



# BOC Aviation Investor Presentation

JANUARY 2023

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# 3Q 2022 and Recent Developments



## STRONG ASSET QUALITY

- 612 aircraft owned, managed and on order<sup>1</sup>
- 4.3 years<sup>2</sup> average fleet age; 8.2 years<sup>2</sup> average remaining lease term
- 96% aircraft utilization rate



## PROACTIVE INVESTMENT STRATEGY

- 12 aircraft deliveries, including six used aircraft transitions
- 21 lease commitments signed
- Committed to acquire nine new aircraft, including six Airbus A320NEO aircraft placed with JetSMART
- Agreed to purchase 40 new Boeing 737 MAX 8 aircraft



## FUTURE GROWTH

- Delivered nine new Boeing 787 aircraft from our orderbook to American Airlines by end-2022 since delivery of the 787 aircraft resumed in August 2022
- Expecting another nine to be delivered to American Airlines through to 2024



## ROBUST LIQUIDITY

- US\$6 billion of available liquidity<sup>3</sup>
- More than covers 2023 target capex and maturing liabilities
- Well positioned to support future investment
- Limited refinancing required



## STRONG CREDIT RATINGS

- A- by S&P Global Ratings
- A- by Fitch Ratings



## EXPERIENCED MANAGEMENT AND OWNERSHIP

- Experienced management team successfully managed through multiple cycles
- Bank of China provides ongoing support

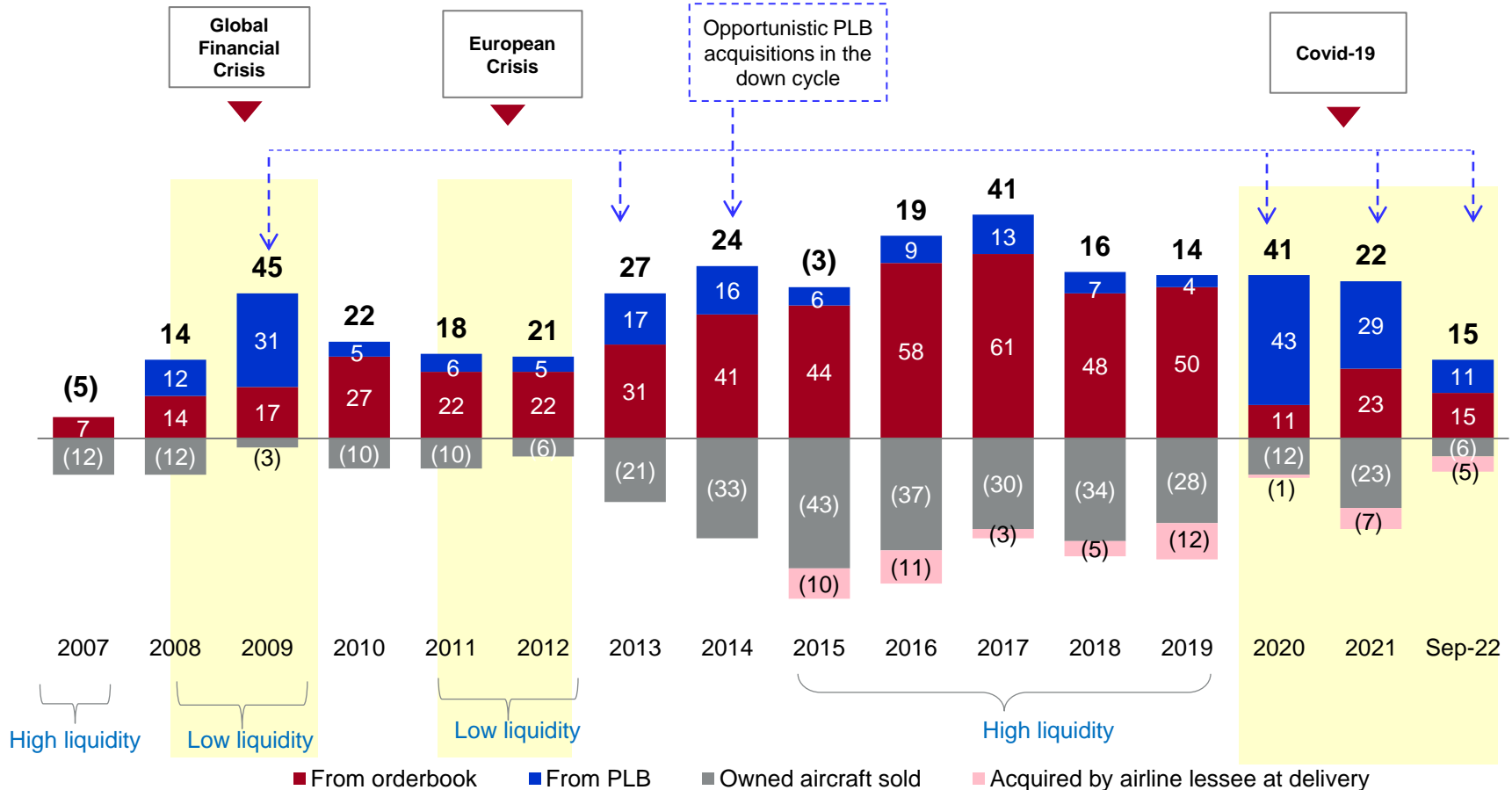
Long-term sustainable growth

All data as at 30 September 2022 unless otherwise indicated  
See Appendices - Endnotes



# How We Invest

## Number of aircraft delivered, purchased and sold



## Investing in aircraft through multiple cycles

All data as at the end of the relevant period

# Popular and Fuel-Efficient Fleet

## Our aircraft portfolio

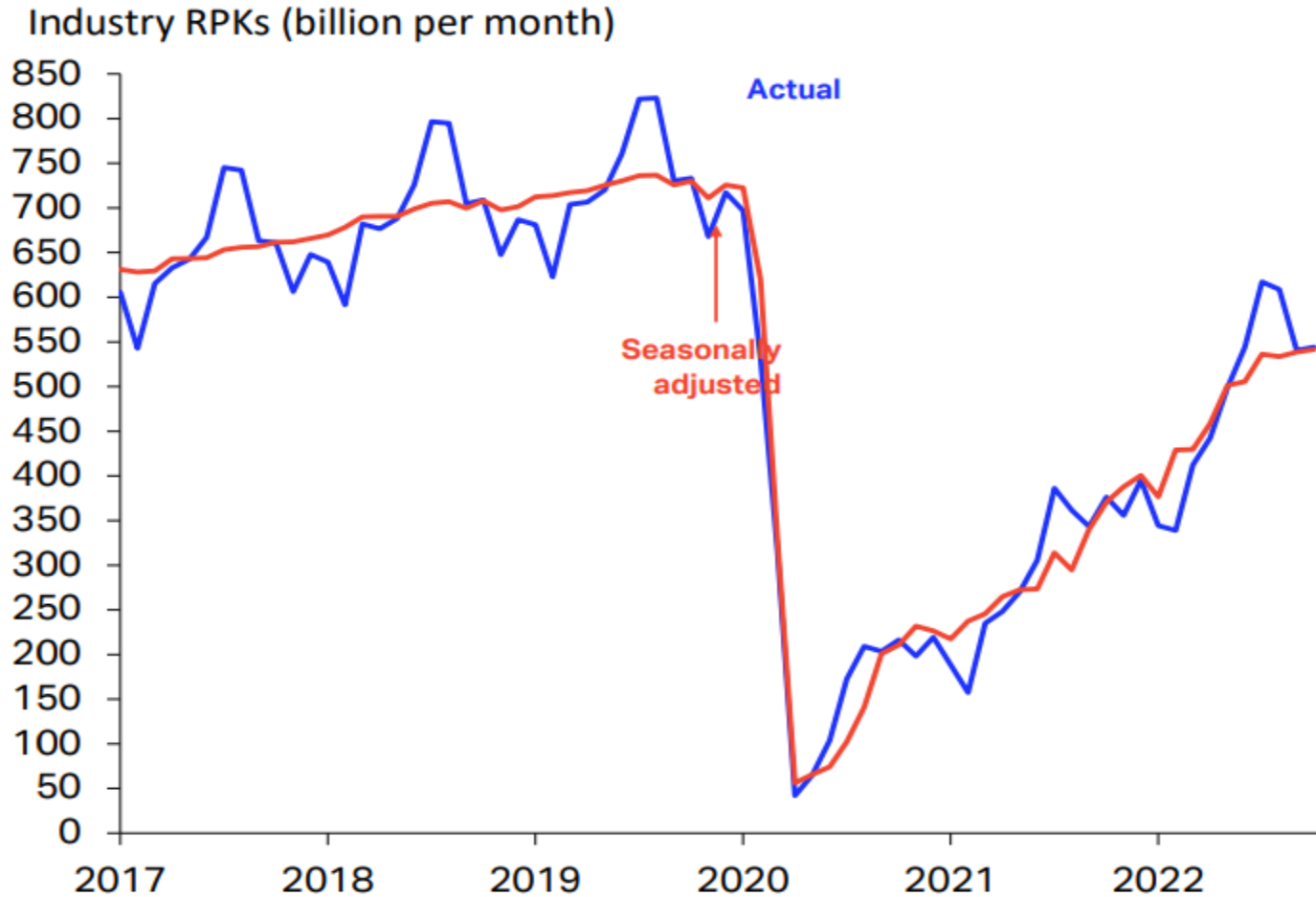
Aircraft type	Owned aircraft	Managed aircraft	Aircraft on order <sup>1</sup>	Total
Airbus A320CEO family	100	15	0	115
Airbus A320NEO family	93	0	117	210
Airbus A330CEO family	8	1	0	9
Airbus A330NEO family	6	0	0	6
Airbus A350 family	9	0	0	9
Boeing 737NG family	72	14	0	86
Boeing 737 MAX family	52	0	50	102
Boeing 777-300ER	27	4	0	31
Boeing 787 family	23	1	14	38
Freighters	5	1	0	6
<b>Total</b>	<b>395</b>	<b>36</b>	<b>181</b>	<b>612</b>

