

# BOC Aviation Investor Presentation

MAY/JUNE 2023

**30** Years of  
Excellence

 **BOC AVIATION**

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# Developments in 2023 YTD



## STRONG ASSET QUALITY

- 635 aircraft owned, managed and on order<sup>1</sup>
- 4.6 years<sup>2</sup> average fleet age; 8.0 years<sup>2</sup> average remaining lease term
- 99% aircraft utilization rate



## PROACTIVE INVESTMENT STRATEGY

- Took delivery of two new aircraft in 1Q 2023
- Signed 13 lease commitments in 1Q 2023
- Committed to acquire three aircraft in 1Q 2023
- Committed to acquire another seven Airbus A320NEO family aircraft and six Boeing 737-8 aircraft in May



## FUTURE GROWTH

- Delivered the first of 11 new Boeing 737-8 aircraft to Lynx Air in April
- Delivered another two new Boeing 787 aircraft from our orderbook to American Airlines in May, a total of 12 delivered to the airline since delivery of the 787 aircraft resumed in August 2022
- Expecting another six to be delivered to American Airlines through to 2024



## ROBUST LIQUIDITY

- More than US\$5 billion of available liquidity<sup>3</sup>
- Supplemented by additional US\$1 billion of bonds raised in May at yield of 5.015% (for 10Y) and 4.627% (for 5Y)
- More than covers 2023 target capex and maturing liabilities
- Well positioned to support future investment



## STRONG CREDIT RATINGS

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

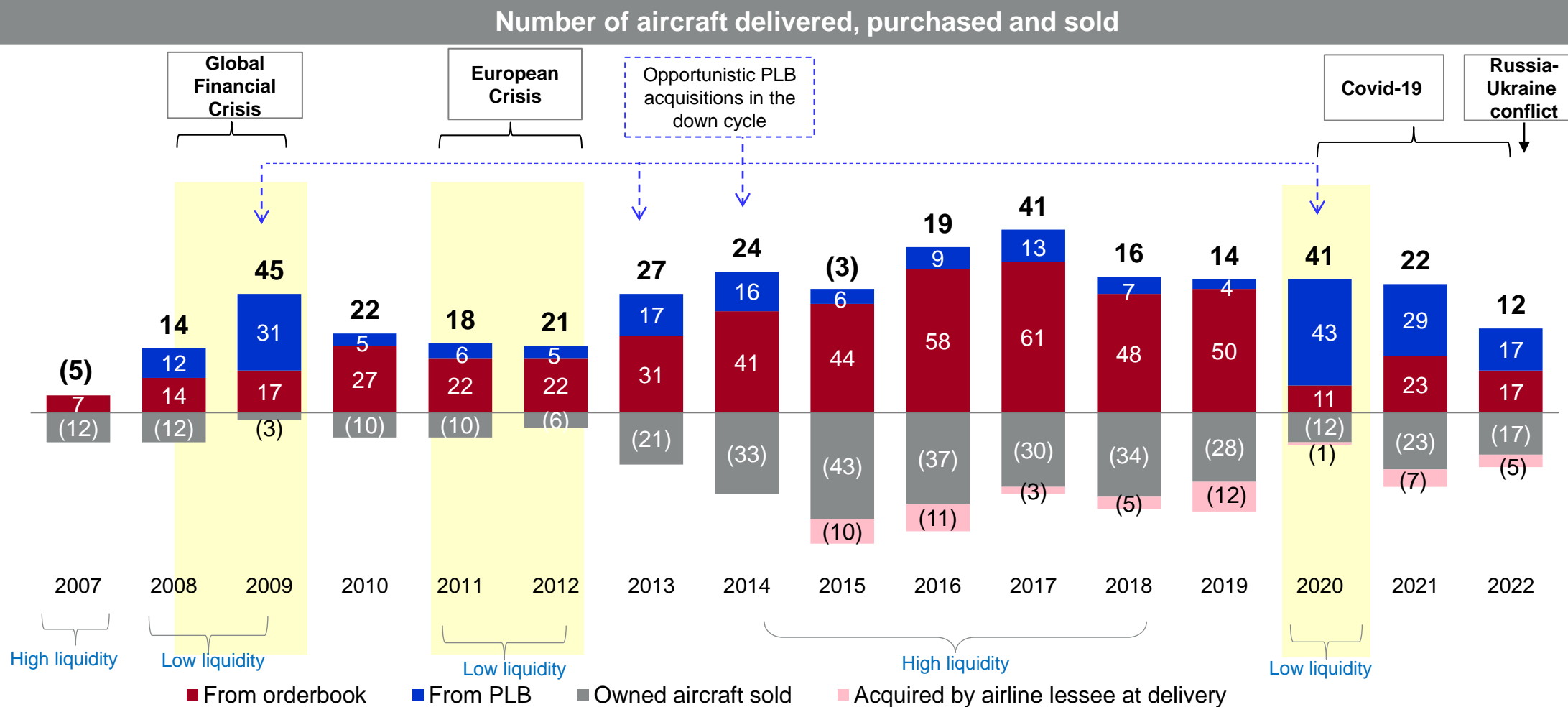


## EXPERIENCED MANAGEMENT AND OWNERSHIP

- Experienced management team successfully managed through multiple cycles
- Bank of China provides ongoing support
- Announced the appointment of Mr. Liu Jin as Chairman of the Board of BOC Aviation
- Mr. Liu is the Vice Chairman of the Board of BOC and President of BOC

Long-term sustainable growth

# How We Invest



**Committed to acquire more than 1,000 aircraft since inception**

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	97	15	0	112
Airbus A320NEO family	92	0	114	206
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	13	0	85
Boeing 737-8/9	52	0	85	137
Boeing 777-300ER	27	4	0	31
Boeing 787 family	25	1	8	34
Freighters	5	1	0	6
<b>Total</b>	<b>393</b>	<b>35</b>	<b>207</b>	<b>635</b>

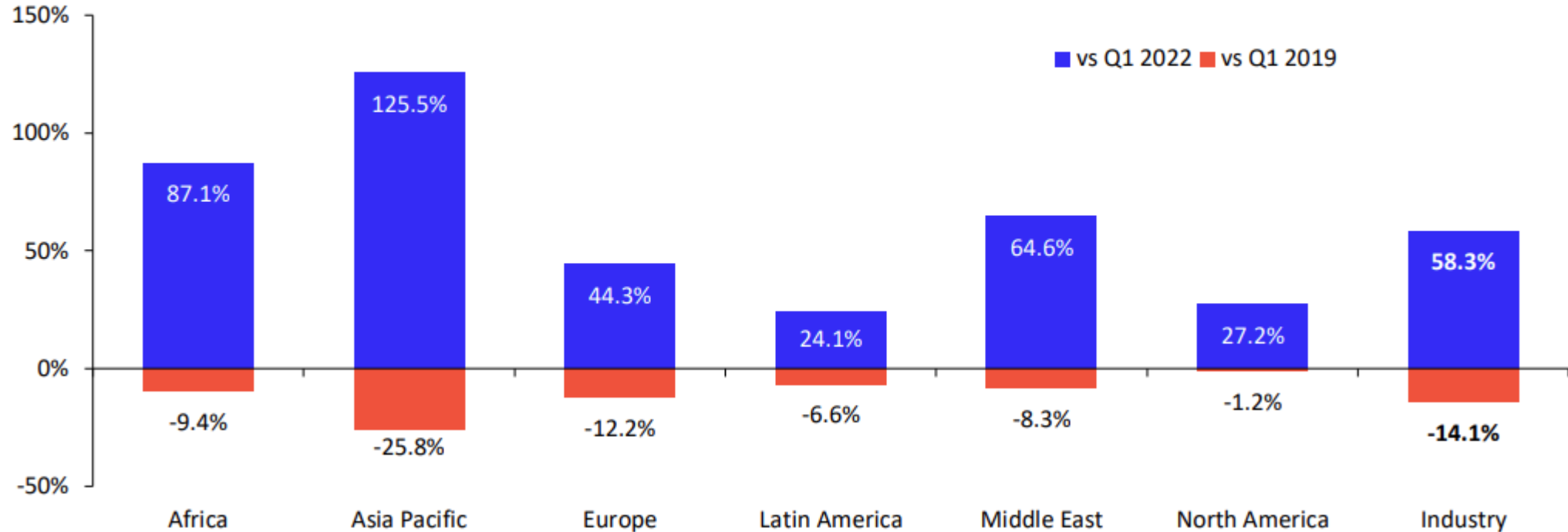
71% of existing fleet is latest technology aircraft<sup>2</sup>

All data as at 31 March 2023  
See Appendices - Endnotes



# Strong Growth in Passenger Demand in 1Q 2023

Growth in revenue passenger-kilometers (RPKs) by airline region  
% change in Q1 2023

