

Asset management:
Aircraft remarketing, appraised versus trading values –
How to make 10%+ returns with proper risk mitigation

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Enhancing Decision Making

Full service

- ▶ Intelligence, Asset management, Advisory
- ▶ Only consultancy that appraises, manages and sells the metal

Independent

- ▶ No vested interest in a deal progressing
- ▶ No conflict in treatment of assets under management or for sale

Diversified talent pool

- ▶ Imaginative solution finding from a breadth of backgrounds

Global

- ▶ Supporting opportunities and challenges in developing markets

Exit

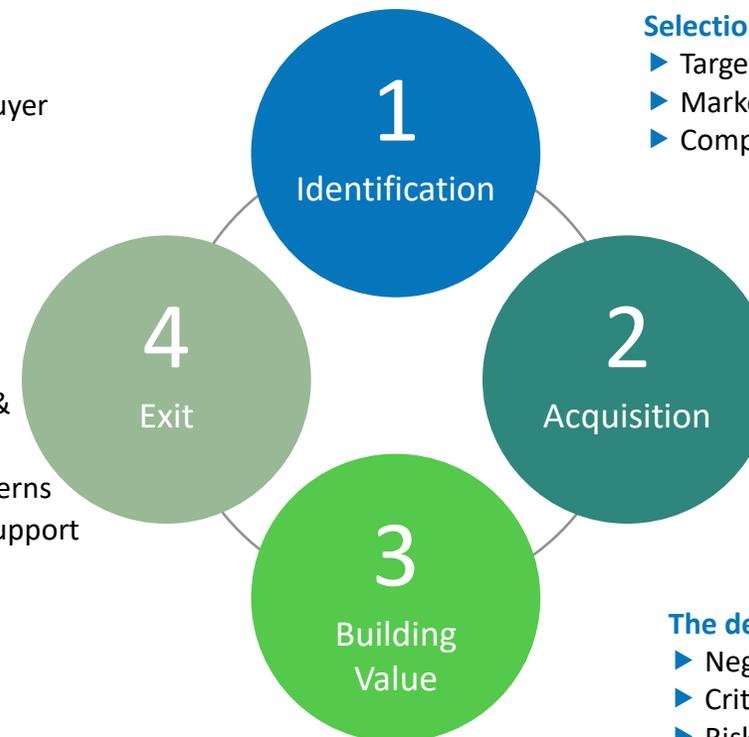
- ▶ IPO readiness
- ▶ DD on prospective buyer
- ▶ Sell side advisory
- ▶ Aircraft disposal

Addressing Issues

- ▶ Portfolio monitoring & analysis
- ▶ Early warning of concerns
- ▶ Litigation & dispute support
- ▶ Repossession

Running the Asset

- ▶ Technical support and advisory
- ▶ Regulation
- ▶ Redelivery planning
- ▶ Maintenance reserves and DOC analysis
- ▶ Regular report around fleets and values



Selection

- ▶ Target intelligence
- ▶ Market entry
- ▶ Competitive intelligence

Opportunity

- ▶ Competitor analysis
- ▶ Key stakeholder DD
- ▶ A sset DD & values
- ▶ Benchmarking

