AIRFREIGHT STATE OF THE INDUSTRY
MARCH 2022

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## Summary

### Demand
- Volumes remain stable; +12% YoY growth in Jan 22
- Demand surge still spread across various sectors but show some signs of softening
- No traditional Lunar New Year slowdown
- E-commerce contributed strongly to robust air demand so far; likely to reduce
- Ukraine, Russia crisis affecting manufacturing and cargo movement across tradelanes; airspaces closed
- Low I/S ratio and PMI Index above 50 indicate strong air cargo demand
- New tech product launches at quarter end to add more volumes

### Capacity
- Overall capacity down by -18% in Mar 22 vs Mar 19; month on month improvement likely to get affected
- PAX capacity down by nearly -26% in Mar 22 vs Mar 19

### Carriers
- CX announced substantial capacity reductions in Q1 22 due to the latest aircrew quarantine measured imposed by HK; capacity affected; freighter flight frequencies reduced
- Japanese airlines have suspended flights to Europe
- EU, UK, US among others closed airspaces for Russian airlines and vice-versa; 17% of global trade affected
- AF/KL, KZ, AY, NH, JL cancelled their flights due to crisis sanctions and restrictions

### Rates
- Rates remain high and extremely volatile. In Jan 22 rates globally were +107% higher vs ‘19 baseline
- Rates expected to remain at high levels due to the rising oil prices, reduced capacity, war surcharges

### Jet Fuel
- Prices reached as high as $151/b in 1st week of Mar 22
- Oil inventories fell further in 2022- lowest levels since mid-2014; the UA/RU situation is causing oil supply disruptions

### Regulation/News
- Flights cancelled to and from German airports as security workers go on strike amid wage dispute; capacity affected
- Major forwarders suspend Russia operations- move comes due to sanctions and restrictions put in place as a result of the crisis; across all transport modes
- Russia, Ukraine airspaces remain close; multiple re-routings happening leading to capacity constraints and longer transit time woes
- New Omicron variant outbreak in ASPA led to renewed lockdowns and continuation of strict quarantine measures; cancelled flights will keep capacity restricted
- Lockdown in China will majorly affect ocean freight; estimated impact greater than Suez Canal incident
- Major airports across ASPA, EU experience labour shortage. Warehouse activities affected. Expected delay in operations further affecting transit times

Source: IATA, Seabury, DGF Desk Research
Key updates

EU situation

• Commercial carrier capacity out of EU is down by -32% in Feb 22 vs Feb 20

• The gap of capacity in current month compare to pre-pandemic month continues widening. Capacity of all aircraft configurations from EU to AMER -32%, to ASPA -34%, to MEA -25% in Feb 22 vs Feb 20

• Airspace closures because of the conflict in Ukraine have resulted by now in a -25% drop in direct air cargo capacity between Europe and North East Asia. Additional air cargo capacity to Japan was taken out of the market, namely AF/KL, KZ, AY, NH, JL cancelled their flights

• Freighter capacity on other trade lanes has seen only minor impact by the Ukraine situation but space remains very tight

• Several carriers announced ATA rate increasing as well as the increasing of fuel surcharge (FSC) and security surcharge (SSC) in order to cover the higher cost of jet fuel and additional operational cost due to rerouting.

• War Risk Surcharges announced by airlines

Source: DGF Desk Research
Market Developments

Economic Outlook

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP Growth 2021</th>
<th>CAGR 2021-2025</th>
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</thead>
<tbody>
<tr>
<td>EURO</td>
<td>5.10%</td>
<td>2.33%</td>
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<td>MEA</td>
<td>3.72%</td>
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<td>AMNO</td>
<td>5.42%</td>
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<tr>
<td>AMLA</td>
<td>5.73%</td>
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<td>ASPA</td>
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<tr>
<td>World</td>
<td>5.70%</td>
<td>3.45%</td>
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</table>

Demand Development in Tons (% change YoY)