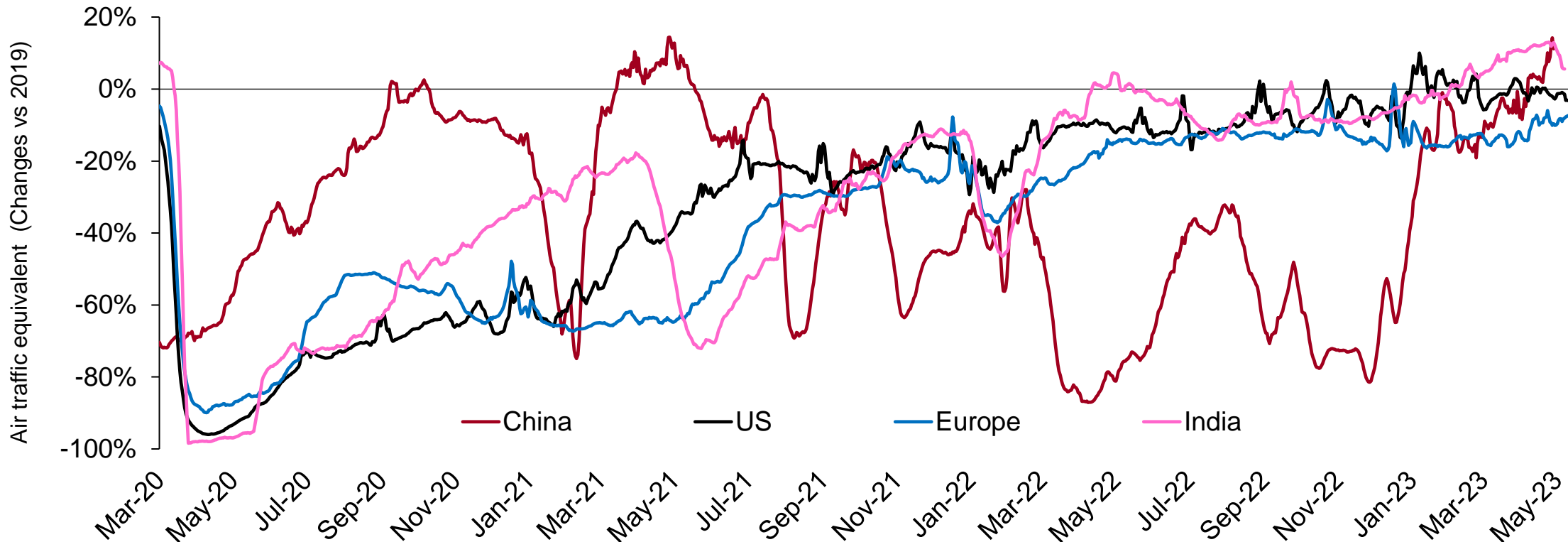


Passenger traffic now within 15% of pre-pandemic levels, re-opening of China's air travel markets to drive further improvement

See Appendices - Endnotes

# All Major Passenger Markets See Strong Travel Rebound

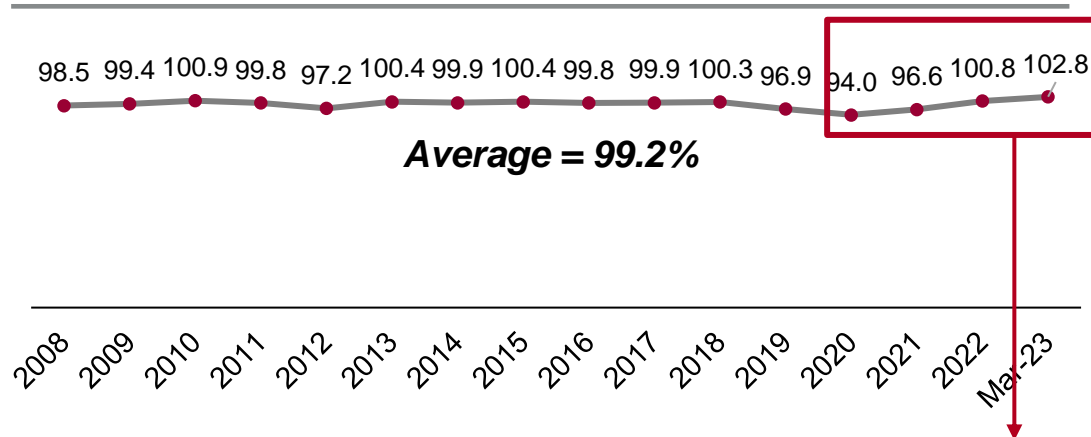
Market continues to recover



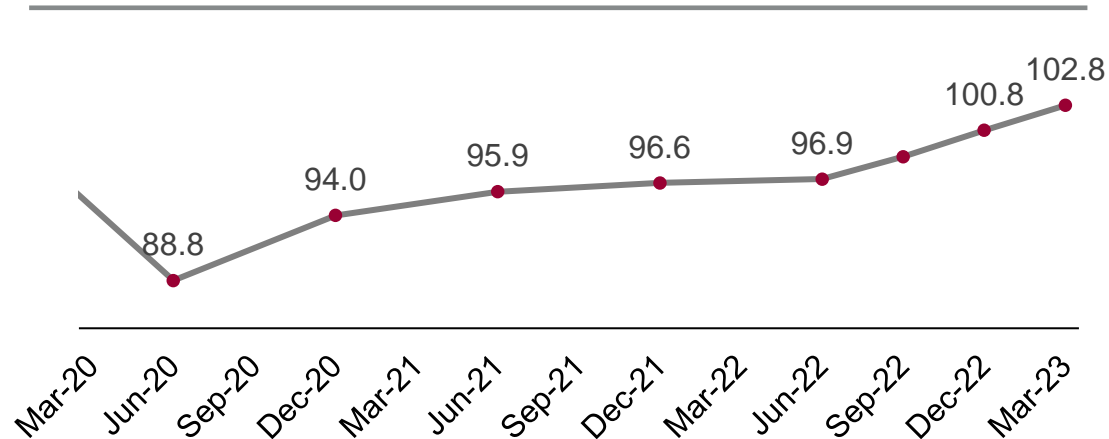
See Appendices - Endnotes

# Rental Collection Consistently Above 100%

Annual collection rate (%)



Collection rate since pandemic (%)

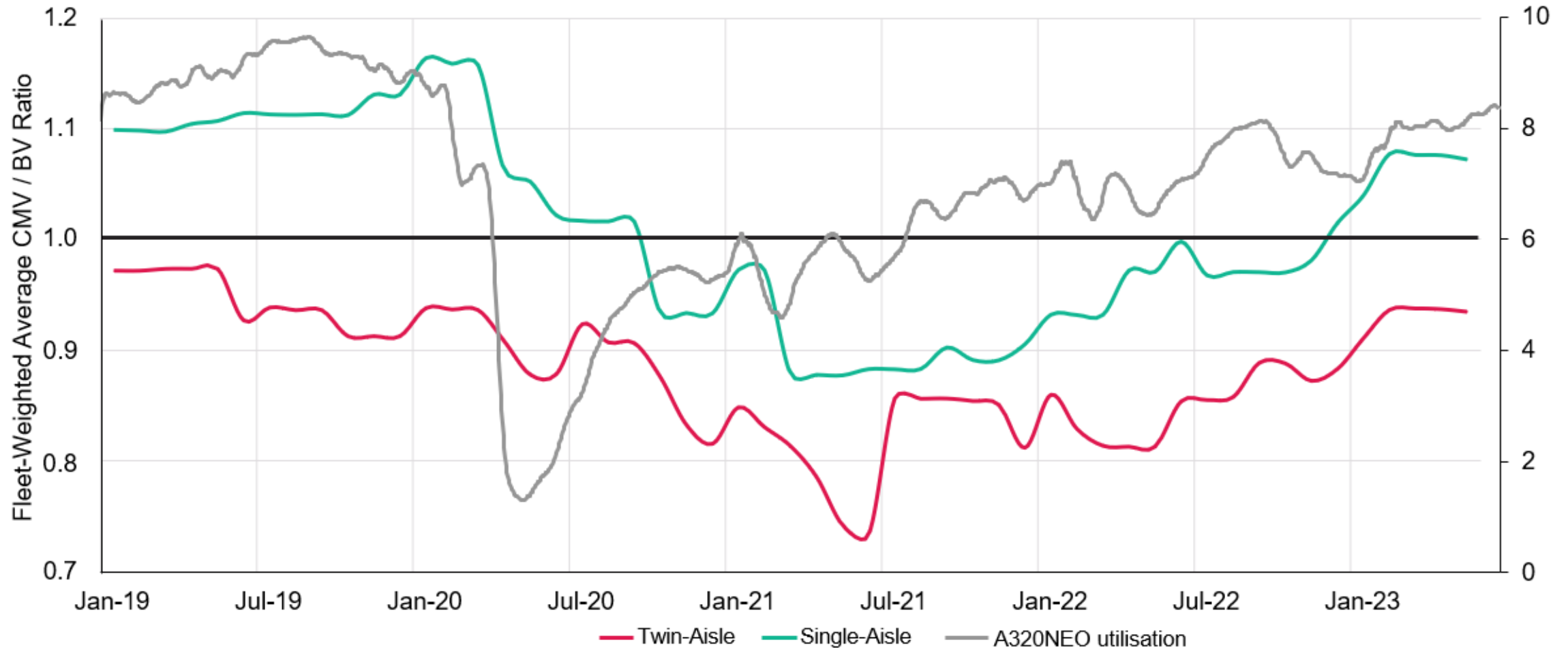


- Long term cash collection from airline customers remains high, at an average rate of 99.2% since 2008
- Collections were severely affected by the Covid-19 outbreak in early 2020, but have been recovering quickly to pre-pandemic level
- Collection rate as at 31 March 2023 was high at 103%