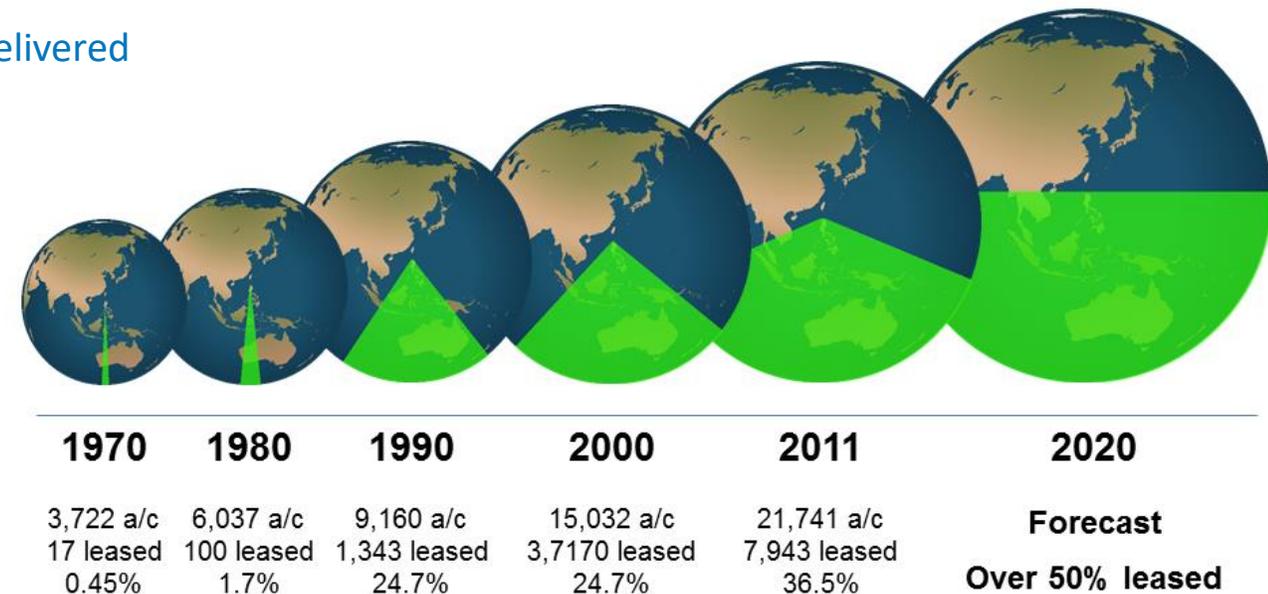
The deal

- ▶ Negotiation
- ▶ Critical factors
- ▶ Risk assessment

The Aviation Growth Story

- ▶ Air travel still doubling every 15 years
- ▶ IATA still bullish
- ▶ Developing market growth
- ▶ Doubling of commercial fleet over 20 years. 40,000 aircraft delivered between 2016 and 2035 – five a day
- ▶ Capital markets supporting financing demands
- ▶ Why lease:
 - ▶ Latest tech
 - ▶ Fuel efficiency
 - ▶ Lower capex
 - ▶ Flexibility
 - ▶ Access the backlog
 - ▶ Avoid residual risk

The Growth of Aircraft Leasing



Source: Boeing

The Aircraft Operating Lease Sector

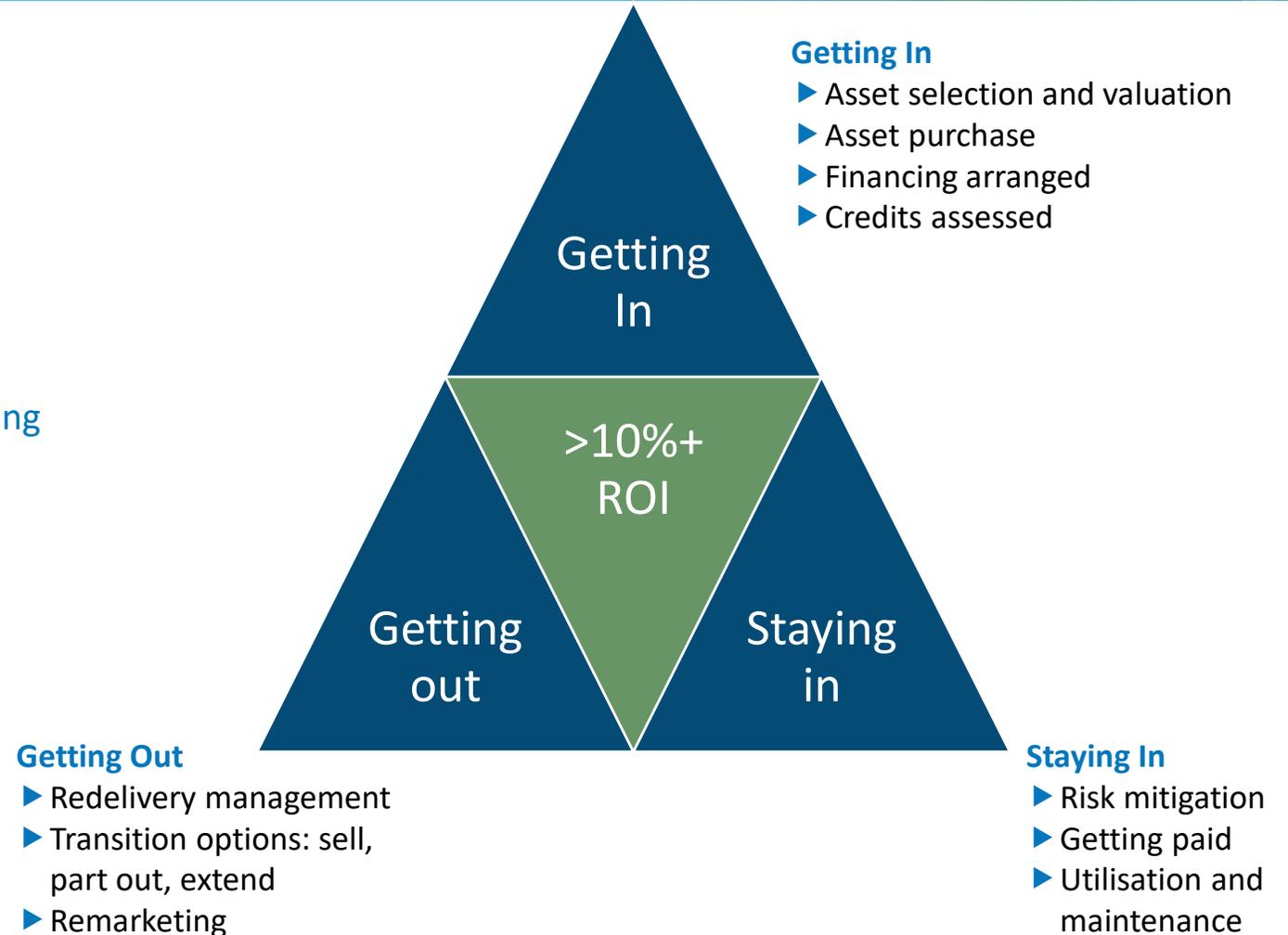
The Growth of the Sector.