Jet Fuel

- IMF still forecasts world economy to grow more than 4% in 2022; the crisis can affect the growth
- Demand growth remained steady in 2022; now ~+4% above pre-pandemic levels
- Overall scheduled capacity -18% in Mar 22 vs Mar 19; MoM improvements will be affected due to the crisis and airspace restrictions
- Lack of cargo capacity will remain a key obstacle for the softening yet stable demand
- Jet fuel price quite high reaching $151/b in Mar 22 1st week; high prices to affect already slow belly capacity recovery

Source: IHS Markit Group, IATA, Seabury, Economic Data Factbook, IMF

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Demand

Global Volume Development

In Tons (% change YoY)

- Demand growth remained stable for all regions; overall growth +12% YoY in Jan 22; breadth of volume growth still across all sectors
- Demand is ~+4% higher than 2019 levels
- Demand drive show some signs of softening due to several underlying factors like inflation, Omicron emergence, the UA/RU crisis, etc.
- ASPA cargo movements did not experience normal Lunar New Year slowdown
- E-commerce boost to demand remained very strong so far; inflation in US can reduce this trend especially on ASPA-AMER tradelane
- The overall impact of sanctions on manufacturing in emerging markets is yet uncertain
- Global PMI index reduced but remained above 50 mark which indicates volume softening but stable flow in coming months

Source: Seabury

1/IS - Inventory to Sales ratio; data available till Jan 22 on global level; data till Dec 21 for regional level

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Global Capacity Development

Supply

Global Capacity Development

Global Capacity Development (000 tons)

- Global capacity still affected & down -18% against Mar 19
- Belly capacity still -26% below pre-COVID levels
- MoM capacity recovery fluctuating due to recent service disruptions, flight cancellations and re-routings
- Among major tradelanes ASPA outbound capacity limited due to flight cancellations amidst strict COVID regulations and recent Omicron outbreak
- Closure of airspaces due to the crisis; significant capacity taken out adding volume pressure on re-routed tradelanes
- EU outbound capacity particularly affected due to airspace restrictions and sanctions imposed
- PAX conversions were expected to add significant space by 2025, not materializing due to over capacity concerns
- Concern remains over ageing freighter fleets; maintenance necessary to continue services

Source: Seabury; Note that The YoY increase vs 2020 is due to severe decline in capacity in 2020

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Utilization

Global Cargo Load Factor Development

Regional Cargo Load Factor Development

- Recovery in capacity slow and lagged continued strong cargo demand
- Resilient cargo volumes against reduced capacity led to high load factors in all regions
  - Freight Load Factor (FLF) is an indicator of how tight is the demand-supply balance
- Industry-wide FLF in Jan 22 grew by +9 percentage points compared to Jan 20
- FLF likely to suffer due to the ramifications of the Ukraine–Russia conflict
- Slight dip in demand growth and slowly improving capacity made CLF less tight in recent times; recent service disruptions will disrupt that recovery

Source: IATA; 2021 onwards FTK and AFTK are being compared against same month in 2019; Africa FLF data unavailable for Jul 21

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Rates remained **+107% higher** in Jan 22 than 2019 baseline and **+35% more** than higher 2020 baseline

- Rates continued to remain high as **capacity remains affected; geo-political tensions; jet fuel price hike; war risk surcharge; continued service disruptions** adding to the woes

- Rates to remain high in the near future mostly across east bound EU-ASPA and other major tradelanes as capacity woes remain; market remains volatile

- Carriers continue to push for higher BSA rates for Q1 from ASPA into EU/US

- Airlines continue to manage yields aggressively; extra capacity still available at a premium

- Alternate routings due to closed airspaces leading to higher transit and increased costs

Source: IATA; average freight rate including other charges
Jet Fuel

Jet Fuel Price Development

- Jet fuel price touched $151/b in Mar 22
- Crude oil prices averaged $97/b in Feb 22, a $11/b increase from Jan 21.
- Ukraine, Russia crisis led to sanctions on Russia; significant market uncertainties about the potential oil supply disruptions
- Brent prices touched as high as $124/b in 1st week of Mar 22
- Brent crude prices already increased +60% over last 12 months
- The crisis and low oil inventories are putting persistent upward pressure on the oil prices; economies are also recovering and hence demand
- Oil inventories fell further in 2022; lowest levels since mid-2014