**100% of orderbook comprises latest technology aircraft**

All data as at 30 September 2022  
See Appendices - Endnotes



# Global Passenger Traffic Recovering Rapidly



Sources: IATA Economics, IATA Monthly Statistics

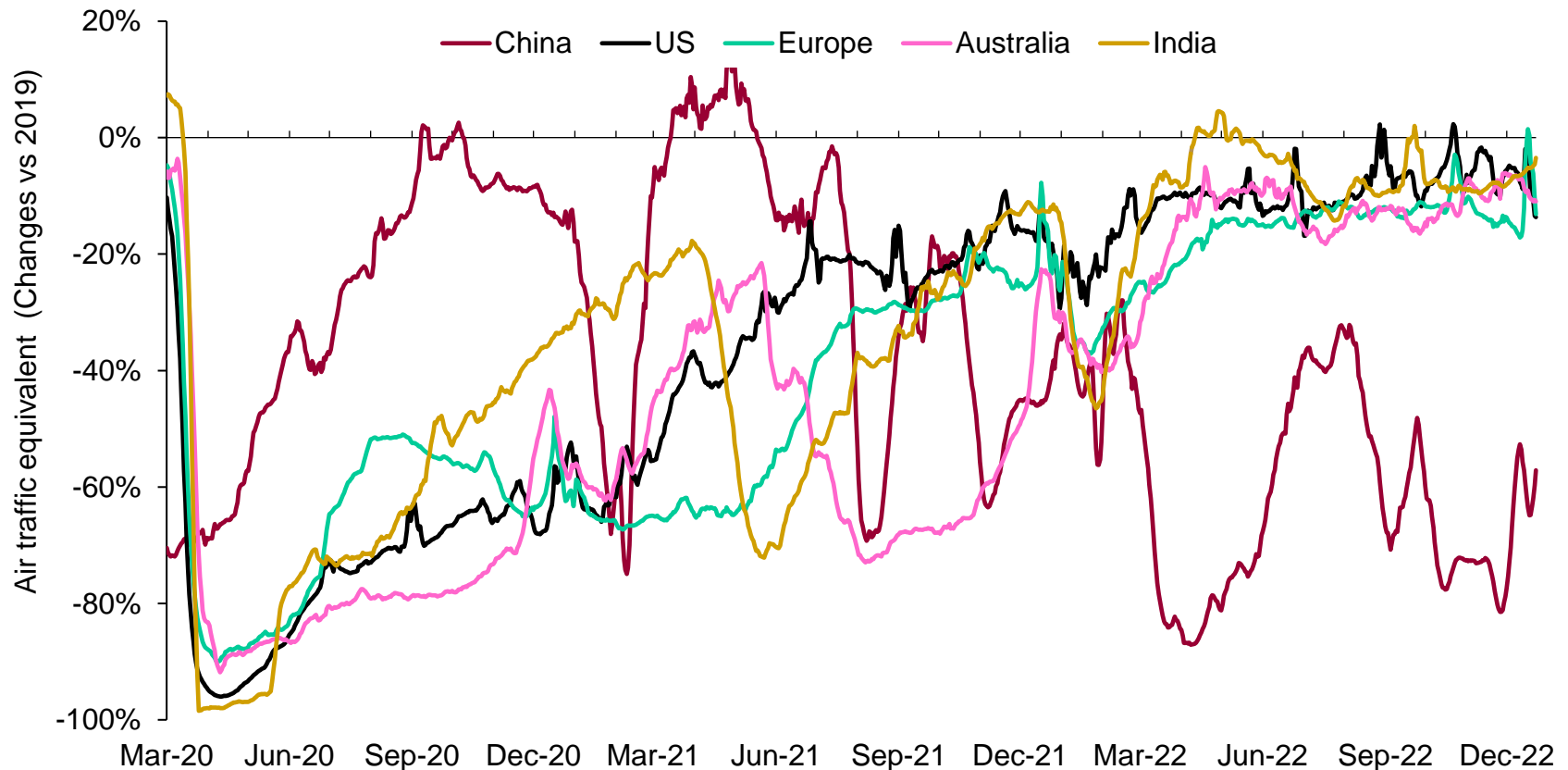
**Passenger traffic now within 20% of pre-pandemic levels, ex-China**

See Appendices - Endnotes



# Most Major Passenger Markets See Strong Travel Rebound

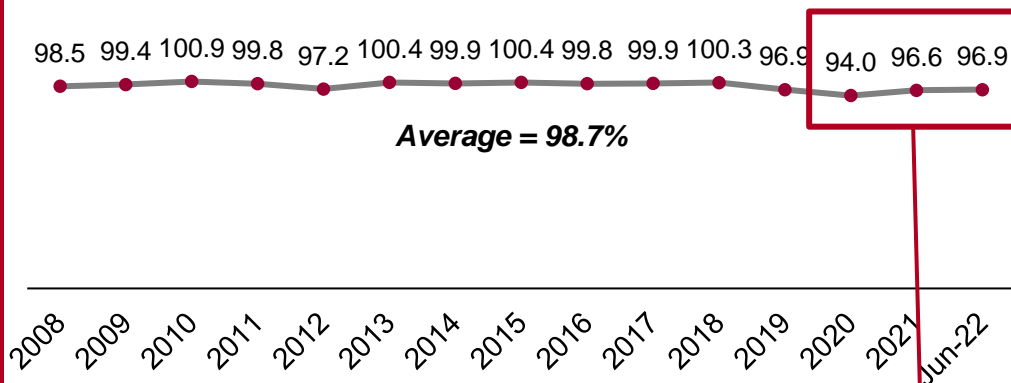
Market continues to recover



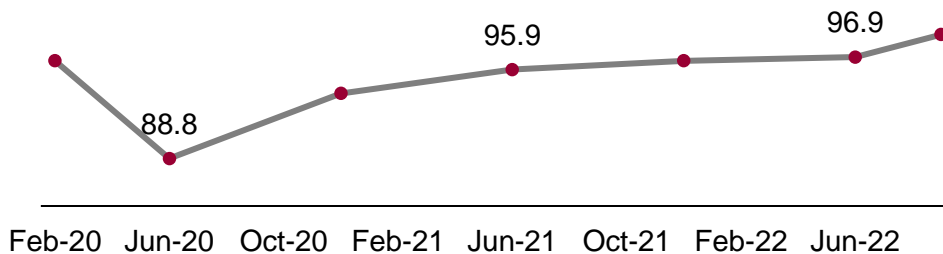
See Appendices - Endnotes

# Rental Collection Improving

Annual collection rate (%)



Collection rate since pandemic (%)



- Long term cash collection from airline customers remains high, at an average rate of 98.7% since 2008
- Collections were severely affected by the Covid-19 outbreak in early 2020, but have been recovering quickly to pre-pandemic level