- ▶ Why airlines like leases – flexibility
- ▶ Why investors like leases – typical returns
- ▶ The changing face of the top 50 lessors
- ▶ The new money
- ▶ The variations in leasing entities from the mega lessors who order speculatively, the mid-band and the new entrants
- ▶ The downside – what can go wrong?
- ▶ How to mitigate risk

The market is still hot

but returns are trickier to realise

- ▶ Maturity – many more players
- ▶ Competition – LRFs declining
- ▶ Over-Supply? - narrow bodies just keep on coming
- ▶ Volatility – some positive experiences



Mitigating Risk – Looking beyond the usual suspects

Pragmatic

- ▶ Before engaging in a multi-year contract worth millions of dollars, it is prudent to conduct robust commercial due diligence on the lessee.
- ▶ IBA's approach to better understanding and managing risk blends an unmatched understanding of the aviation-specific elements in play.
- ▶ Initially, we analyse the operator across the following five areas, with increased focus on any areas where red flags are raised

Credit	Asset	Technical	Jurisdiction	Transition
Track Record	Values	Maint costs	Stability	Repos
Deferrals	Residuals	Utilisation	Capetown	Reconfig
Route Changes	Mods	Transitions	Courts	Maint
Mgmt	Market Shift	TDD	Arrests	Liquidity

Robust Due Diligence

The combination of IBA's valuations and analysis expertise is also invaluable when conducting due diligence.

What we analyse

- ▶ History of the business
- ▶ Origins of capital
- ▶ Scale of commercial activity
- ▶ General industry reputation
- ▶ Reputation amongst stakeholders
- ▶ Strengths and weaknesses relative to competitors
- ▶ Association with concerns that have yet to reach the public domain

Who we typically speak to

- ▶ Former employees
- ▶ Industry analysts and brokers
- ▶ Investors
- ▶ Competitors
- ▶ Journalists

- ▶ Academic community
- ▶ MRO facilities
- ▶ Airports
- ▶ Caterers
- ▶ Fuellers
- ▶ Air crew

What we might find

- ▶ Material differences in valuations
- ▶ Inadequate maintenance
- ▶ Insufficient reserves
- ▶ Exposure to sub-optimal credits
- ▶ Inexperienced management team