Source: DGF Desk Research; updated till March 1st week
The UA/RU Crisis - Potential impact

FINANCIAL BREAKDOWN
- Potential long-term damage to country GDPs
- Soaring energy prices; Inflation fears
- Currency and government bond crash
- Soaring food prices

FUEL PRICE INCREASE
- Crude oil price increase - $100/b
- Brent crude prices already increased +60% over last 12 months
- Risk scenario - Oil - $175; Gas - $250

MANUFACTURING AND AGRICULTURE AFFECTED
- Production of wheat, barley, corn, sunflower, etc. to get seriously affected
- RU main exporter of agricultural fertilizers
- Metal exports to be affected which can increase prices for several dependent industries ranging from automobiles to kitchenware

CAPACITY CONCERNS
- Airspace restrictions
- Flights cancelled due to schedule uncertainties; sanctions in place
- New routes impacting capacity; transit times longer due to alternate routing

HIGHER RATES
- Lost capacity at a premium; longer routes
- Demand pressure on alternate routes between EU & Asia
2022– What to expect?

**SERVICE DISRUPTIONS**
- COVID outbreaks impacting operations
- Airport backlogs amid staff shortage
- UA/RU crisis impact will continue to unfold
- Unforeseen circumstances can affect further

**STABLE DEMAND**
- Demand is expected to remain stable on certain tradelanes; filling inventories
- PMI index has fallen below 50; indicates volume softening
- UA/RU crisis impact

**UA-RU CRISIS**
- Airspace restrictions
- Capacity affected; demand adding pressure on alternate routes; higher prices
- Soaring energy and food prices; oil prices extremely high

**CAPACITY RECOVERY**
- Capacity at MoM recovery but slow; will remain restricted
- PAX resumption on certain Tradelanes; addition of belly capacity
- Current tensions can affect recovery

**RATES REMAIN ELEVATED**
- Rates remain high vs 2019,2020
- Demand supply imbalance expected to continue
- Extra capacity at a premium
Global Capacity Development

Capacity Development by Aircraft Configuration January 2019 – February 2022

In tons

WHO declares a global pandemic

Source: Seabury (Total Capacity includes marginal Combi aircraft contribution); data is updated now for same month of release.

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Global Capacity vs Demand Development

Capacity vs Demand change gap (pre-COVID, ongoing-COVID)

Source: Seabury; Feb 22 numbers are forecasted
Global Capacity Situation- concerns remain

2021 had the lowest total of newly delivered belly cargo capacity since 2006 mainly due to order deferrals

Convertions of passenger aircraft could potentially add a significant amount of capacity to the market by 2025

The share of airline freighter orders is significantly lower than in the past 15 years

The I/S ratio keeps declining, despite an increase in inventories as sales increase even stronger

Freighter retirements dropped in the past 5 years with only 10 to 15 aircraft retiring annually

As a result, the in-service freighter fleet is ageing: almost 350 aircraft will be 30+ years old by 2026
### Abbreviations

**Explanation of Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>AFTK</td>
<td>Available Freight Ton Kilometers</td>
</tr>
<tr>
<td>AMLA</td>
<td>Latin America</td>
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<tr>
<td>AMNO</td>
<td>North America</td>
</tr>
<tr>
<td>ASPA</td>
<td>Asia Pacific</td>
</tr>
<tr>
<td>ATK</td>
<td>Available Ton Kilometers</td>
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<tr>
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<td>Barrel</td>
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<td>bn</td>
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<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
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<tr>
<td>CLF</td>
<td>Cargo Load Factor</td>
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<td>FRT</td>
<td>Freighters (in the airline industry)</td>
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<td>FSC</td>
<td>Fuel surcharge</td>
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<tr>
<td>FTK</td>
<td>Freight Ton Kilometers (also referred to as Cargo Ton Kilometers or CTK)</td>
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<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
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<td>LY</td>
<td>Last Year</td>
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<tr>
<td>mn</td>
<td>Millions</td>
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<tr>
<td>MoM</td>
<td>Month-on-Month</td>
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<td>PAX</td>
<td>Passengers (in the airline industry)</td>
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<td>Personal Protective Equipment</td>
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