Maintaining high collection rate as deferred and overdue amounts are repaid



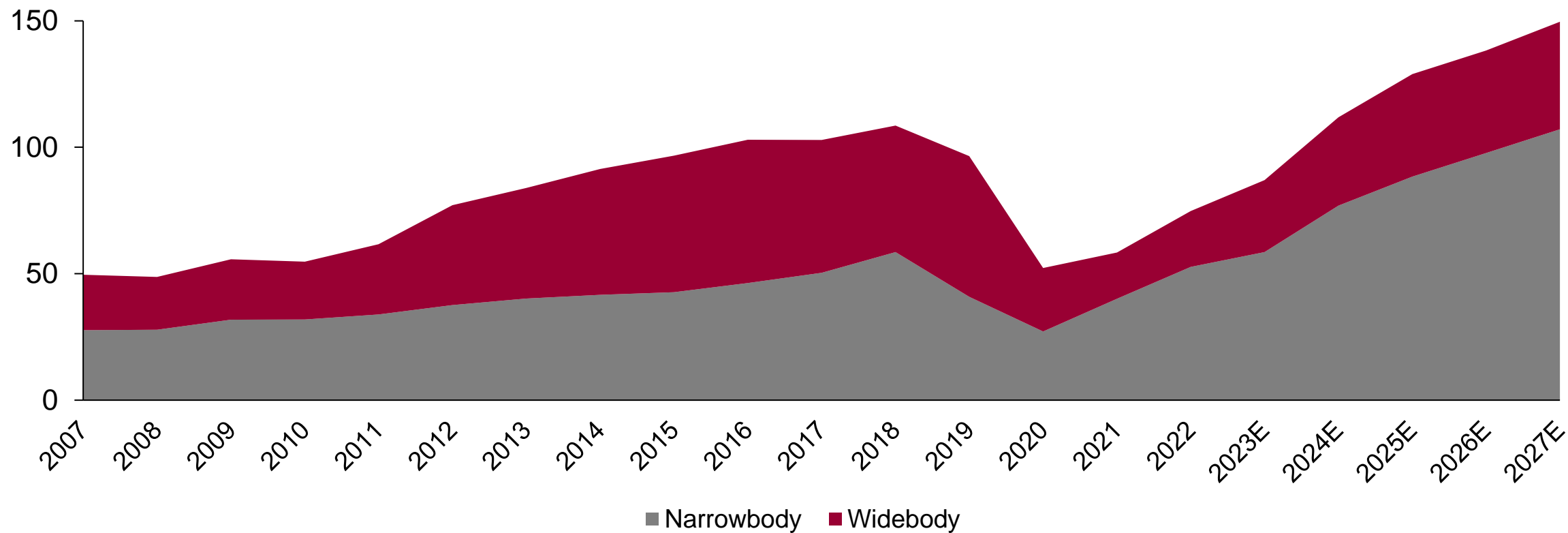
# Rising Aircraft Values as Utilisation Accelerates



Aircraft valuation and lease rates track rising daily aircraft utilisation

# Value of Deliveries to Exceed US\$125 Billion in 2025

US\$ billion

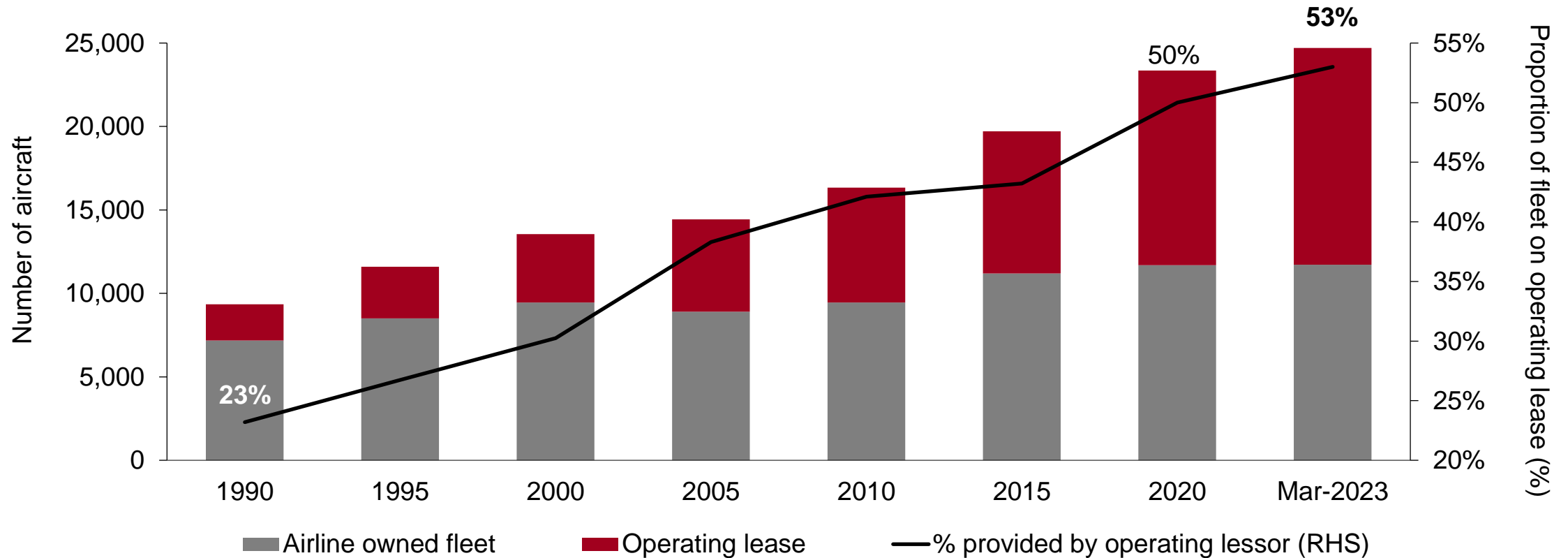


Value of deliveries expected to rise in the next four years

All data as at 31 December 2022  
See Appendices - Endnotes

# Operating Lessors' Share of the Market

Proportion of fleet on operating lease



**Lessors own 53% of the aircraft market today**

All data as at 31 March 2023  
See Appendices - Endnotes

## BOC Aviation Bonds Issued on the Tightest Spreads in 2023

Issuer	Issue Date	Tenor (years)	Amt Issued (US\$ million)	Coupon (%)	Yield (%)	T-Spread at Issue (bps)
BOC Aviation Limited	23/5/2023	5	500	4.500	4.627	120
BOC Aviation USA Corp	3/5/2023	10	500	4.875	5.015	160
Air Lease Corp	13/1/2023	5	700	5.300	5.560	190
SMBC Aviation Capital Finance DAC	3/5/2023	5	650	5.450	5.489	200
Air Lease Corp Sukuk Ltd	15/3/2023	5	600	5.850	-	185
Aviation Capital Group LLC	3/4/2023	5	600	6.250	6.438	275
Avolon Holdings Funding Ltd	4/5/2023	5	750	6.375	6.624	300
Macquarie Airfinance Holdings Ltd	18/4/2023	5	500	8.375	8.375	479

BOC Aviation's recent 10-year offering prices inside other lessors' 5-years

# Looking Ahead

- Strong start to 2023
  - Improving utilisation rate and collection rate
  - All aircraft scheduled for delivery in 2023 are placed
  - Maintained strong credit ratings of A- from Fitch Ratings and S&P Global Ratings
  - Robust support from debt capital markets for US\$1 billion in bond offerings
- 2023 outlook
  - Robust recovery in the airline industry bodes well for demand for leased aircraft
  - Major passenger markets recording strong travel rebound
  - Relaxation of travel restrictions in China to further boost air travel demand
- Investing for the future to build sustainable long-term earnings
  - Committed to acquire seven Airbus A320NEO family aircraft and nine Boeing 737-8 aircraft in 2023 to date
  - High liquidity of more than US\$5 billion to fund debt obligations and anticipated capex

**29 years of unbroken profitability with cumulative profits of US\$5.5 billion**

All data as at 31 December 2022 unless otherwise stated

# APPENDICES

# The BOC Aviation Journey – 30 Years in 2023

## Ownership

- 1993 ● SALE established with 50:50 joint ownership between Singapore Airlines and Boullioun Aviation Services
- 1997 ● Temasek and GIC each became 14.5% shareholders
- 2006 ● Bank of China acquired 100% of SALE on 15 Dec 2006
- 2016 ● Listed on HKEx on 1 June  
- 70% by Bank of China  
- 30% by public float
- 2023 ● 7<sup>th</sup> year as a listed company on 1 June

## Total assets

US\$ billion

- 1997 ● >0.3
- 2000 ● >1
- 2006 ● >3
- 2009 ● >5
- 2013 ● >10
- 2017 ● >15
- 2020 ● >20
- 2022 ● 22.1

2023 is our 30th year anniversary

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\$5.5 billion

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

## >US\$5.0 billion

Available liquidity<sup>2</sup>

## 207

Aircraft on order<sup>3</sup>

## Bank of China

70% owned by BOC

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

## US\$22.1 billion

Total assets<sup>2</sup>

## 635

Aircraft in fleet<sup>4</sup>

## 4.6 years; 8.0 years

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

Industry leader focused on long-term sustainable earnings

All data as at 31 March 2023 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

- 27 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 May 2023



# Core Competencies - BOC Aviation Track Record

## Since inception in 1993:

- Purchasing More than 1,000 aircraft purchased totalling more than US\$58 billion
- Leasing More than 1,200 leases executed with >180 airlines in > 60 countries and regions
- Financing<sup>1,2</sup> More than US\$38 billion in debt raised