Trading Volumes

Considering new operating leases, secondary sales and sale leasebacks, trading volumes for 2016 appears to be close to levels encountered for 2015 – although majority of most liquid aircraft are down so far

Once again, we expect the top 3 families that trade under those scenarios to remain the same. In terms of % of trades performed this year:

- ▶ A320 family = 22.9% \equiv 3.7% of the in service fleet
- ▶ 737NG = 14.2% (16.0% in 2015) \equiv 2.7% of the in service fleet
- ▶ 737 classics = 8.8% (8.5% in 2015) \equiv 7.5% of the in service fleet

A320 family trading is at same level as for 737classics & 737NG

The top 3 specific models are the same as in 2015:

- ▶ A320-200 = 12.5% of trades
- ▶ 737-800 = 10.9% of trades
- ▶ A321-200 = 6.3% of trades

Widebody trading is down from 2015 – but not far from long-term trend

- ▶ 767s = 4.1% of 2016 trades \equiv 10.2 % of the in service fleet
- ▶ A330s = 2.6% of 2016 trades \equiv 4.6% of the in service fleet
- ▶ 777s = 2.0% of 2016 trades \equiv 3.2% of the in service fleet
- ▶ 4 engined aircraft overall remain down on previous year

Secondary trading 2016F v 2015

	Volume	CMV
– A320-200	▼	▲
– 737-800	▼	▲
– A321-200	▲	▲
– 767-300ER	▲	◀
– A319-100	▲	▲
– 737-700	▼	▲
– A330-200	▼	▼
– A330-300	▼	▼
– 787-9	▲	▲
– 777-300ER	▲	▼
– 777-200ER	▲	▼
– A350-900	▲	▲
– 737-900ER	▼	▲
– 787-8	▼	▲
– A380-800	▼	▲ (new)
– A340-500/600	▼	▼

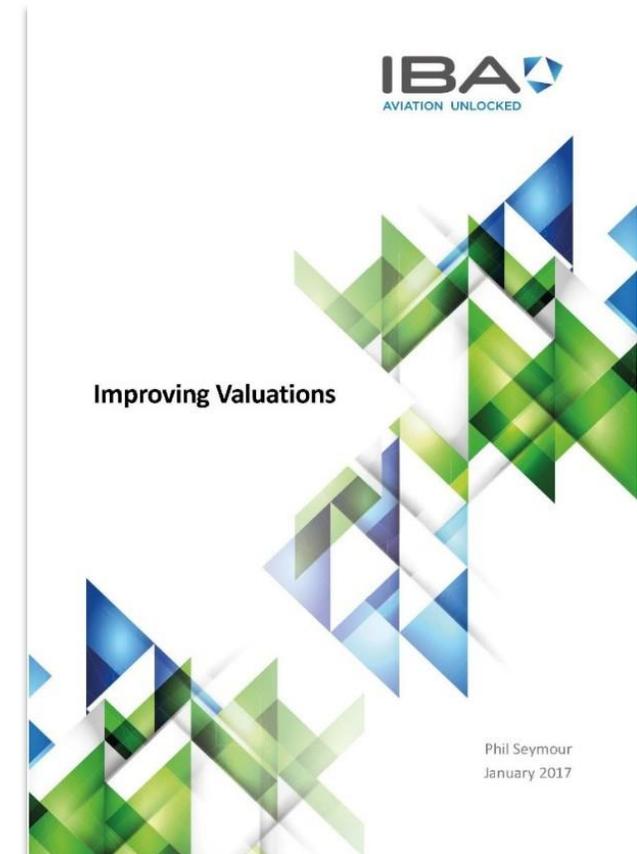
Appraised vs Trading values

Understandable frustration

- ▶ **Excusable reasons for lack of accuracy**
 - ▶ Crystal ball – 9/11, GFC
 - ▶ Large carrier goes under

- ▶ **Inexcusable reasons for lack of accuracy**
 - ▶ Leaned on for value X
 - ▶ Didn't ask what it was for

- ▶ **Steps being to improve definitions**
 - ▶ We cannot put the genie back, but we can make it more clear what you are buying