Maintaining high collection rate remains a key priority

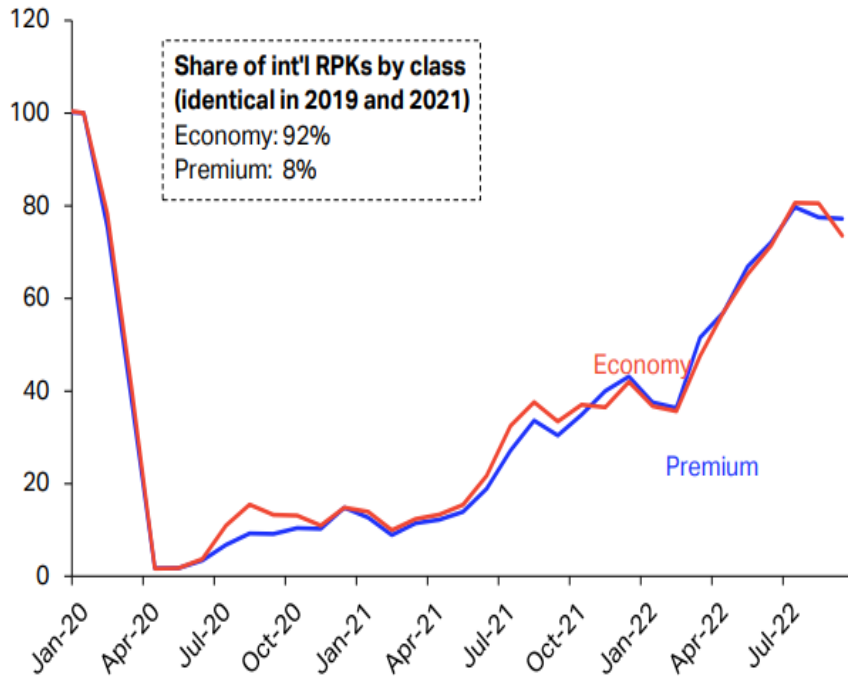




# Improving Forward Bookings Drive Traffic Recovery

## International RPKs by cabin class

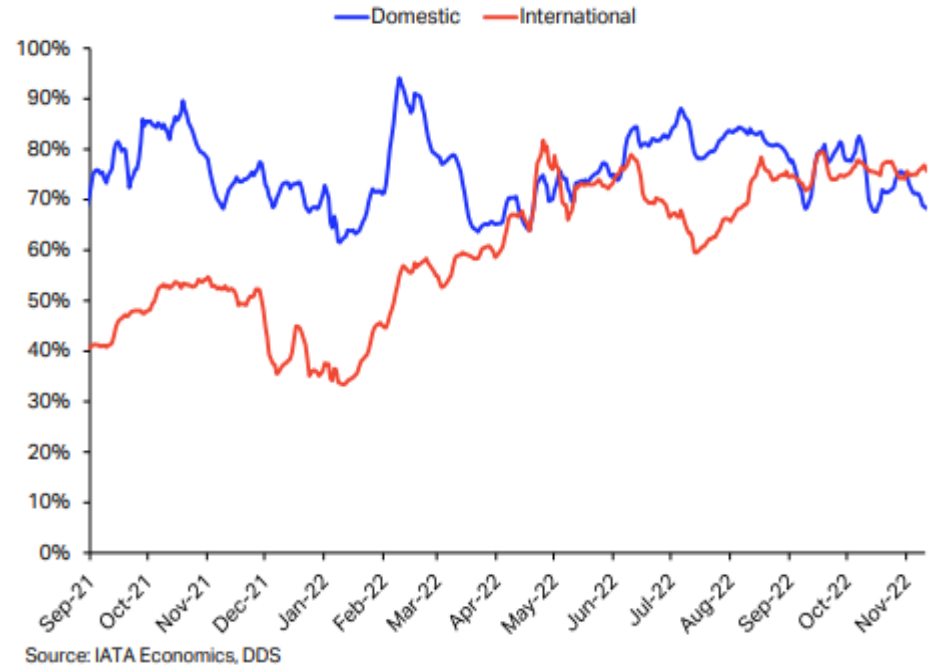
International RPKs, January 2020 = 100



Source: IATA Monthly Statistics

## Passenger ticket sales

Bookings by purchase date, year-on-year vs 2019, 7-day



**Air traffic is expected to remain resilient as forward bookings move up**

# Jet Fuel Prices

Jet fuel price, US\$

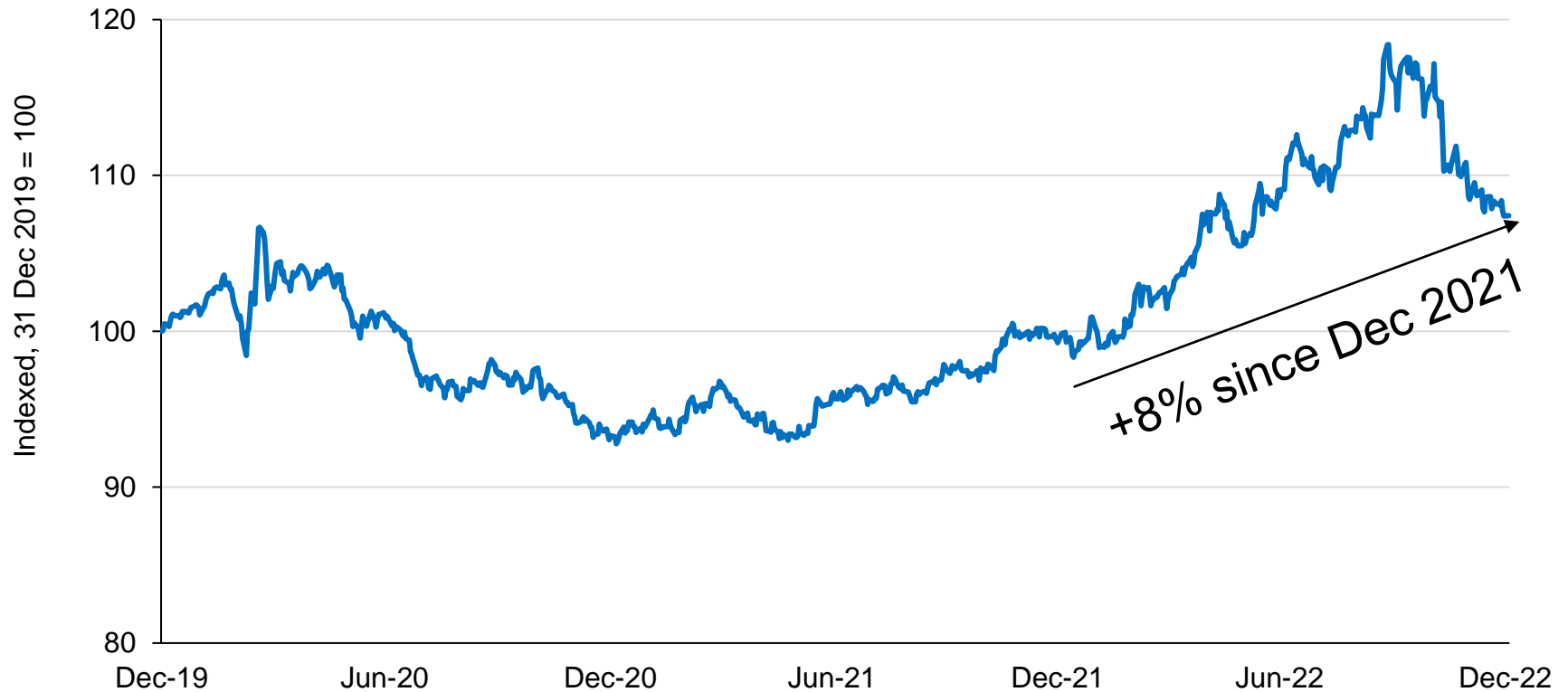


**Fuel prices remain high and volatile**

See Appendices - Endnotes



# USD Strength Affects Airline Costs

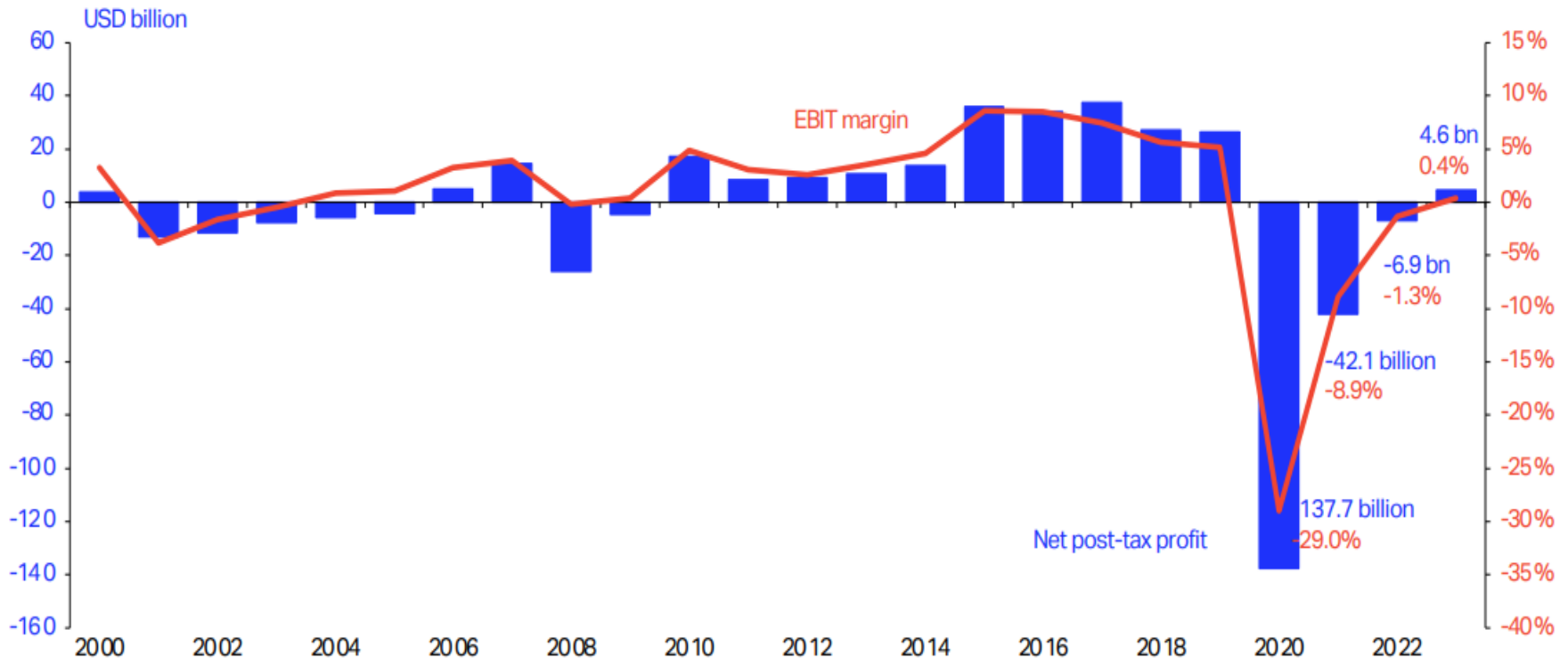


**Sharp appreciation of USD since 2021 reversed sharply in 4Q2022**

See Appendices - Endnotes



# Airline Earnings: Speediest Recovery in History



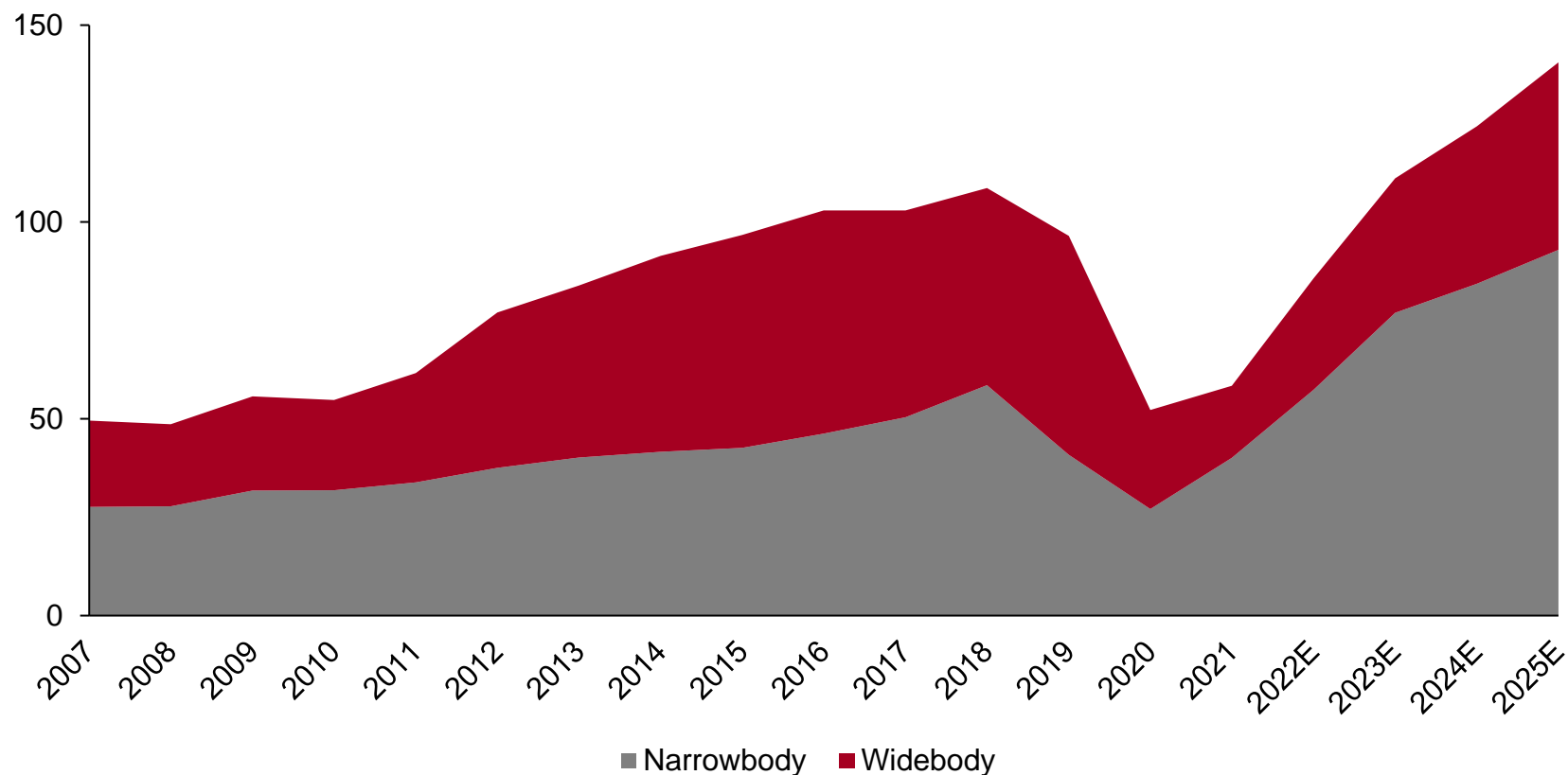
**Airline profits expected to rebound at the fastest rate on record**

See Appendices - Endnotes



# Value of Deliveries to Exceed US\$120 Billion in 2025

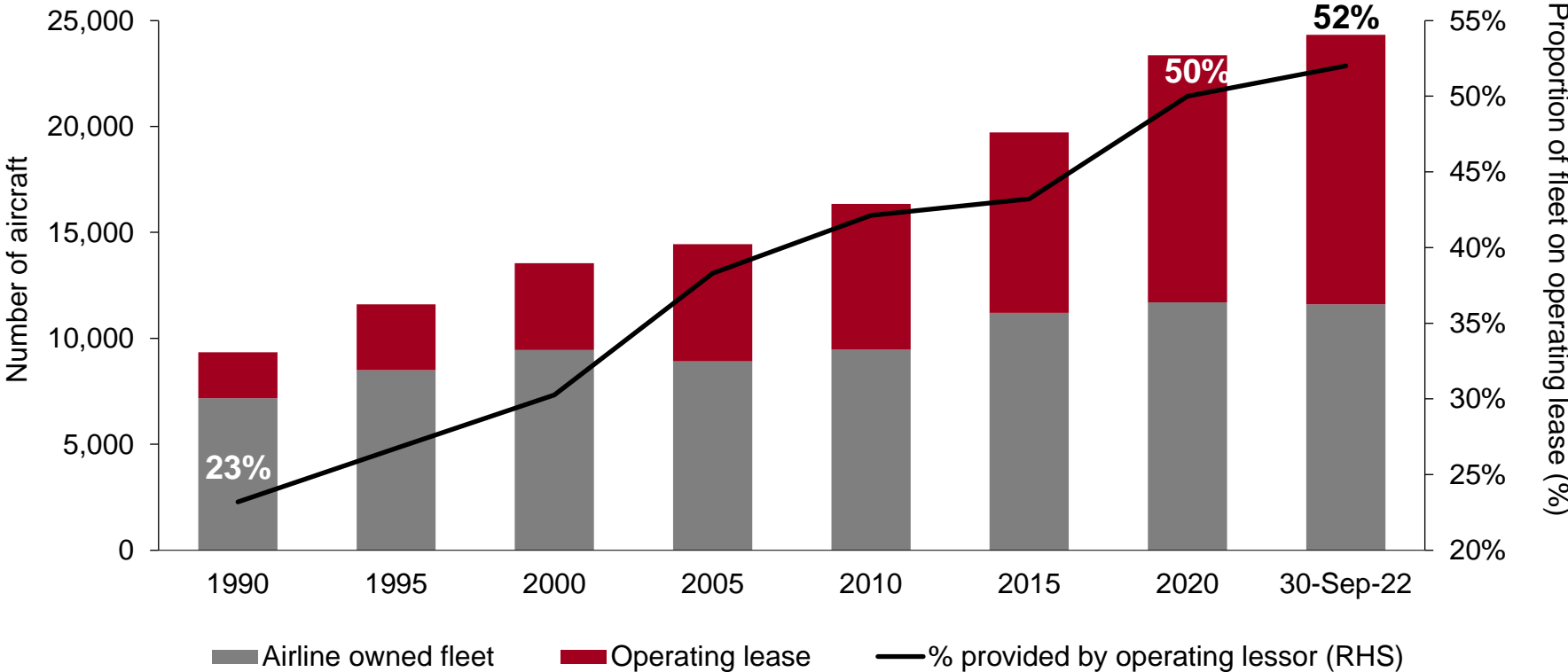
Annual capex – US\$ billion



All data as at 30 June 2022  