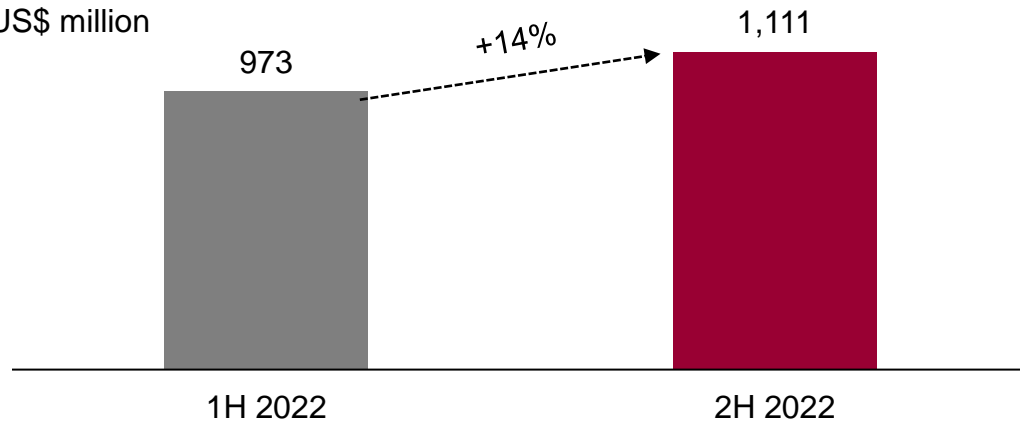
- Sales More than 400 aircraft sold
- Transitions 129 transitions
- Repossessions<sup>3</sup> 65 aircraft in 19 jurisdictions

All data as at 31 March 2023, since inception unless otherwise indicated  
See Appendices - Endnotes

# An Improvement in 2H 2022 over 1H 2022

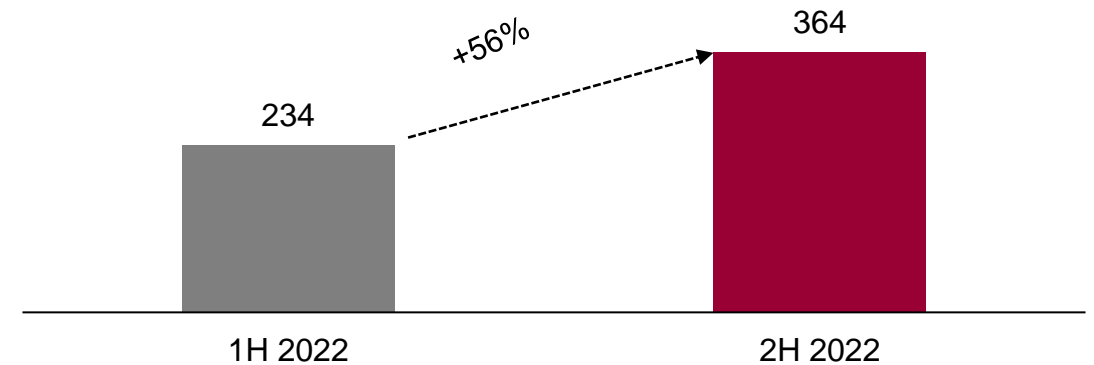
## Core revenues<sup>1</sup>

US\$ million



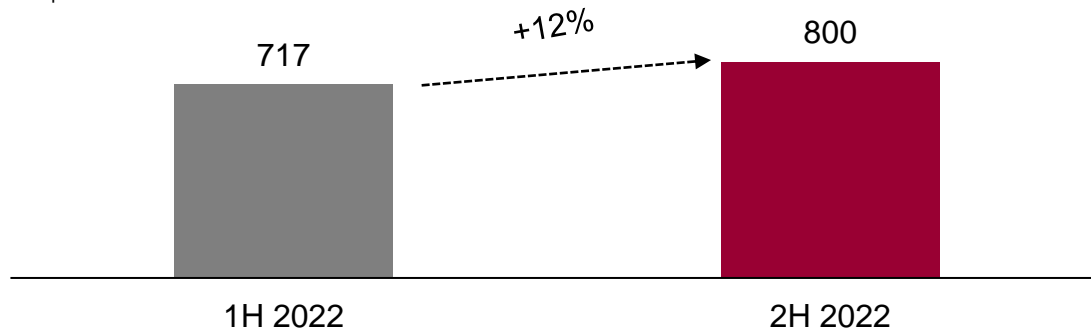
## Core profit before tax<sup>1</sup>

US\$ million



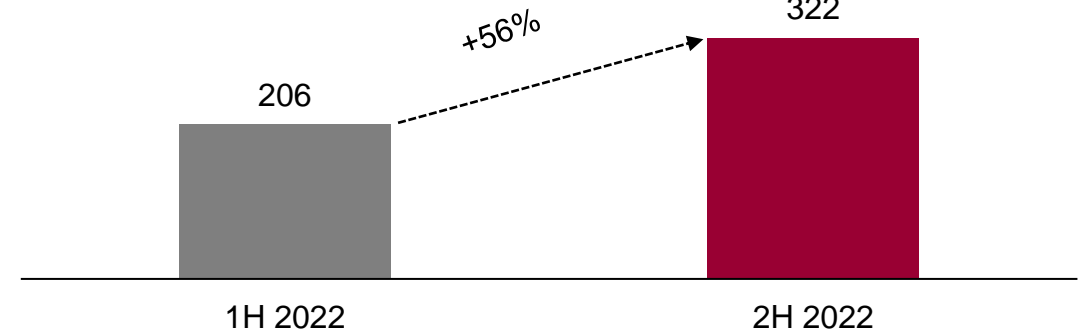
## Operating cash flow net of interest<sup>2</sup>

US\$ million



## Core net profit after tax<sup>1</sup>

US\$ million



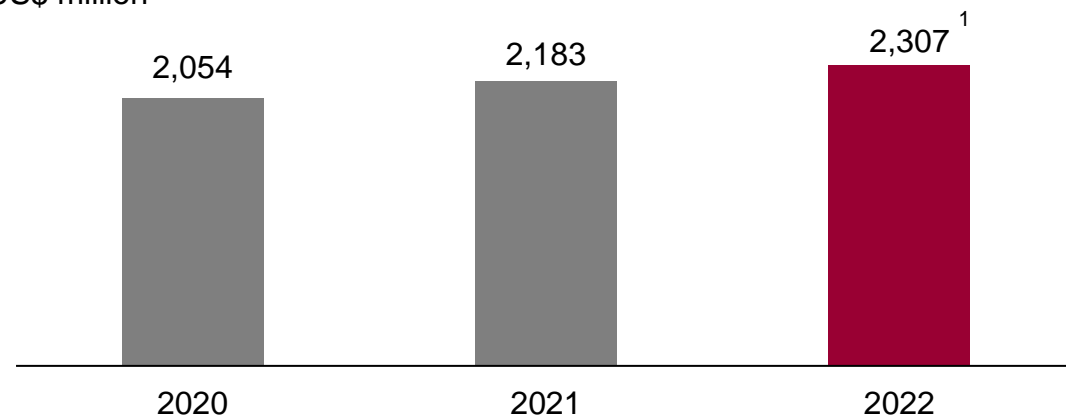
**A strong 2H 2022 performance reflects the robustness of the business model**

Due to rounding, numbers presented may not add up precisely to the total core net profit after tax provided elsewhere in the presentation  
See Appendices - Endnotes

# Continued Resilient Performance

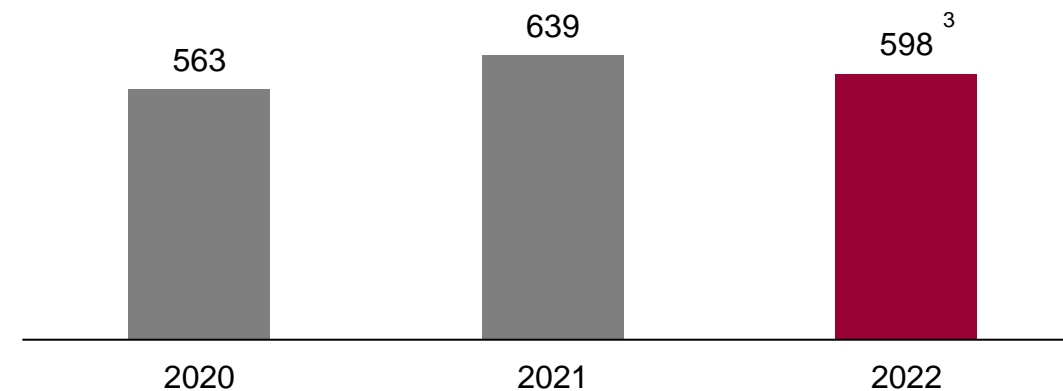
## Fleet growth underpins growth in revenues