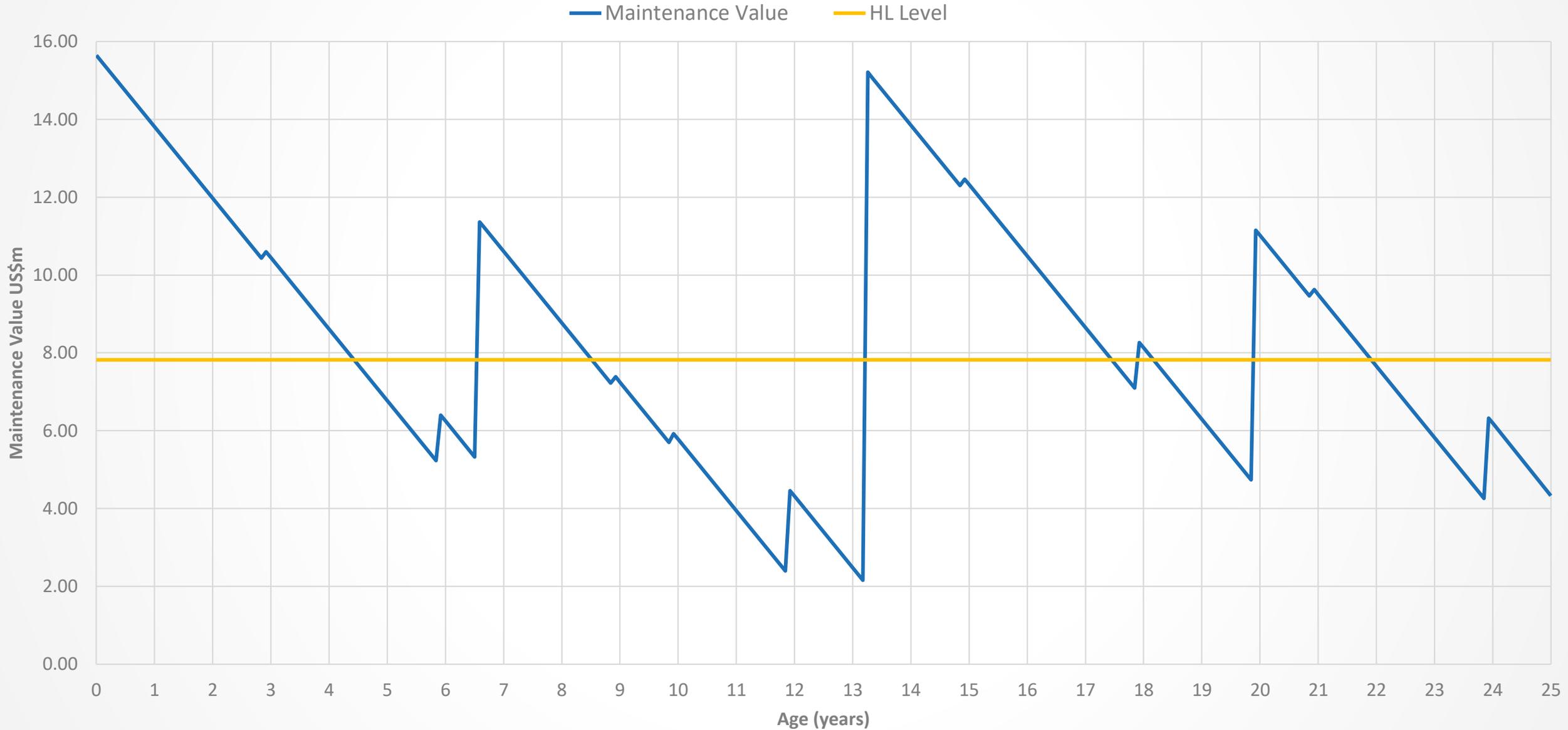
Trading - “Naked” aircraft versus “encumbered/with lease attached”

Appraised Values versus Real Data

- ▶ Most “trading” data is based on Large fleets and/or sales of aircraft with lease attached.
- ▶ Most accessible on line systems are based on single sale, average specification, “half-life” assumptions.

What happens in reality.....

A320-200 Maintenance Value - 2016 Constant USD - V2500-A5, 2:1 (W.Europe)



Trading - “Naked” aircraft versus “encumbered/with lease attached”

An economic analysis reveals the real value....