See Appendices - Endnotes

# Lessors Own 52% of the Aircraft Market Today

Proportion of fleet on operating lease



**Lessors own 52% of the aircraft market today; this proportion has potential to increase**

All data as at 30 September 2022  
See Appendices - Endnotes



# Looking Ahead

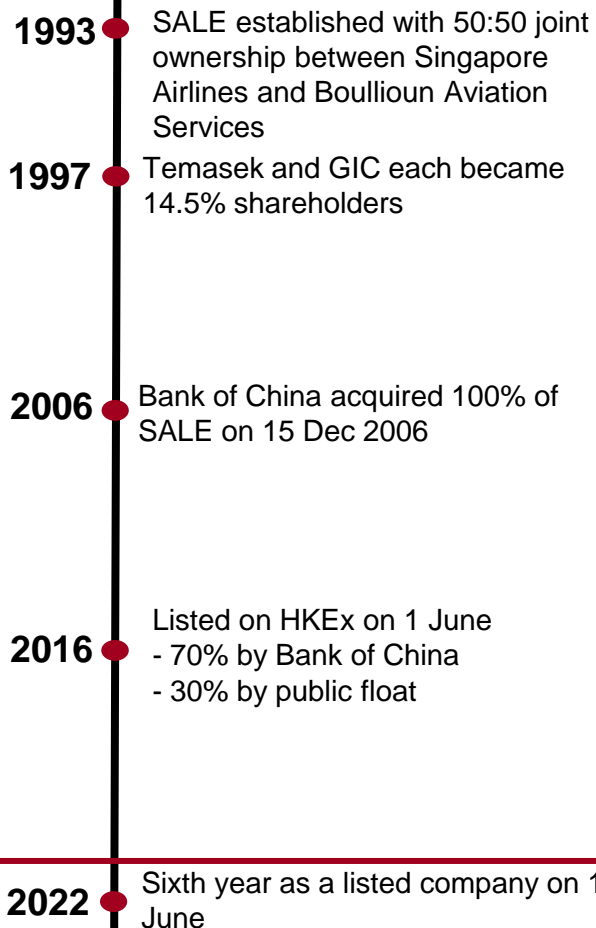
- Improving airline traffic visible globally
  - Long-haul markets recovering
  - Asia is poised to follow suit as more markets are opening up
  - China re-opening will drive upside globally and especially for Southeast Asia
  - Russian airspace closure having limited effect on overall travel demand
- Higher interest rates, fuel prices and USD provide financing opportunities for well-capitalised operating lessors
  - Airline capex showing signs of distinct recovery
- A global aircraft operating lessor committed for the long-term
  - Resilient 1H 2022 performance achieved amidst a challenging backdrop
  - Orderbook and available liquidity of US\$6 billion position us well to capture airline demand upturn
  - Committed lease revenues of US\$17 billion
  - Three female Directors out of Board of 11

