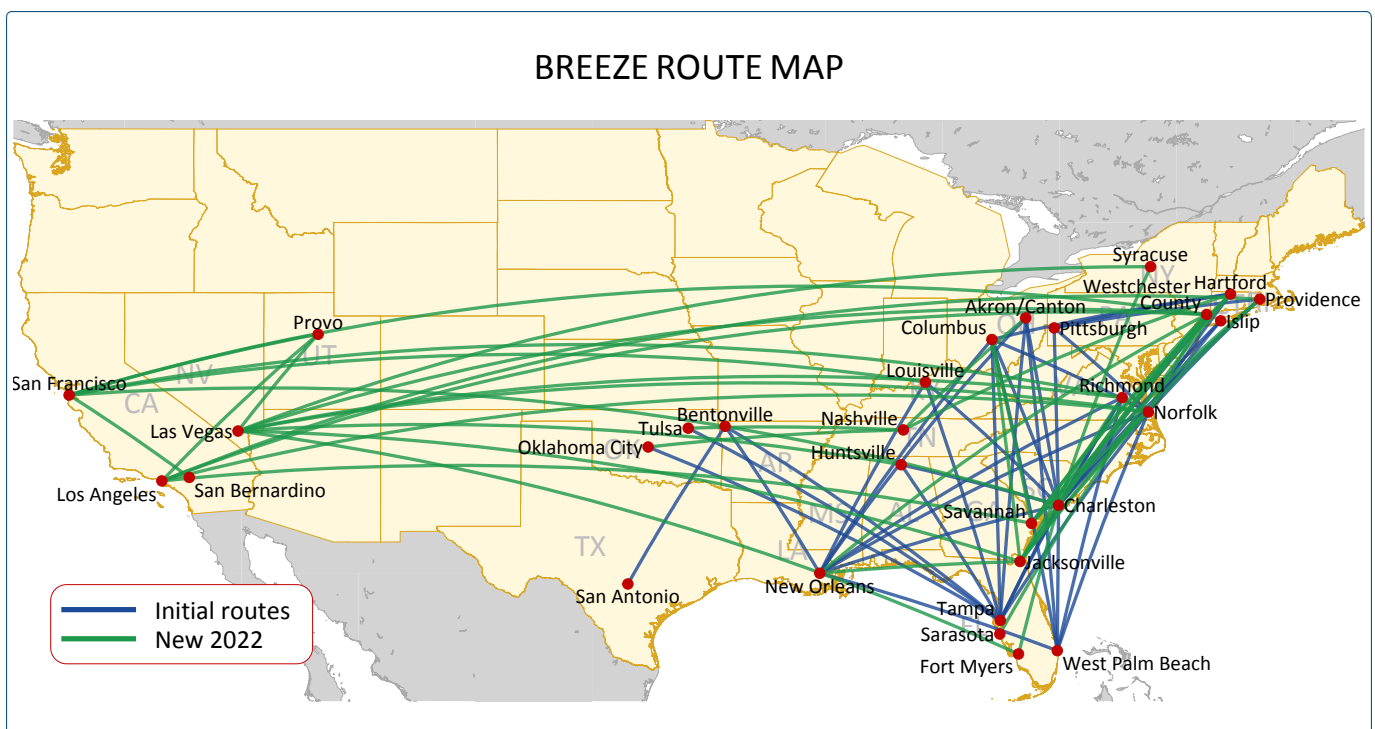
Neeleman describes Breeze as “low-cost”. But like Neeleman’s two previous creations — Azul and Jet Blue — Breeze is a hybrid between a low-cost carrier and a traditional airline. It has a mixture of fleet types.

The offerings include some common LCC features, such as a point-to-point route network and fees for

additional services. Its aircraft do not have in-flight entertainment screens in the seats, but instead, offer streaming content to personal electronic devices. It does not offer connecting flights, but does market “one-stop”. For example, a passenger buying a ticket from Provo (Salt Lake City) to San Bernardino (a route on offer later this year) would fly via San Francisco and stay on the aircraft on the ground during the turnaround.