US\$ million



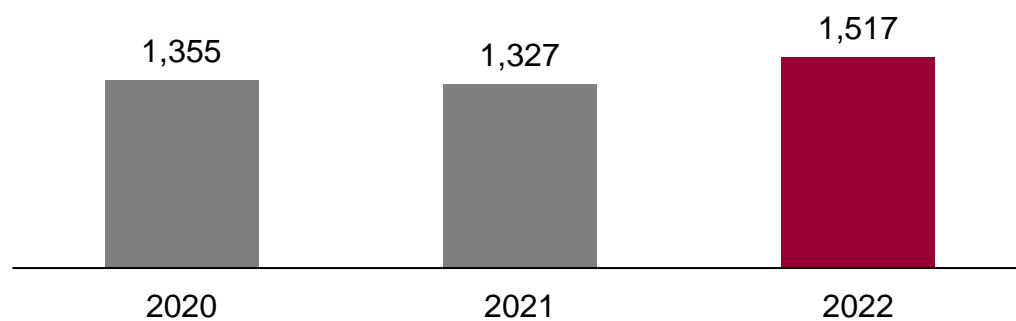
## Strong core PBT

US\$ million



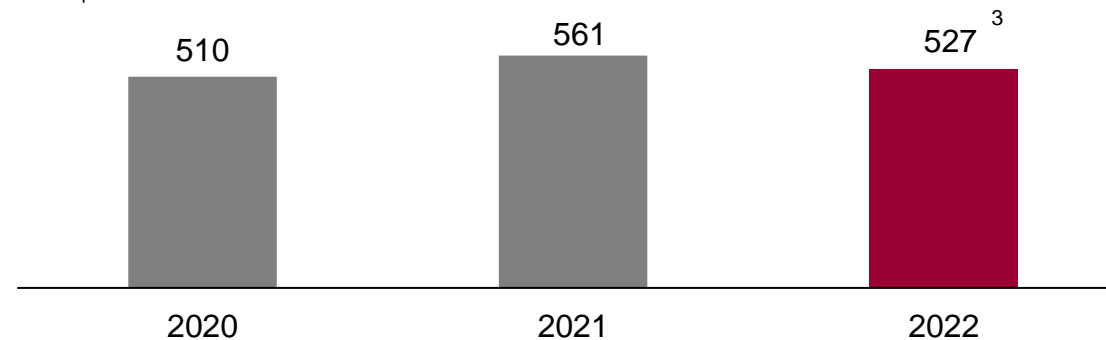
## Rising operating cash flow net of interest<sup>2</sup>

US\$ million



## Resilient core NPAT

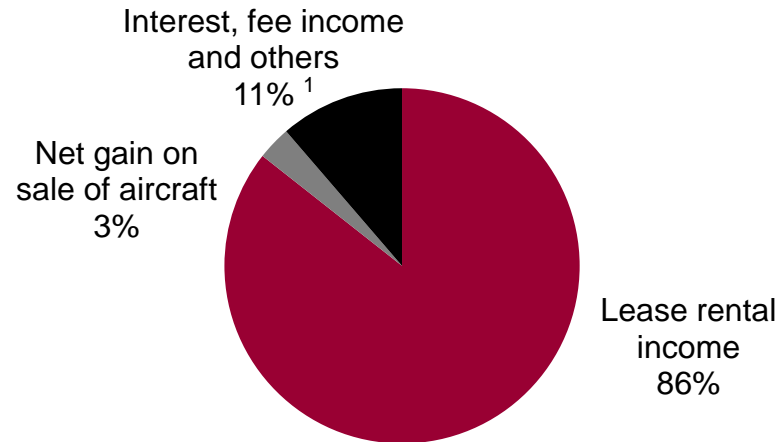
US\$ million



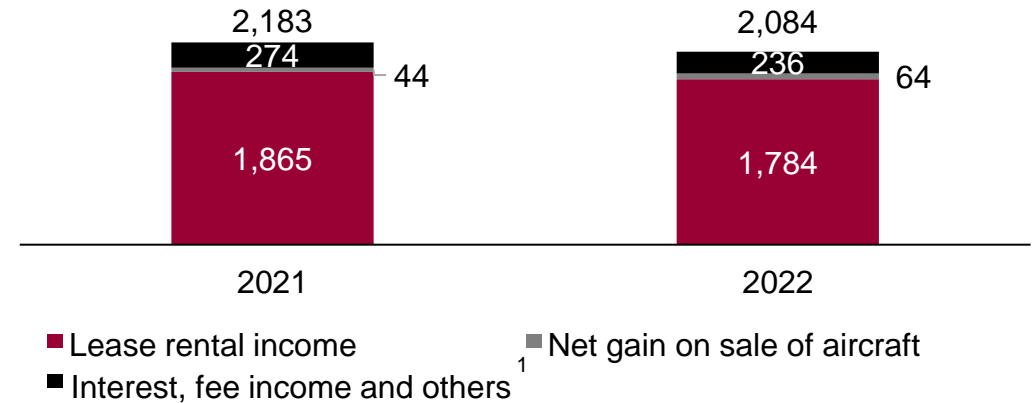
All data as at 31 December 2022  
See Appendices - Endnotes

# Lease Rental Income Continues to Dominate Revenue

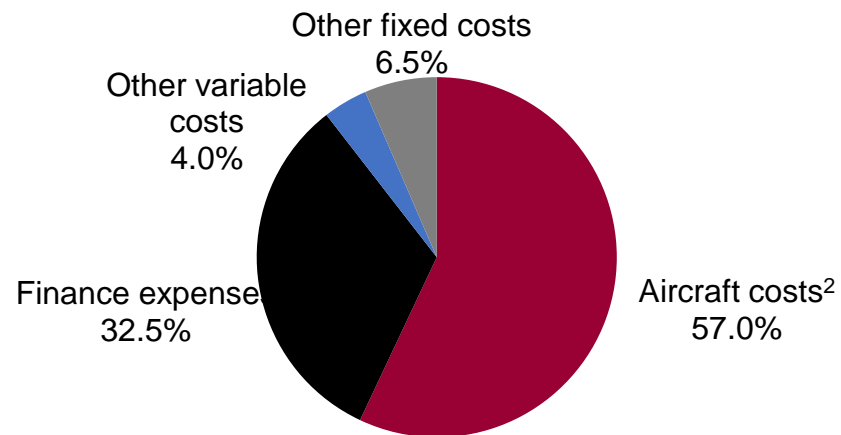
## Lease rental income dominates total revenues and other income



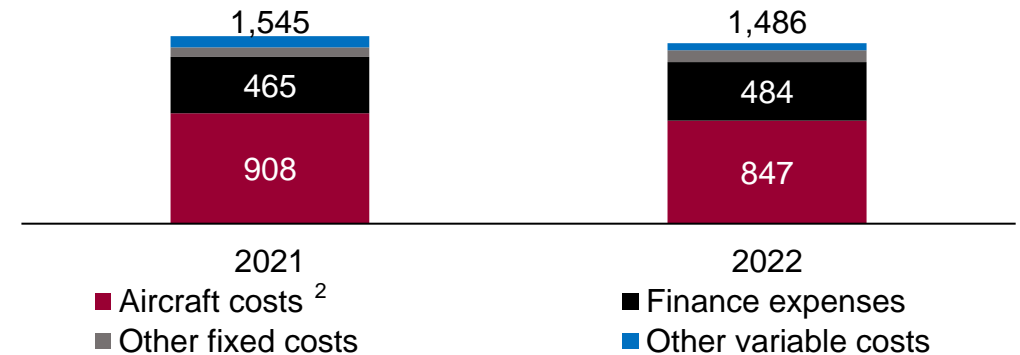
US\$ million



## Depreciation of aircraft and financing costs are key costs



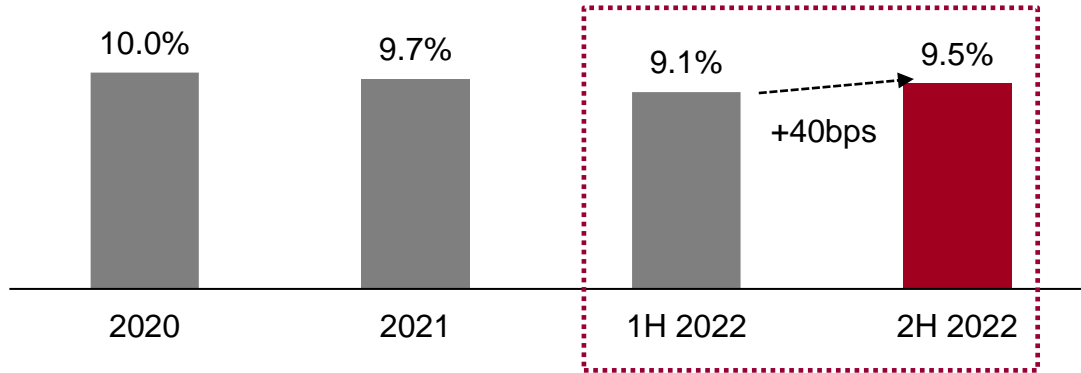
US\$ million



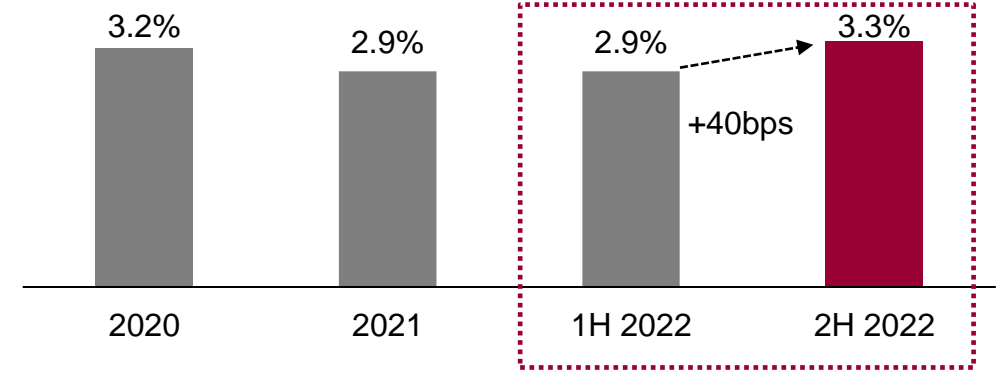
All data as at 31 December 2022  
See Appendices - Endnotes