# APPENDICES



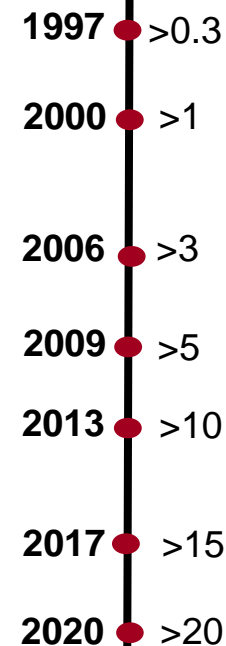
# The BOC Aviation Journey

## Ownership



## Total assets

US\$ billion



30 June 2022 22.8

All data as at the end of the relevant period

# BOC Aviation – Who Are We?

## Top 5

Global aircraft operating lessor<sup>1</sup>

## Listed on HKEX

HKEX code: 2588

## >US\$5.0 billion

Cumulative profits since inception<sup>2</sup>

## US\$6.0 billion

Available liquidity

## 181

Aircraft on order<sup>3</sup>

## Bank of China

70% owned by BOC

**A-** Investment grade credit ratings  
from S&P and Fitch

## US\$22.8 billion

Total assets<sup>2</sup>

## 612

Aircraft in fleet<sup>4</sup>

## 4.3 years; 8.2 years

Average fleet age & lease term remaining<sup>5</sup>

**Industry leader focused on long-term sustainable earnings**

All data as at 30 September 2022 unless otherwise indicated  
See Appendices - Endnotes



# Globally Diverse Management Team



**Robert Martin**  
*Managing Director & Chief Executive Officer*

**Zhang Xiaolu**  
*Vice-Chairman & Deputy Managing Director*

**Steven Townend**  
*Deputy Managing Director & Chief Financial Officer*

**David Walton**  
*Deputy Managing Director & Chief Operating Officer*

**Deng Lei**  
*Chief Commercial Officer (Asia Pacific & the Middle East)*

**Paul Kent**  
*Chief Commercial Officer (Europe, Americas, Africa)*

- 35 years of banking and leasing experience
- Managing Director and Board Director since July 1998

- 32 years of banking experience
- In charge of Risk Management, Market Research, Board Secretariat and Corporate Affairs departments

- 31 years of banking and leasing experience
- In charge of Finance, Treasury, Tax, Investor Relations and Settlement

- 36 years of legal, aviation finance and leasing experience
- In charge of Procurement, all operations and related departments

- 24 years of banking experience
- In charge of revenue activities for Asia Pacific and Middle East

- 26 years of aircraft finance and leasing experience
- In charge of revenue activities for Europe, Americas and Africa

**Nationality**



**Highly experienced senior management team**

All data as at November 2022



# Core Competencies - BOC Aviation Track Record

## Since inception in 1993:

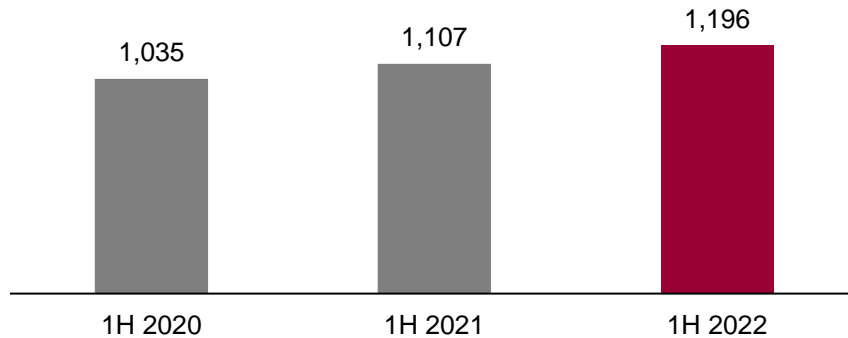
- Purchasing More than 990 aircraft purchased totalling close to US\$57 billion
- Leasing More than 1,190 leases executed with >180 airlines in 61 countries and regions
- Financing<sup>1</sup> More than US\$38 billion in debt raised since 1 January 2007

- Sales More than 400 aircraft sold
- Transitions More than 110 transitions
- Repossessions<sup>2</sup> 65 aircraft in 19 jurisdictions

# Resilient Performance in a Challenging Market

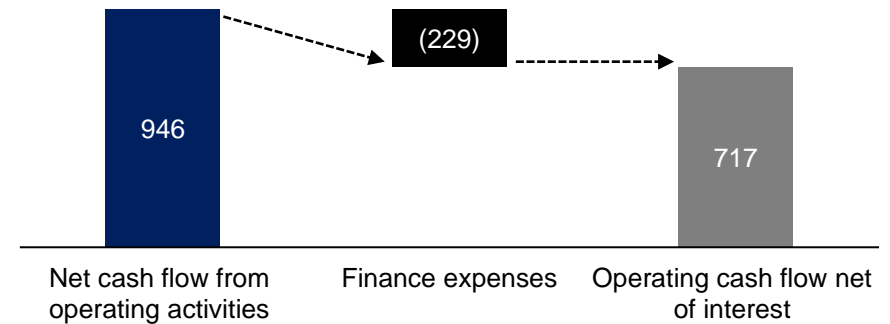
## Diversified revenue sources underpin growth

US\$ million



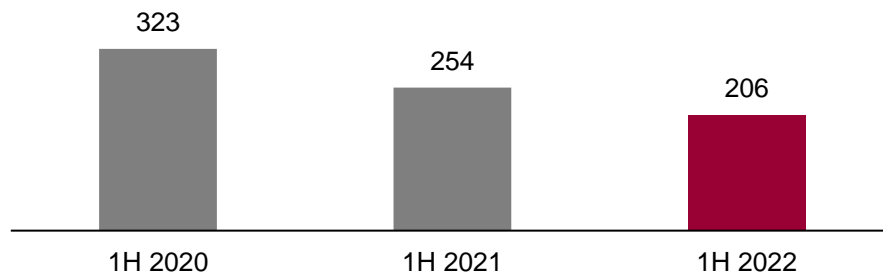
## 1H 2022 operating cash flow net of interest<sup>1</sup>

US\$ million



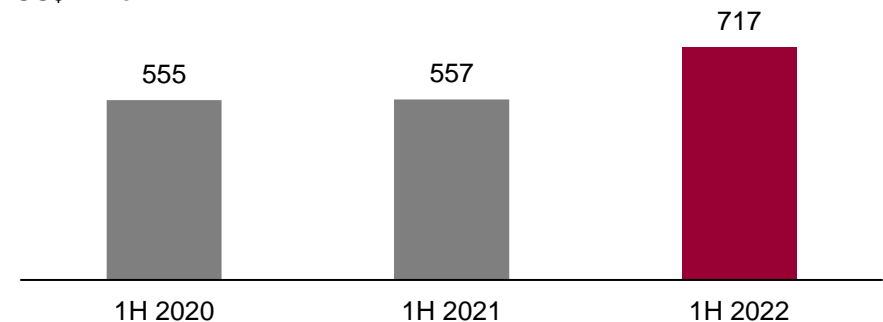
## Core NPAT

US\$ million



## Rising operating cash flow net of interest<sup>1</sup>

US\$ million



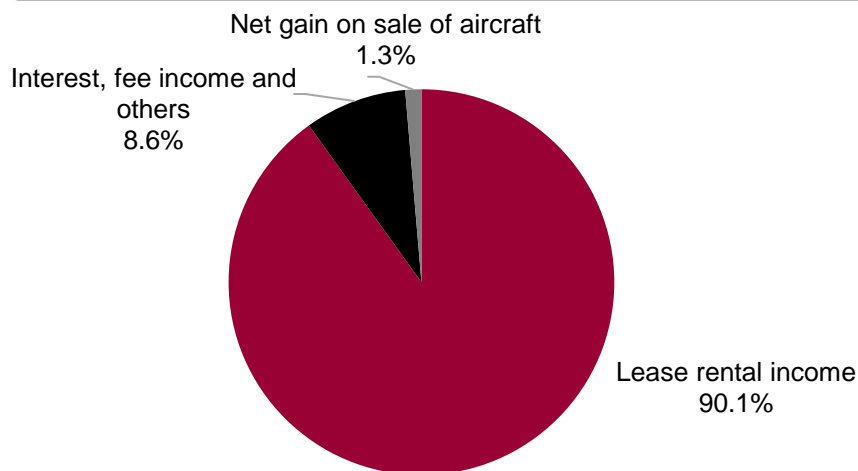
**Collection rate rose to 97% from 96% a year ago**