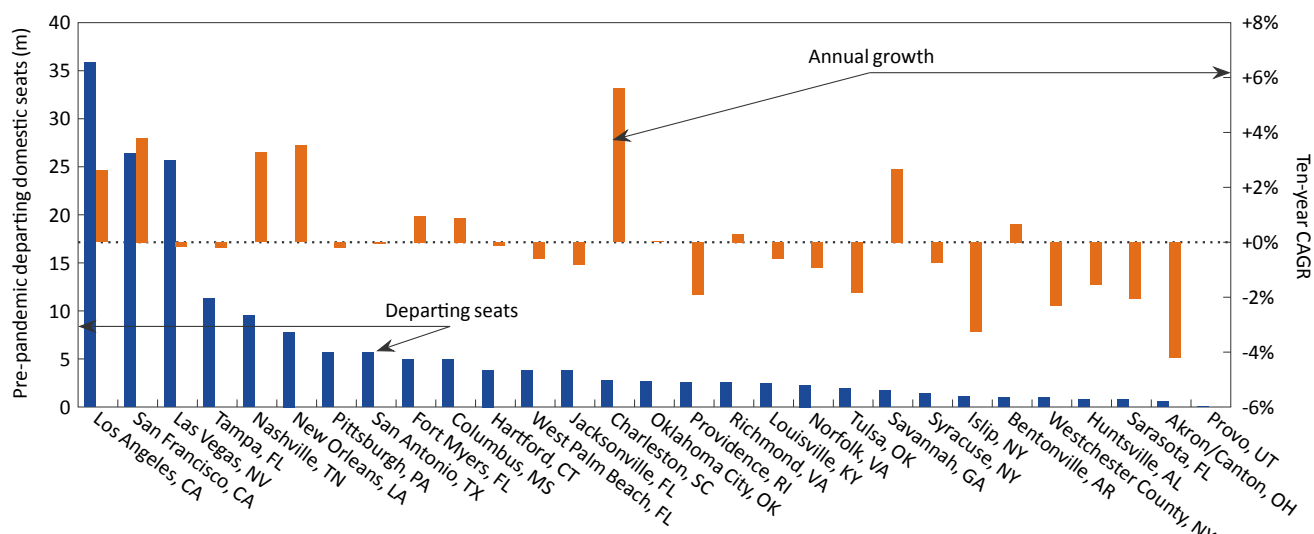
It also operates multiple cabin classes. The E190s are configured with 108 seats: 60 at the back of the bus with 29” seat pitch and 48 “extra leg-room” seats with a seat pitch of 33-39 inches. The E195s have 118 seats with 96 standard and 22 extra leg-room. Both Embraers are laid out on a 2x2 basis, which allowed the airline to advertise “no middle seat”.

It similarly markets two fare classes. The “nice” fare — which gives the passenger a standard seat and space to put a handbag under the seat, all other service options sold as add-on ancillaries — and the “nicer”



Aviation Strategy

BREEZE: SELECTED UNDER-SERVED DESTINATIONS



fare — pricing in an extra leg-room seat, carry-on luggage and priority boarding.

With the A220s the company is adding a third class: a “first class” cabin of seats with 39” pitch, and is adding a third fare category the “nicest” fare (which adds that seat and among other things two checked-in bags). It is currently establishing two configurations. The 126-seat version has 80 standard seats configured 2x3 at a 30” pitch, 10 extra leg-room seats at a 33” pitch and 36 first class seats laid out 2x2. The larger 137-seat version has only 12 first class, but 45 extra leg-room and 80 standard seats.

Neeleman explains that he regards the configuration of the aircraft as dynamic depending on seasonality and route. It seems that he regards the front cabin as a “playland” for experimentation, mentioning that he might one day introduce lie-flat premium seats (of which it could fit in 12). Breeze is also adding quick change functionality, helped by its decision not to provide IFE with the miles of associated cabling. He said: “In front of the [over wing] exit row,

we have total flexibility. In a matter of days, we can go from 36 first class seats to no first class seats to domestic-style first class seats. We can have 36, 12 or zero premium seats in that cabin.”

Breeze has only been operating for a year, and there is little public detail of the progress of the operation. Neeleman at the beginning of the year stated that the company had carried 330,000 passengers since launch. The DoT traffic filings suggest figures consistent with his comment but on load factors only in the mid-60s. The Form 41 financial filings only show Q4 2021 results with revenues of \$19m and operating losses of \$20m.

The model he is pursuing with Breeze seems similar to that of Allegiant, or another new entrant Avelo, in going after low frequency, and under-served leisure markets. But the big difference is his choice of the A220: a small capacity aircraft with good economics and a range that can cover the US and even be turned onto the Atlantic. David Neeleman is an aviation innovator, and in his career

has created four successful airlines — Morris Air, WestJet, JetBlue and Azul — with his definition of success being broader than quarterly financial profits. It would be surprising if he were to fail with Breeze.

Aviation Strategy

We welcome feedback from subscribers on the analyses contained in the newsletter. If you would like to suggest a company or a subject that you would like to see covered, please contact us:

Email:
info@aviationstrategy.aero
 or go to
www.aviationstrategy.aero

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 will 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