Then there are further considerations:

- ▶ Lease income, security deposits.
- ▶ Lessor contributions
- ▶ Other lease terms – extension/purchase option
- ▶ Delivery/Redelivery Conditions
- ▶ Maintenance Reserves and compensation for use
- ▶ Cost of finance

Lessor Trading Model

	Monthly	Jun-2017	Jul-2017	Aug-2017	Sep-2017	Oct-2017	Nov-2017	Dec-2017	Jan-2018	Feb-2018
PDPs	Payment									
	Cumulative Payments									
	Cumulative Equity									
Excess Equity Paid before First Drawdown										
	Cumulative Debt Principal									
	Monthly PDP Debt Interest	36,714	36,714	36,714						
	Upfront/Legal Fees									
Delivery Financing	Upfront/Legal Fees				449,182				5,000	
	Total Financing				37,015,149					
	Equity Amount				7,403,030					
	Principal Outstanding				29,612,119	29,492,360	29,371,902	29,250,742	29,128,875	29,006,297
	Total Monthly Payment					292,496	292,496	292,496	292,496	292,496
	Monthly Interest Portion					172,737	172,039	171,336	170,629	169,918
	Monthly Principal Portion					119,759	120,458	121,160	121,867	122,578
Operating Lease	Lease Rental				399,376	399,376	399,376	399,376	399,376	399,376
	Security Deposits		793,200							
	Maintenance Reserve Payments				119,162	119,162	119,162	119,162	119,162	119,162
	Maintenance Reserves Spent									
	Net Maintenance Reserve Account				119,162	238,622	358,380	478,438	598,796	719,455
	Interest Earned on Maintenance Reserves					298	597	896	1,196	1,497
	Other Expenses									
	Depreciation					123,384	123,384	123,384	123,384	123,384
	Book Value				37,015,149	36,891,765	36,768,381	36,644,997	36,521,614	36,398,230
	Future Sale	Price if Sold (Input)								
Gain on Aircraft Sale										
Selling Expenses										

All of the necessary parameters are included in the model, including PDPs. In this section, the aircraft delivers in September 2017 and the operating lease begins...

Lessor Trading Model

Imbalance:	0	0	0	0	0	0	0	0	0	0	0
Annually	Dec-2016	Dec-2017	Dec-2018	Dec-2019	Dec-2020	Dec-2021	Dec-2022	Dec-2023	Dec-2024	Dec-2025	Dec-2026
Purchase Deposits	10,489,612										
Aircraft Held for Lease	239,754	36,644,997	35,164,391	33,683,785	32,203,180	30,722,574	29,241,968	27,761,362	26,280,756	24,800,150	23,319,544
Aircraft Held for Sale											
Maint. Reserve Cash (minus Interest)		476,648	1,908,380	3,372,702	3,881,562	5,421,221	6,992,388	7,611,345	8,072,830	8,317,455	7,285,410
Non-Maintenance Reserve Cash	(31,967)	1,010,208	2,393,962	3,866,429	5,416,188	7,046,361	8,776,218	10,594,779	12,491,712	14,455,930	16,462,330
Total Assets	10,697,399	38,131,853	39,466,734	40,922,916	41,500,929	43,190,155	45,010,574	45,967,485	46,845,298	47,573,535	47,067,284
Loan from Group 1											
Loan from Group 2	3,146,884	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030	7,403,030
Purchase Credit Facility		29,250,742	27,740,493	26,121,068	24,384,574	22,522,550	20,525,919	18,384,952	16,089,214	13,627,517	10,987,864
Deposit Credit Facility	7,342,729										
Equity Amount	(188,813)	(188,366)	1,225,031	2,836,317	4,641,964	6,653,555	8,899,436	11,378,359	14,090,424	17,035,733	20,201,180
Provision for Maintenance Reserves		476,648	1,908,380	3,372,702	3,881,562	5,421,221	6,992,388	7,611,345	8,072,830	8,317,455	7,285,410
Security Deposits	396,600	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800	1,189,800
Total Liabilities	10,697,399	38,131,853	39,466,734	40,922,916	41,500,929	43,190,155	45,010,574	45,967,485	46,845,298	47,573,535	47,067,284
Interest Income on Non-MR Cash	0	30,306	71,819	115,993	162,486	211,391	263,287	317,843	374,751	433,678	493,870
Book Profit on Aircraft Sale + MR Kept			0	0	0	0	0	0	0	0	0
Lease Revenue		1,597,505	4,792,514	4,792,514	4,792,514	4,792,514	4,792,514	4,792,514	4,792,514	4,792,514	4,792,514
Interest Income on Reserves		1,790	34,379	78,917	109,717	141,225	189,014	223,162	244,625	252,983	234,973
Total Revenues	0	1,629,601	4,898,712	4,987,425	5,064,717	5,145,130	5,244,815	5,333,519	5,411,891	5,479,176	5,521,358
Aircraft Depreciation		370,151	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606
Interest Paid	78,672	809,821	1,999,709	1,890,533	1,773,464	1,647,933	1,513,327	1,368,991	1,214,220	1,048,261	870,304
Selling, General & Administrative		0	0	0	0	0	0	0	0	0	0
Other Expenses + MR for Buyer	110,141	449,182	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Expenses	188,813	1,629,155	3,485,315	3,376,139	3,259,070	3,133,539	2,998,933	2,854,596	2,699,826	2,533,867	2,355,910
Income (loss)	(188,813)	447	1,413,397	1,611,286	1,805,647	2,011,591	2,245,881	2,478,923	2,712,065	2,945,309	3,165,447