All data as at 30 June 2022  
See Appendices - Endnotes

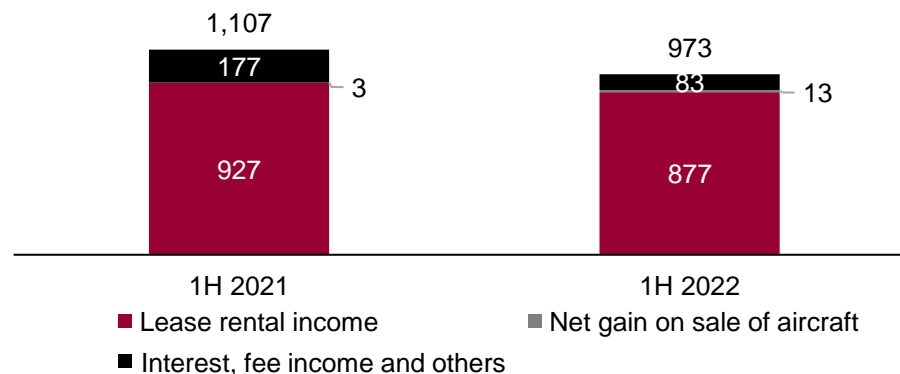


# Lease Rental Income Continues to Dominate Revenue

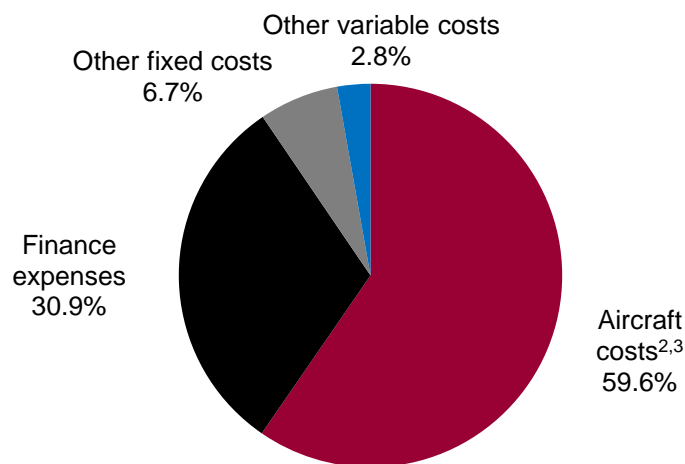
## Lease rental income at 90% of total revenues and other income<sup>1</sup>



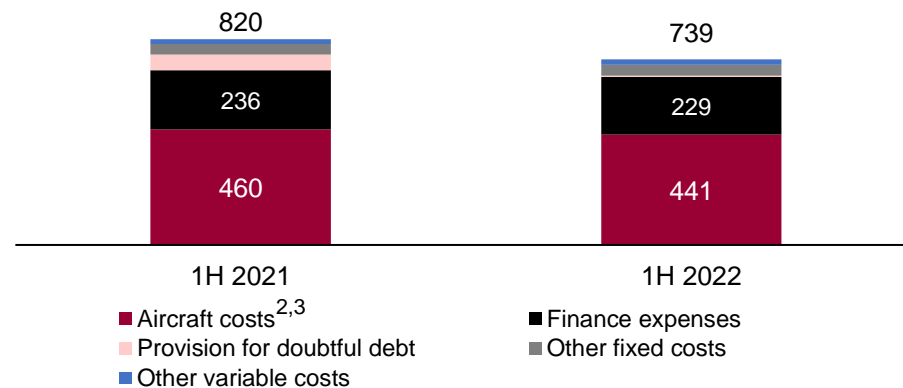
US\$ million



## Depreciation of aircraft and financing costs are key costs<sup>2</sup>



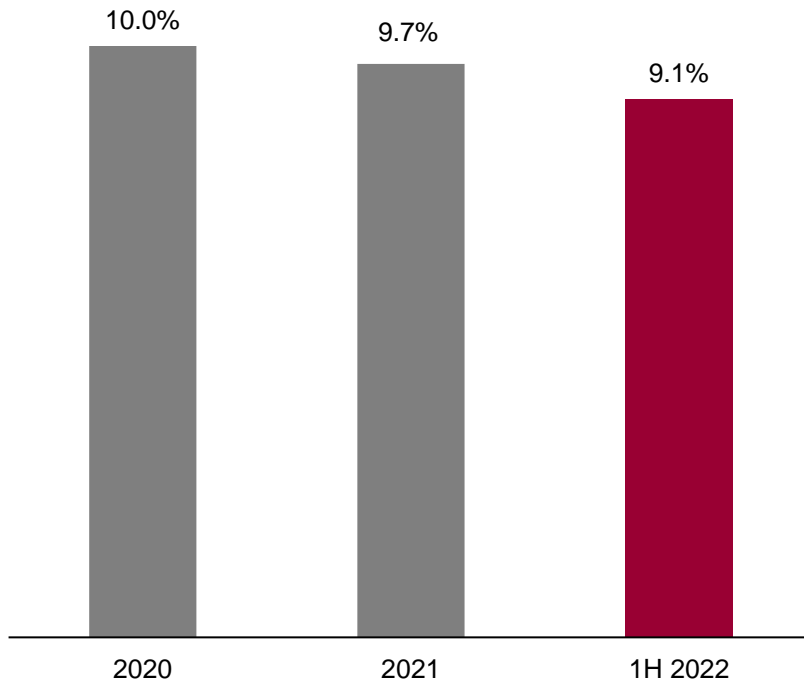
US\$ million



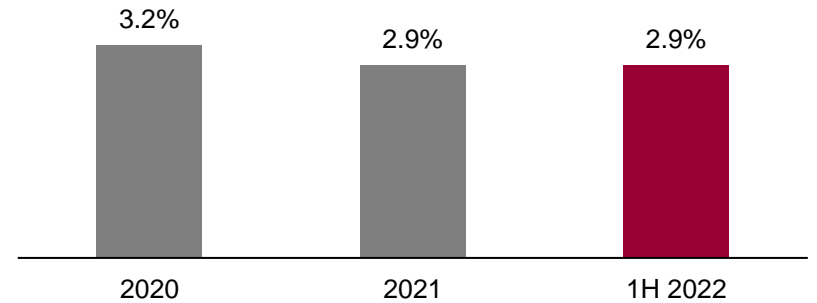
All data as at 30 June 2022  
See Appendices - Endnotes

# Lease Yields Reflect Market Environment During Covid

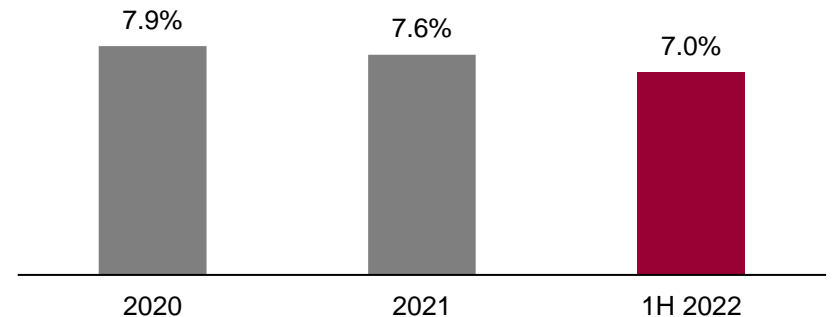
Lease rate factor<sup>1</sup>



Maintained low cost of debt<sup>2</sup>



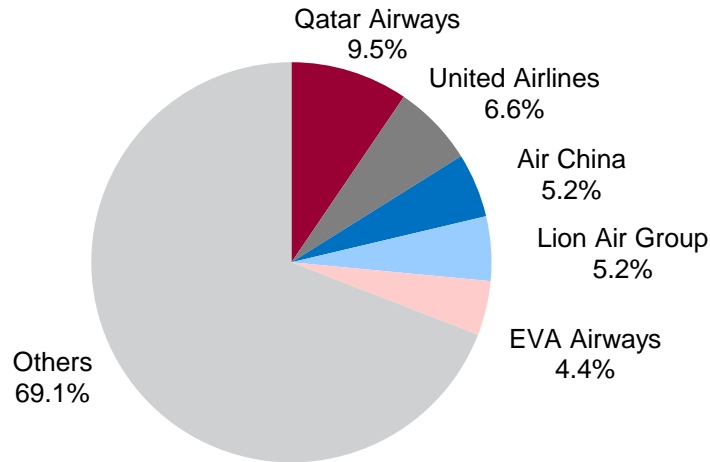
Net lease yield<sup>3</sup>



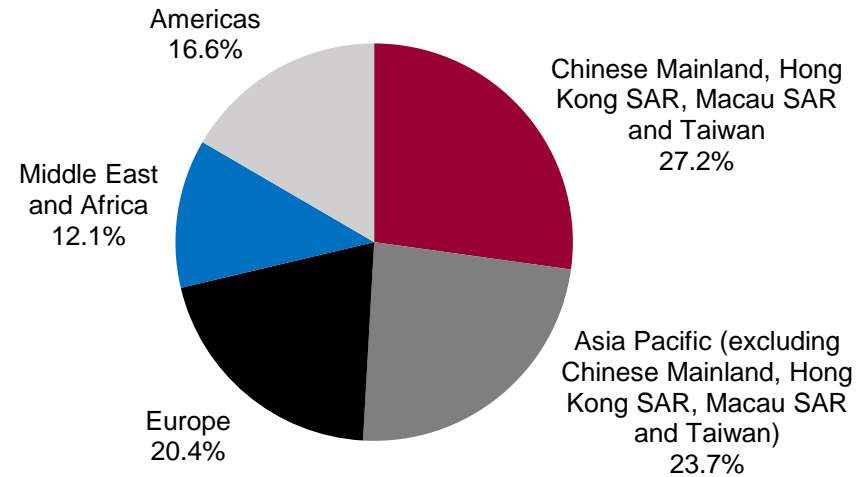
All data as at 30 June 2022  
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# Globally Diversified Portfolio