# Lease Yields Improved in 2H 2022

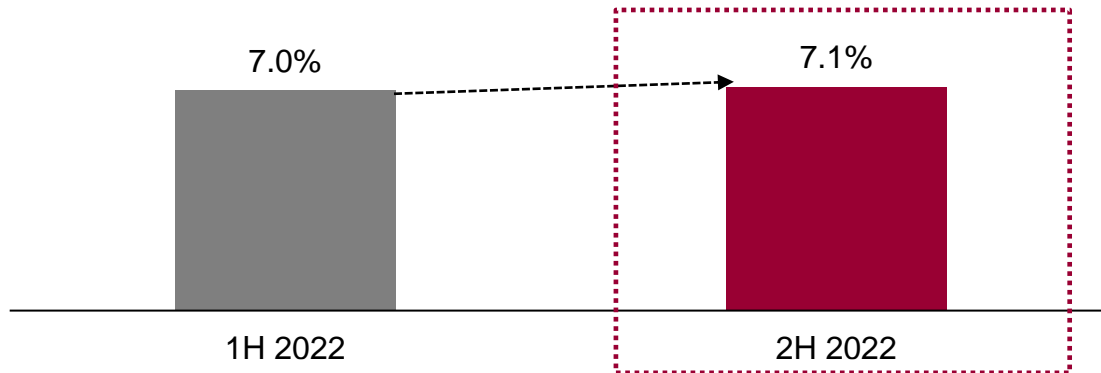
Lease rate factor<sup>1</sup>



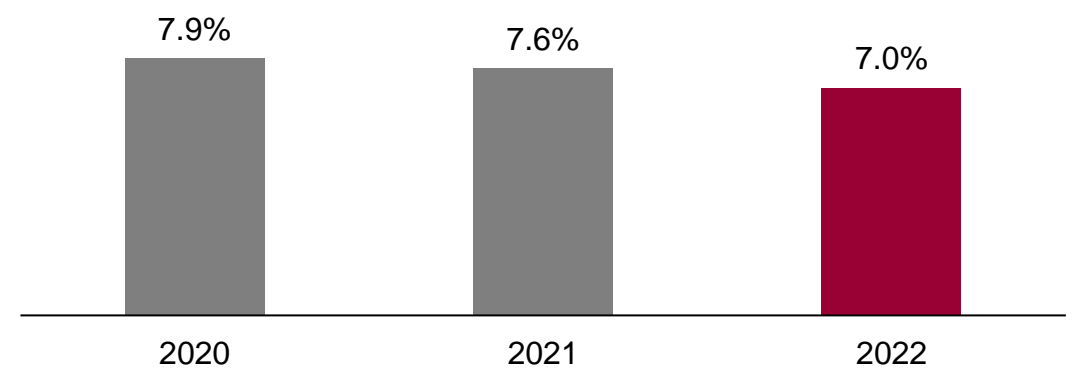
Cost of debt<sup>2</sup>



Net lease yield<sup>3</sup> 1H 2022 vs 2H 2022



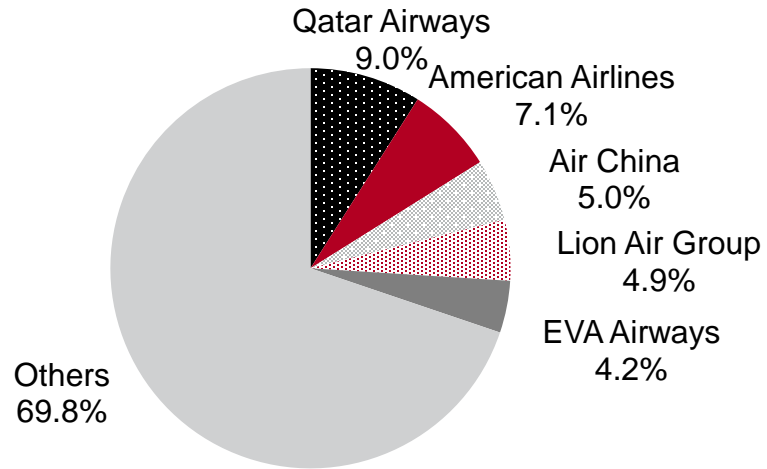
Net lease yield<sup>3</sup>



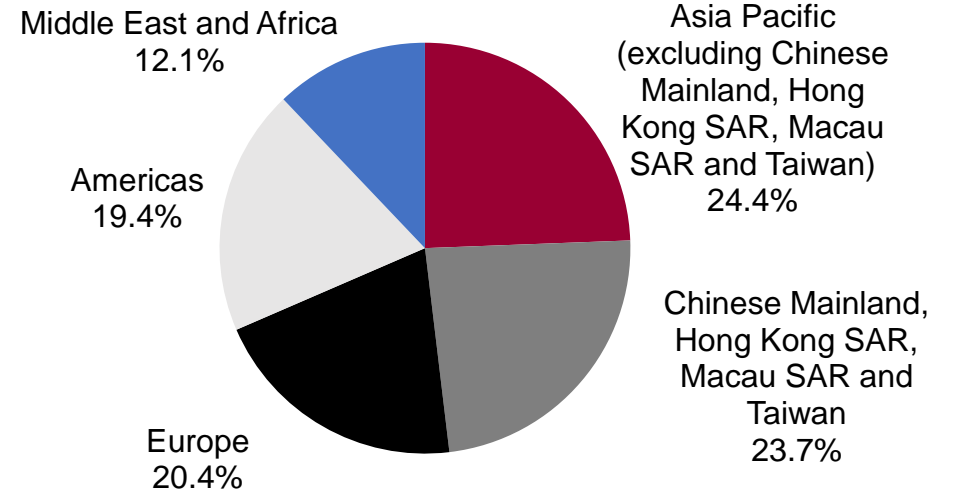
All data as at 31 December 2022  
See Appendices - Endnotes

# Globally Diversified Portfolio

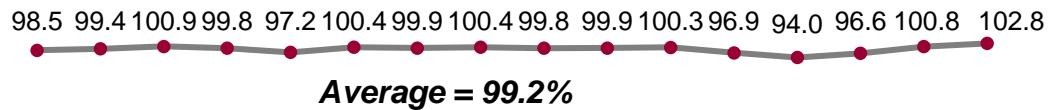
## Lease portfolio diversified by customer<sup>1,2</sup>



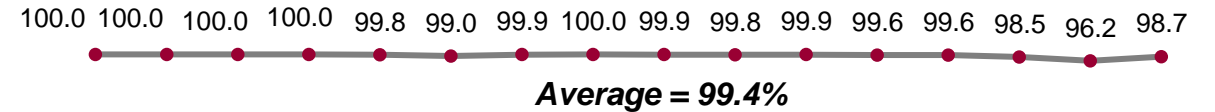
## ...and increasingly diversified by geography<sup>3,4</sup>



## Collection rate (%)



## Fleet utilisation (%)<sup>5</sup>



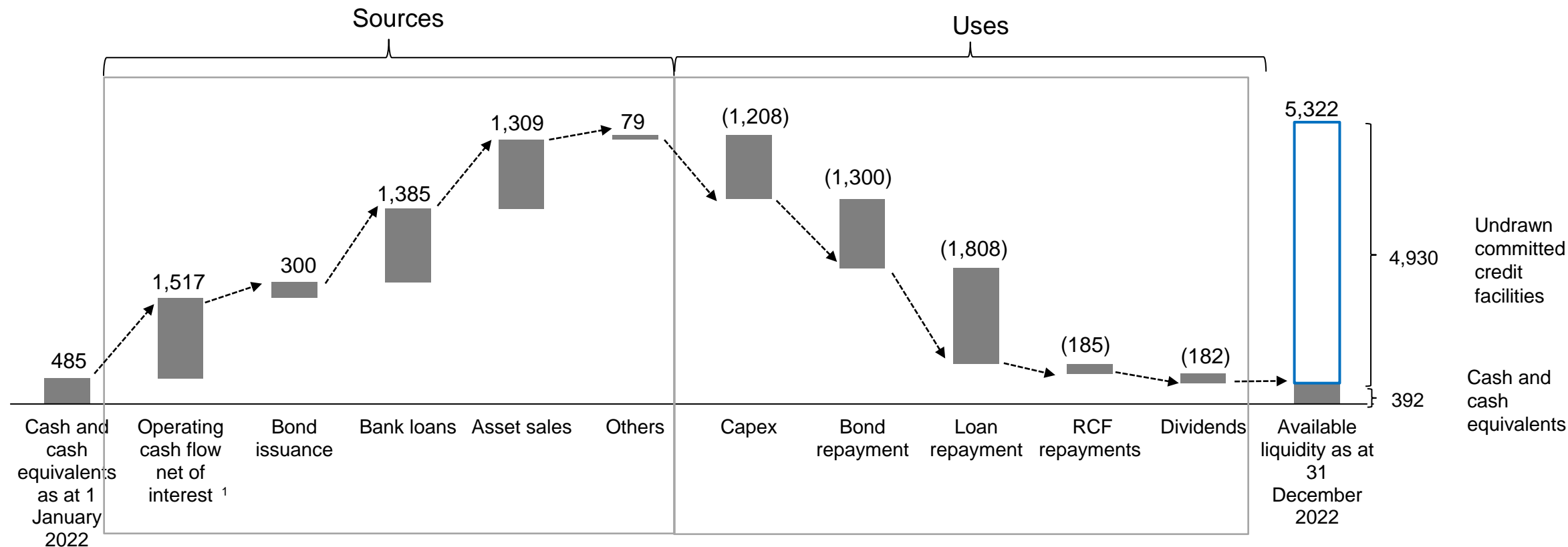
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 Mar-23