The balance sheet handles a 25 year lease term...and still balances after a future aircraft sale is input...so it is a powerful trading/decision making analysis tool for aircraft investors.

Lessor Trading Model

	Annually	Dec-2016	Dec-2017	Dec-2018	Dec-2019	Dec-2020	Dec-2021	Dec-2022	Dec-2023	Dec-2024	Dec-2025	Dec-2026
Net Income (loss):		(188,813)	447	1,413,397	1,611,286	1,805,647	2,011,591	2,245,881	2,478,923	2,712,065	2,945,309	3,165,447
or non-cash charges:												
Depreciation:			370,151	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606	1,480,606
Assets and liabilities:												
Security Deposits:		396,600	793,200	0	0	0	0	0	0	0	0	0
Net cash from operating activities:		207,787	1,163,798	2,894,003	3,091,892	3,286,252	3,492,197	3,726,487	3,959,529	4,192,671	4,425,915	4,646,053
Acquisition of Aircraft:		(3,036,984)	(33,628,511)									
Deposits for Aircraft Purchase:		(10,489,612)										
Disposal of Aircraft (Price - Book Profit):				0	0	0	0	0	0	0	0	0
Net cash used in investing activities:		(13,526,596)	(33,628,511)	0								
Loan from Group 1 (PDP Equity)		2,797,230										
Loan from Group 2 (PDP Equity)		3,146,884	4,256,146									
PDP Borrowings:		7,342,729	0									
PDP Equity Payback:			0	0	0	0	0	0	0	0	0	0
PDP Borrowings Payback:			0									
Long Term Facility Borrowings:			29,612,119									
Long Term Facility Equity:			0	0	0	0	0	0	0	0	0	0
Long Term Facility Repayments:			(361,377)	(1,510,249)	(1,619,425)	(1,736,493)	(1,862,025)	(1,996,631)	(2,140,967)	(2,295,738)	(2,461,697)	(2,639,653)
Net cash from financing activities:		13,286,842	33,506,888	(1,510,249)	(1,619,425)	(1,736,493)	(1,862,025)	(1,996,631)	(2,140,967)	(2,295,738)	(2,461,697)	(2,639,653)
Net change in cash and equivalents:		(31,967)	1,042,175	1,383,754	1,472,467	1,549,759	1,630,173	1,729,857	1,818,562	1,896,933	1,964,218	2,006,400
Cash at beginning of period:		0	(31,967)	1,010,208	2,393,962	3,866,429	5,416,188	7,046,361	8,776,218	10,594,779	12,491,712	14,455,930
Cash at end of period:		(31,967)	1,010,208	2,393,962	3,866,429	5,416,188	7,046,361	8,776,218	10,594,779	12,491,712	14,455,930	16,462,330

The related Cash Flow Statement allows investors to calculate the IRR as a function of any scenario. So, let's see what happens if we "sell" the aircraft for \$3mn over book value in year 7...