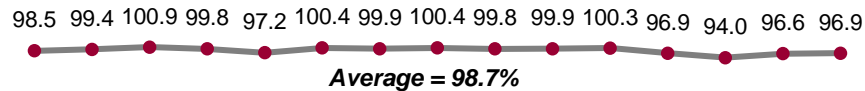
## Lease portfolio diversified by customer<sup>1,2</sup>



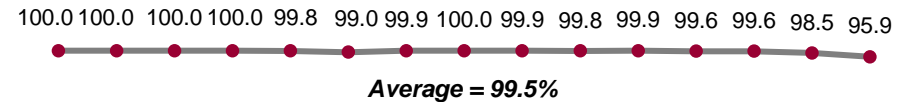
## ...and increasingly diversified by geography<sup>1,3</sup>



## Collection rate (%)



## Fleet utilisation (%)<sup>4</sup>



2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 Jun-22

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 Sep-22

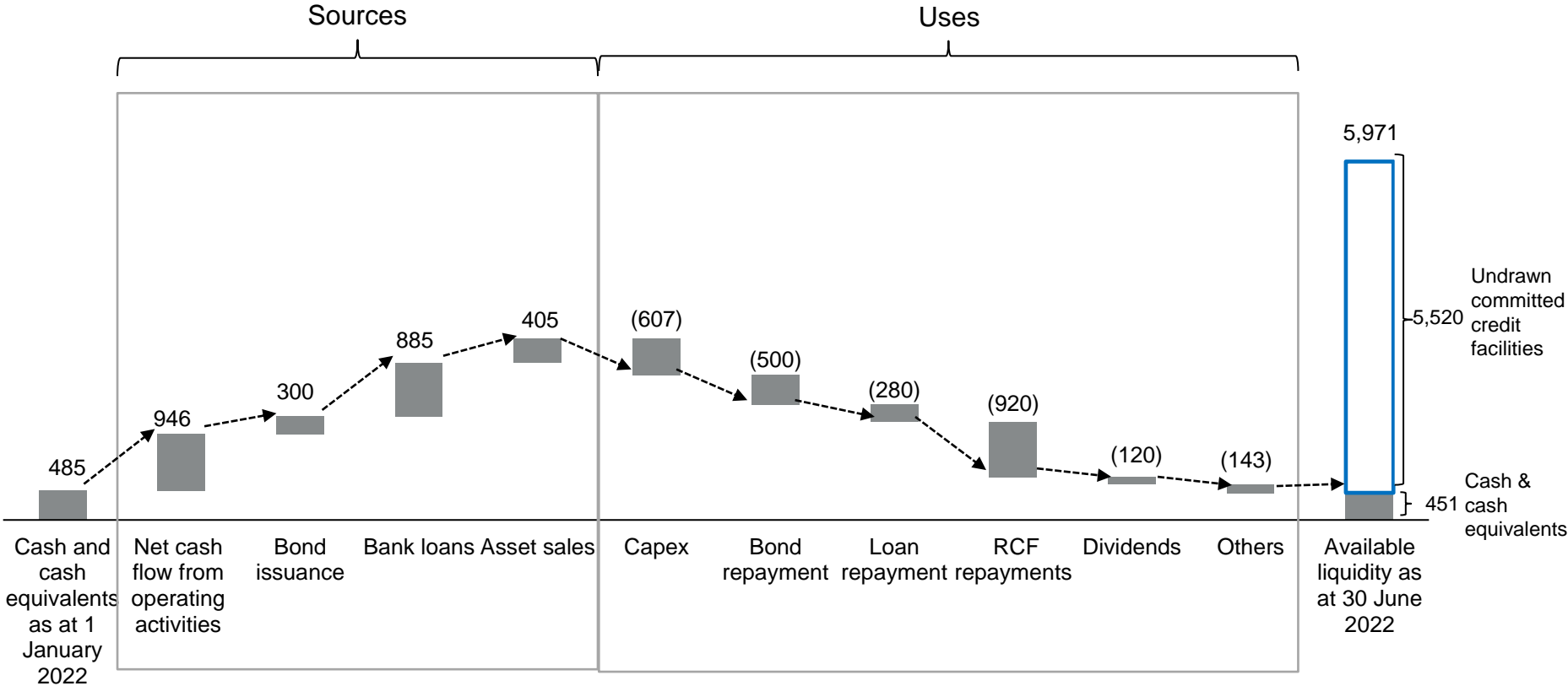
All data as at 30 June 2022 unless otherwise indicated  
See Appendices - Endnotes



# Diverse Funding Channels Utilised in 1H 2022

## Sources and Uses of Cash

US\$ million



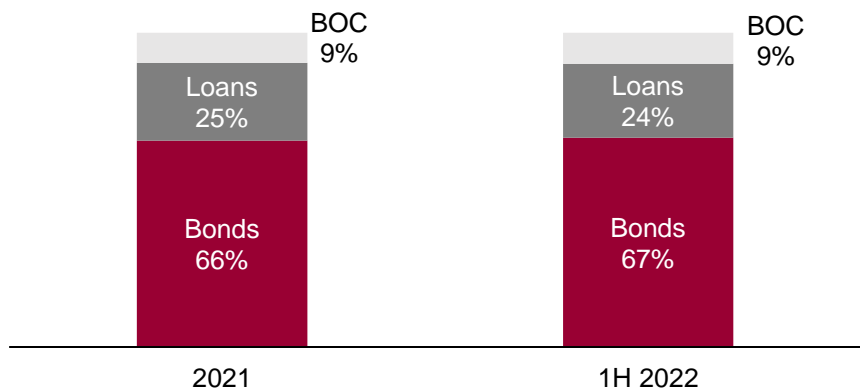
**US\$6 billion of committed available liquidity**



All data as at 30 June 2022

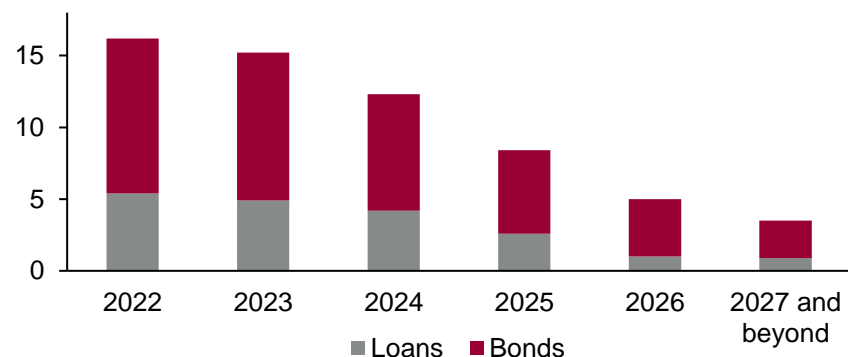
# Flexible Capital Structure and Ample Backstop Liquidity