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 Mar-23

All data as at 31 December 2022 unless otherwise indicated  
See Appendices - Endnotes

# Diverse Funding Channels Utilised in 2022

US\$ million



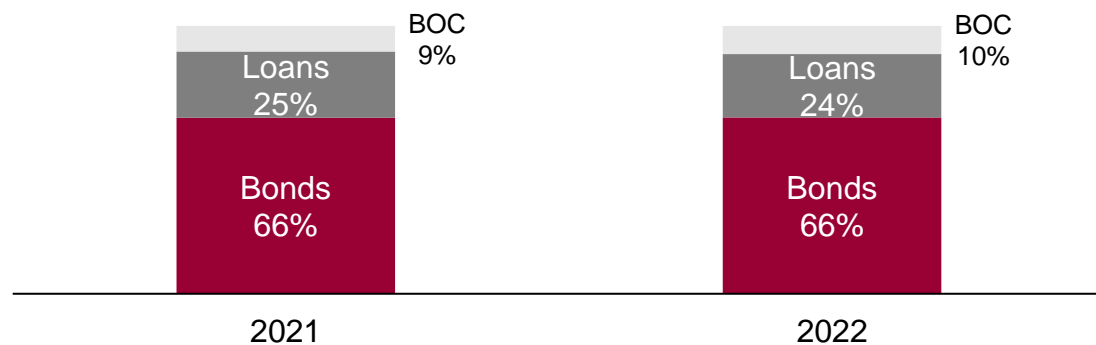
**Internal cash generation reduced reliance on debt financing**

All data as at 31 December 2022  
See Appendices - Endnotes

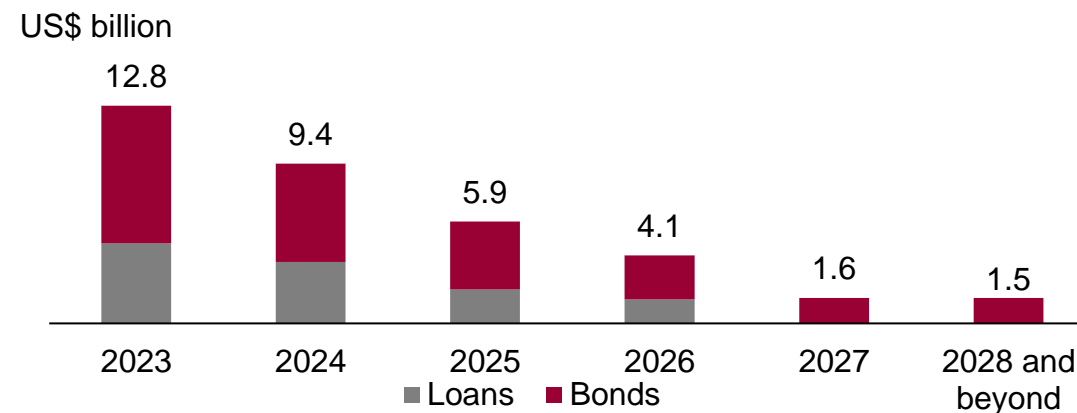


# Flexible Capital Structure

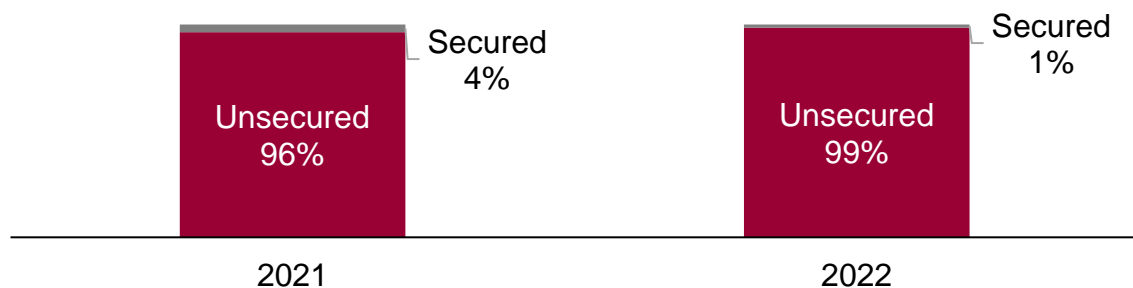
## Sources of debt<sup>1</sup>



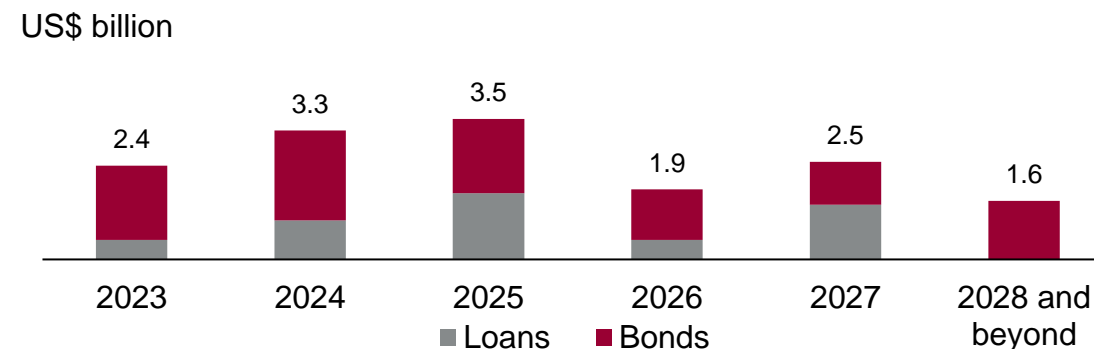
## Outstanding debt amortises over a long term