Lessor Trading Model

	Monthly	Sep-2024	Oct-2024	Nov-2024	Dec-2024
Delivery Financing	Upfront/Legal Fees				
	Total Financing				
	Equity Amount				
	Principal Outstanding	11,135,173	10,856,306	10,575,813	0
	Total Monthly Payment	343,822	343,822	343,822	0
	Monthly Interest Portion	66,572	64,955	63,328	0
	Monthly Principal Portion	277,249	278,867	280,493	10,575,813
Operating Lease	Lease Rental	399,376	399,376	399,376	0
	Security Deposits				
	Maintenance Reserve Payments	0	0	0	0
	Maintenance Reserves Spent				
	Net Maintenance Reserve Account	8,255,385	8,276,023	8,296,713	8,317,455
	Interest Earned on Maintenance Reserves	20,587	20,638	20,690	20,742
	Other Expenses				
	Depreciation	123,384	123,384	123,384	0
	Book Value	26,650,907	26,527,523	26,404,140	0
Future Sale	Price if Sold (Input)				29,280,756
	Gain on Aircraft Sale				2,876,616
	Selling Expenses				585,615
	Imbalance:				
	Annually	Maintenance Reserves for Seller:			2,495,236
	Purchase Deposits	Maintenance Reserves for Buyer:			5,822,218

	Imbalance:	0	0
	Annually	Dec-2023	Dec-2024
	Purchase Deposits		
	Aircraft Held for Lease	27,761,362	0
	Aircraft Held for Sale		
	Maint. Reserve Cash (minus Interest)	7,611,345	0
	Non-Maintenance Reserve Cash	6,287,497	13,750,244
	Total Assets	41,660,204	13,750,244
	Loan from Group 1		
	Loan from Group 2	7,403,030	0
	Purchase Credit Facility	13,573,309	0
	Deposit Credit Facility		
	Equity Amount	11,882,720	13,750,244
	Provision for Maintenance Reserves	7,611,345	0
	Security Deposits	1,189,800	0
	Total Liabilities	41,660,204	13,750,244
	Interest Income on Non-MR Cash	188,625	412,507
	Book Profit on Aircraft Sale + MR Kept	0	5,371,853
	Lease Revenue	4,792,514	4,393,138
	Interest Income on Reserves	223,162	244,625
	Total Revenues	5,204,301	10,422,123
	Aircraft Depreciation	1,480,606	1,357,222
	Interest Paid	1,067,337	784,544
	Selling, General & Administrative	0	585,615
	Other Expenses + MR for Buyer	5,000	5,827,218
	Total Expenses	2,552,943	8,554,600
	Income (loss)	2,651,358	1,867,524

	Annually	Dec-2023	Dec-2024
	Net Income (loss):	2,651,358	1,867,524
-cash charges:	Depreciation:	1,480,606	1,357,222
and liabilities:	Security Deposits:	0	(1,189,800)
	Net cash from operating activities:	4,131,964	2,034,946
	Acquisition of Aircraft:		
	Deposits for Aircraft Purchase:		
	Disposal of Aircraft (Price - Book Profit):	0	26,404,140
	Net cash used in investing activities:	0	26,404,140
	Loan from Group 1 (PDP Equity)		
	Loan from Group 2 (PDP Equity)		
	PDP Borrowings:		
	PDP Equity Payback:	0	(7,403,030)
	PDP Borrowings Payback:		
	Long Term Facility Borrowings:		
	Long Term Facility Equity:	0	0
	Long Term Facility Repayments:	(3,058,525)	(13,573,309)
	Net cash from financing activities:	(3,058,525)	(20,976,339)
	Net change in cash and equivalents:	1,073,439	7,462,747
	Cash at beginning of period:	5,214,058	6,287,497
	Cash at end of period:	6,287,497	13,750,244
	26,285,783		
	3,036,984		
	<u>7,342,729</u>		
	36,665,495		
Investment	Cash Flows:	1,073,439	7,462,747
7,403,030	IRR: Gross	-5%	14%

The Sales Price of \$29.28mn is input in December 2024, and then everything recalculates...which yields an IRR of 14% for this scenario. Note that this analysis can be performed and summarized for a lease portfolio of any size.

Asset management:
Aircraft remarketing, appraised versus trading values –
How to make 10%+ returns with proper risk mitigation

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