## Sources of debt<sup>1</sup>

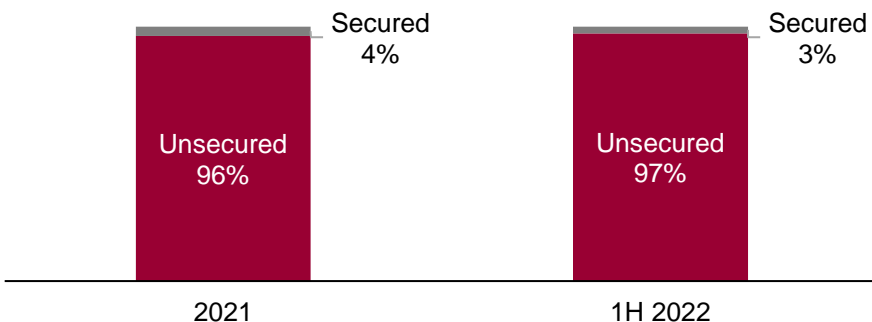


## Outstanding debt amortises over a long term

US\$ billion

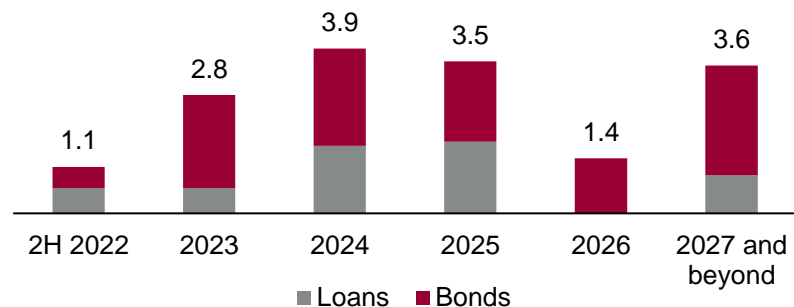


## Increasing unsecured funding



## Near term debt maturities well covered by US\$6 billion available liquidity

US\$ billion



Long-term debt is a key strength

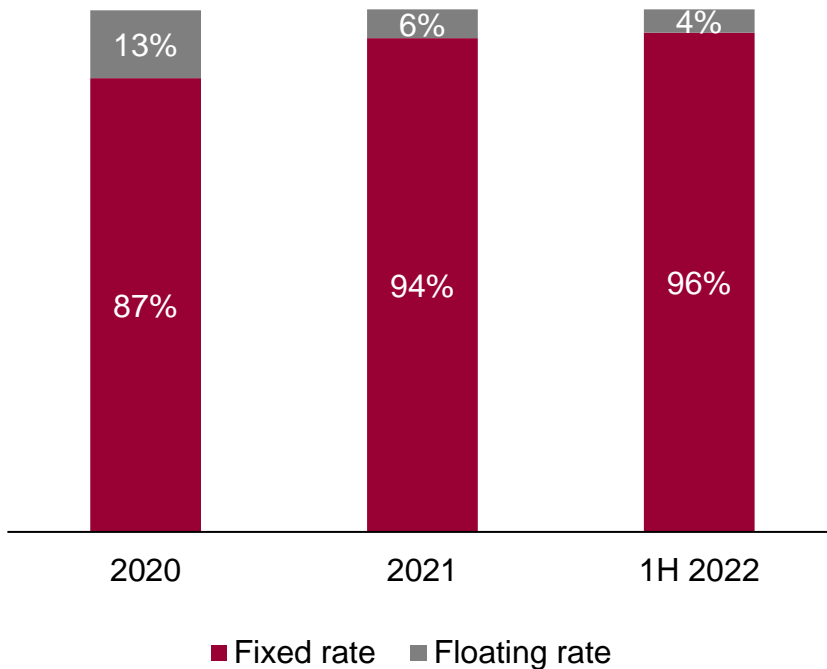
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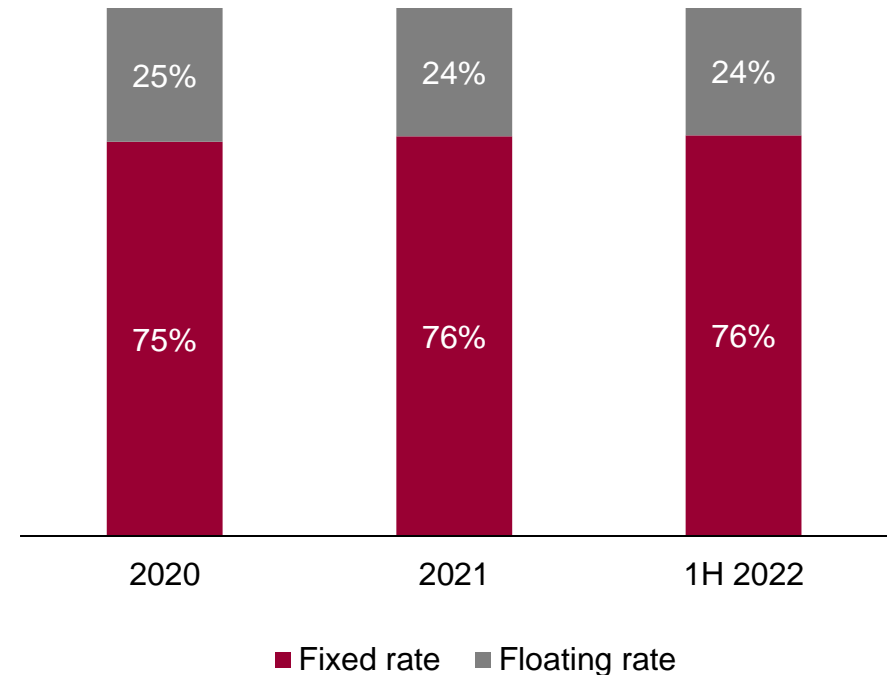
# Fixed Rate Leases and Debt

Fixed rate leases dominate<sup>1</sup>

By net book value



Stable proportion of fixed rate debt<sup>2</sup>



High proportion of fixed rate debt reduces impact of rising interest rates

All data as at 30 June 2022  
See Appendices - Endnotes

# Aviation in a Low Carbon Environment

	2020	2025	2030	2035	2040	2045	2050
<b>Commuter</b> » 9-50 seats » < 60 minute flights » <1% of industry CO <sub>2</sub>	SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF
<b>Regional</b> » 50-100 seats » 30-90 minute flights » ~3% of industry CO <sub>2</sub>	SAF	SAF	Electric or Hydrogen fuel cell and/or SAF	Electric or Hydrogen fuel cell and/or SAF	Electric or Hydrogen fuel cell and/or SAF	Electric or Hydrogen fuel cell and/or SAF	Electric or Hydrogen fuel cell and/or SAF
<b>Short haul</b> » 100-150 seats » 45-120 minute flights » ~24% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	Electric or Hydrogen combustion and/or SAF	Electric or Hydrogen combustion and/or SAF	Electric or Hydrogen combustion and/or SAF
<b>Medium haul</b> » 100-250 seats » 60-150 minute flights » ~43% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	SAF	SAF	SAF potentially some Hydrogen
<b>Long haul</b> » 250+ seats » 150 minute + flights » ~30% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	SAF	SAF	SAF

See Appendices - Endnotes

# Endnotes (1)

- **SLIDE 3: 3Q 2022 and Recent Developments**
  1. Includes all commitments to purchase aircraft including those where an airline customer has the right to acquire the relevant aircraft on delivery
  2. Weighted by net book value of owned fleet as at 30 June 2022
  3. As at 30 June 2022
- **SLIDE 5: Popular and Fuel-Efficient Fleet**
  1. Includes all commitments to purchase aircraft including those where an airline customer has the right to acquire the relevant aircraft on delivery
- **SLIDE 6: Global Passenger Traffic Recovering Rapidly** - Source: IATA Air Passenger Market Analysis (October 2022)
- **SLIDE 7: Major Passenger Markets See Strong Rebound in Travel** - Sources: China MoT (Air Pax YoY) TravelSky (Traffic), TSA (Throughput), Eurocontrol (Flights), AWN ADS-B (Flights)
  1. Changes compared to 2021 with effect from January 2022
- **SLIDE 9: Improving Forward Bookings Drive Traffic Recovery** – Source: IATA Air Passenger Market Analysis (October 2022)
- **SLIDE 10: Jet Fuel Prices** – Source: Bloomberg, 2 January 2023
- **SLIDE 11: Strengthening USD** – Source: Bloomberg, 3 January 2023
- **SLIDE 12: Airline Earnings: Speediest Recovery in History** – Source: Airline Industry Update and Outlook (IATA, 6 December 2022)
- **SLIDE 13: Value of Deliveries to Exceed US\$120 Billion in 2025** – Sources: BOC Aviation Analysis

# Endnotes (2)

- **SLIDE 14: Lessors Own 52% of the Aircraft Market Today** – Sources: Ascend, as at 30 September 2022, based on aircraft of 100+ seats. Fleet data for 2020 onwards includes aircraft in-service and aircraft additionally parked from end-2019 due to Covid-19 fleet grounding
- **SLIDE 18: BOC Aviation – Who Are We?**
  1. By net book value of owned aircraft
  2. As at 30 June 2022
  3. Includes all commitments to purchase aircraft including those where an airline customer has the right to acquire the relevant aircraft on delivery
  4. Includes owned, managed and aircraft on order as at 30 September 2022
  5. Weighted by net book value of owned fleet as at 30 September 2022
- **SLIDE 20: Core Competencies - BOC Aviation Track Record**
  1. As at 30 June 2022
  2. Includes repossessions and consensual early returns
- **SLIDE 21: Resilient Performance in a Challenging Market**
  1. Calculated as net cash flow from operating activities less finance expenses paid
- **SLIDE 22: Lease Rental Income Continues to Dominate Revenue**
  1. Excludes income of US\$223 million arising from the termination of leases of aircraft that remain in Russia
  2. Excludes the effects of the one-time write-down of the net book value of aircraft that remain in Russia of US\$804 million
  3. Comprises aircraft depreciation and impairment charges

# Endnotes (3)

- **SLIDE 23: Lease Yields Reflect Market Environment During Covid**
  1. Calculated as operating lease rental income divided by average net book value of aircraft and multiplied by 100%
  2. Calculated as the sum of finance expenses and capitalised interest, divided by average total indebtedness. Total indebtedness represents loans and borrowings before adjustments for deferred debt issue costs, fair values, revaluations and discounts/premiums to medium term notes
  3. Calculated as operating lease rental income less finance expenses apportioned to operating lease rental income, divided by average of aircraft net book value. Net lease yield for 1H 2022 is calculated on an annualised basis.
- **SLIDE 24: Globally Diversified Lease Portfolio**
  1. Based on net book value including aircraft subject to finance leases and excluding aircraft off lease and aircraft that remain in Russia as at 30 June 2022
  2. For certain airlines, the percentage includes leases to affiliated airlines whose obligations are guaranteed by the named airline
  3. Based on the jurisdiction of the primary obligor under the relevant operating lease
  4. Fleet utilisation is the total days on-lease in the period as a percentage of total available lease days in the period
- **SLIDE 26: Flexible Capital Structure and Ample Backstop Liquidity**
  1. Drawn debt only
- **SLIDE 27: Fixed Rate Leases and Debt**
  1. By net book value including aircraft subject to finance lease, and excluding aircraft off lease
  2. Represents the position net of any hedging
- **SLIDE 28: Aviation in a Low Carbon Environment** – Source: ATAG Waypoint 2050 Report



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