## Increasing unsecured funding



## Debt maturity profile



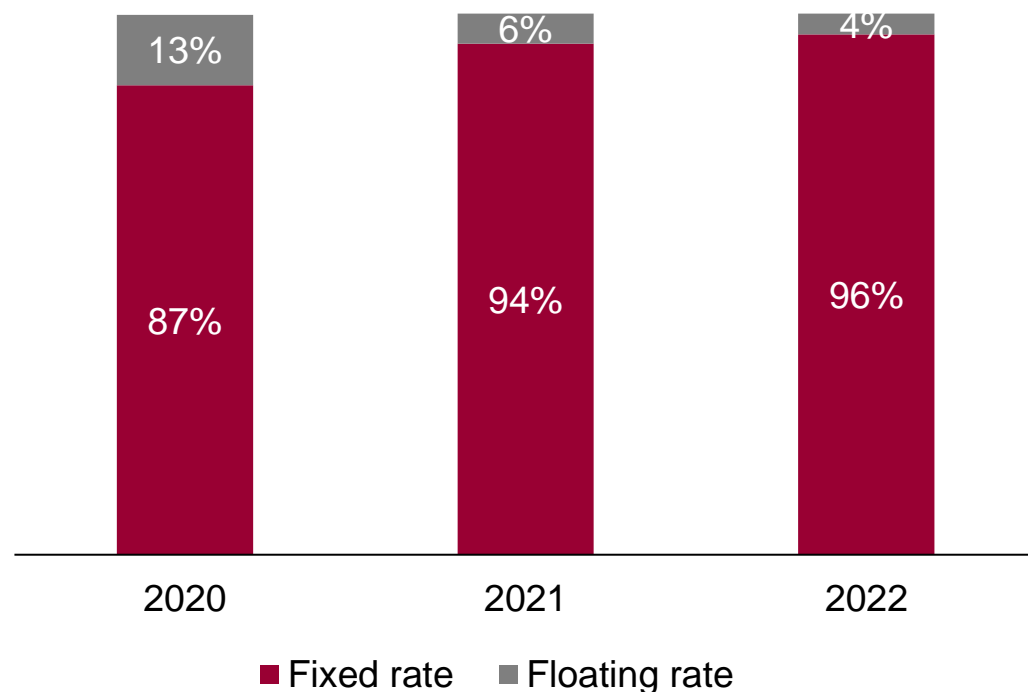
**Borrowings predominantly unsecured**

All data as at 31 December 2022 unless otherwise indicated  
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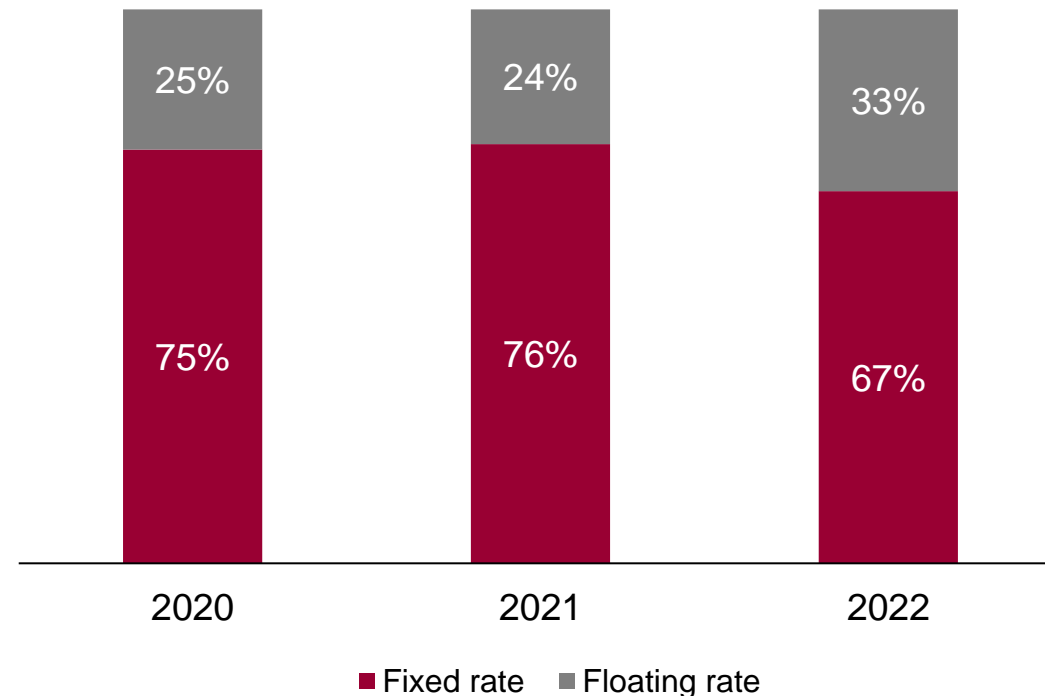
# Fixed Rate Leases and Debt

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

By net book value



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



Continued asset and liability management to minimise impact of interest rate changes

All data as at 31 December 2022  
See Appendices - Endnotes

# ESG is a Key Focus

## Environmental

- **100%** carbon neutral for direct emissions
- **100%** latest technology aircraft in the orderbook
- **More than 70%** of our owned fleet is latest technology aircraft
- **4.4** years average fleet age

## Social

- **Supports Airlink** and other global and local NGOs
- **1,300** volunteer hours in local communities
- **More than 4,200** training hours across the company
- **50%** female representation in the workforce
- **20** nationalities across five offices

## Governance

- **Three** female Board of Directors out of 11
- **Three** nationalities on the Board
- **30%** females in the management team
- **Nil** regulatory breaches
- **100%** completion of compliance training

ESG Committee chaired by Chief Operating Officer

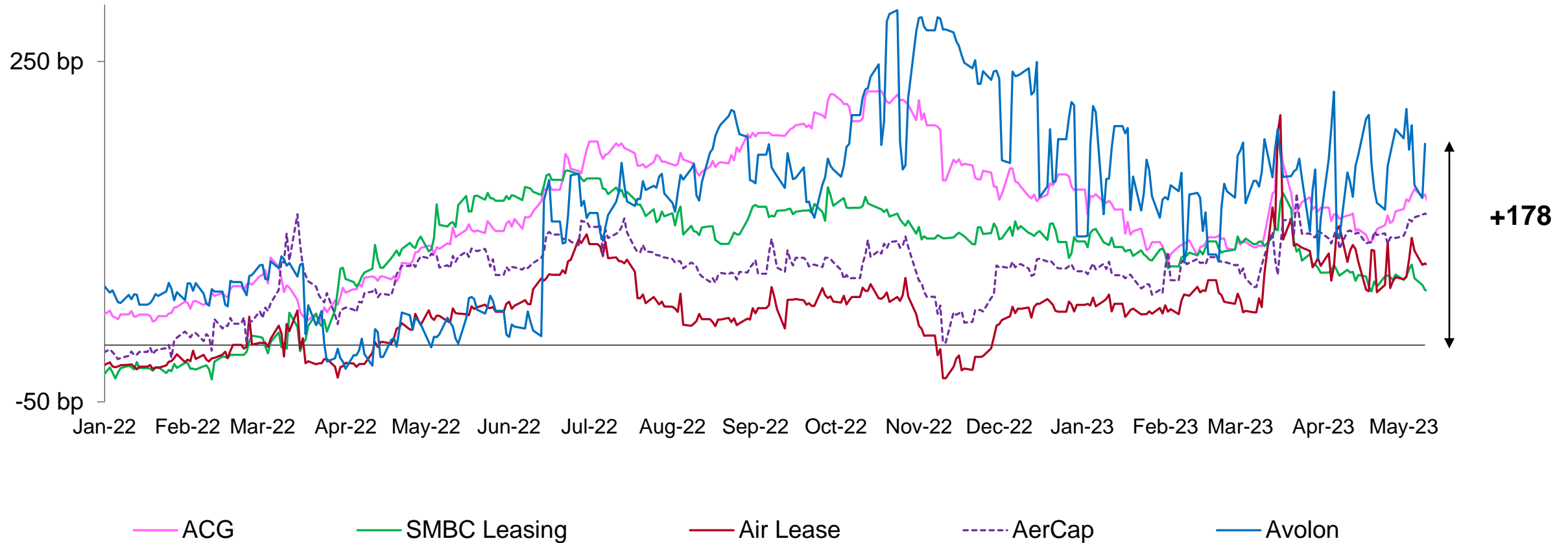
# Aviation in a Low Carbon Environment

	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

# Historical G-Spread Differential vs. BOC Aviation

Historical G-Spread Differential vs. BOC Aviation



Spreads reflect relative credit strength

See Appendices - Endnotes



# Endnotes (1)

- **SLIDE 3: Developments in 2023 YTD**
  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 31 March 2023
  3. As at 31 December 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
  2. As at 31 December 2022
- **SLIDE 6: Strong Growth in Passenger Demand in 1Q 2023** - Source: IATA Chart of the Week (12 May 2023)
- **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)
- **SLIDE 9: Rising Aircraft Values as Utilisation Accelerates** – Sources: Ascend, BOC Aviation Analysis
- **SLIDE 10: Value of Deliveries to Exceed US\$125 Billion in 2025** – Source: BOC Aviation Analysis
- **SLIDE 11: Lessors Own 53% of the Aircraft Market Today** – Sources: Ascend, as at 31 March 2023, 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 12: Recent IG Lessor Bond Deals** – Source: Bloomberg
- **SLIDE 16: BOC Aviation – Who Are We?**
  1. By net book value of owned aircraft
  2. As at 31 December 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 31 March 2023
  5. Weighted by net book value of owned fleet as at 31 March 2023

## Endnotes (2)

- **SLIDE 18: Core Competencies - BOC Aviation Track Record**

1. Since 1 January 2007
2. As at 31 December 2022
3. Includes repossessions and consensual early returns

- **SLIDE 19: An Improvement in 2H 2022 over 1H 2022**

1. Excluding the net impact of aircraft in Russia
2. Calculated as net cash flow from operating activities less finance expenses paid

- **SLIDE 20: Continued Resilient Performance**

1. Includes income arising from termination of leases with airlines in Russia
2. Calculated as net cash flow from operating activities less finance expenses paid
3. Excluding the net impact of the write-down of aircraft in Russia

- **SLIDE 21: Lease Rental Income Continues to Dominate Revenue**

1. Excludes income arising from termination of leases with airlines in Russia in 2022
2. Comprises aircraft depreciation and impairment charges (excludes the impairment of aircraft in Russia in 2022)

- **SLIDE 22: Lease Yields Improved in 2H 2022**

1. Calculated as operating lease rental income divided by average net book value of aircraft and multiplied by 100%. Semi-annual lease rate factors are calculated on an annualised basis
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. Semi-annual cost of debt is calculated on an annualised basis
3. Calculated as operating lease rental income less finance expenses apportioned to operating lease rental income, divided by average of aircraft net book value. Semi-annual net lease yields are calculated on an annualised basis

# Endnotes (3)

- **SLIDE 23: Globally Diversified Lease Portfolio**
  1. Based on net book value (excluding off lease aircraft) and including aircraft subject to finance leases
  2. For certain airlines, the percentage includes leases to affiliated airlines whose obligations are guaranteed by the named airline
  3. Based on net book value of aircraft excluding aircraft subject to finance leases and including off lease aircraft
  4. Off lease aircraft are allocated to the region of the prospective operator if a lease commitment is in place or to the region of the prior operator if no lease commitment is in place
  5. Fleet utilisation is the total days on-lease in the period as a percentage of total available lease days in the period
- **SLIDE 24: Diverse Funding Channels Utilised in 2022**
  1. Calculated as net cash flow from operating activities less finance expenses paid
- **SLIDE 25: Flexible Capital Structure**
  1. Drawn debt only
- **SLIDE 26: Fixed Rate Leases and Debt**
  1. By net book value of aircraft including aircraft on leases classified as finance leases in accordance with IFRS 16 (Leases ) 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
- **SLIDE 29: Historical G-Spread Differential vs. BOC Aviation** – Source: Bloomberg (9 May 2023)





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