Airline Economics
School of Aviation Finance

pwc

Asset Management and Portfolio Management

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Asset Management and portfolio management

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Operating Lease school
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Agenda

1. Lease
   - Airline credit management
   - Jurisdictional risk
   - Due diligence during contract stage

2. Asset & portfolio
   - Deal collateral (Maintenance reserves & deposits)
   - Which assets?

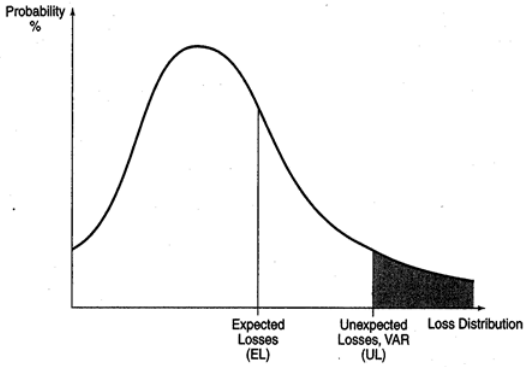
Credit Risk – Quantifying Expected Loss

- Risk is a product of uncertainty and the exposure to it;
- Operating lessors typically define credit risk exposure as a function of time that the asset is off lease and associated expenses.

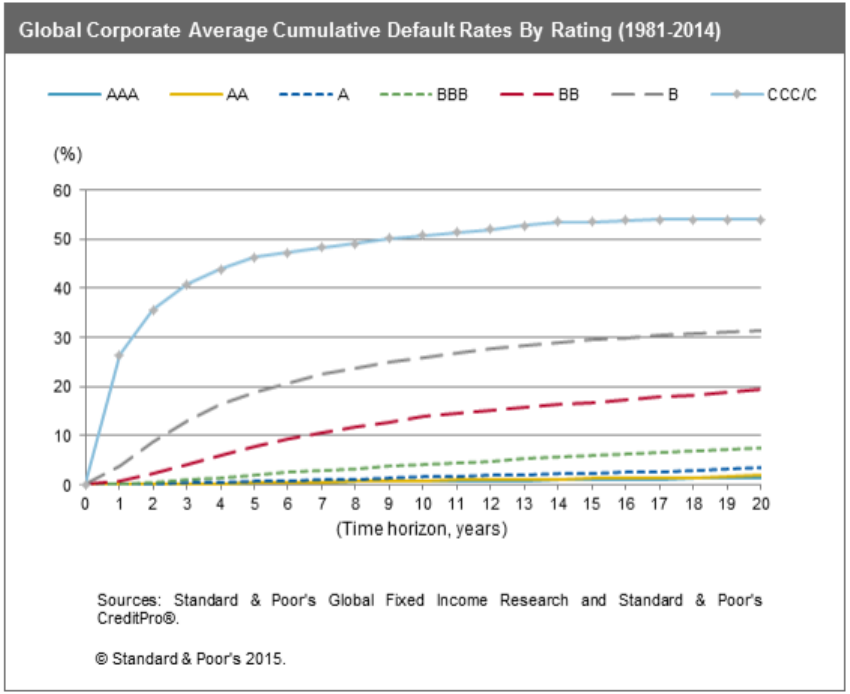
- Credit exposures differ significantly depending on transaction structure impacting:
  - Rentals;
  - Maintenance status and reserves, security deposits;
  - Eurocontrol, airport and mechanic liens
  - Registration and aircraft specification issues
- Uncertainty correlates to the operator's default probability which normally is shown as a function of the operator's credit rating;
- Every lessor should have a rating system of its customers and potential operators that includes a consistent process based on quantitative and qualitative analysis to rate its customers and potential operators with regard to default risk.

Credit Risk – Expected Loss

- Expected Loss is the average loss an operating lessor can expect to incur from holding a portfolio of assets over time, not to be confused with actual losses;
- From a statistical view it is the mean of the probability distribution of possible losses;
- Expected Loss is an average that provides a benchmark in quantifying and measuring the risk in a financial portfolio.



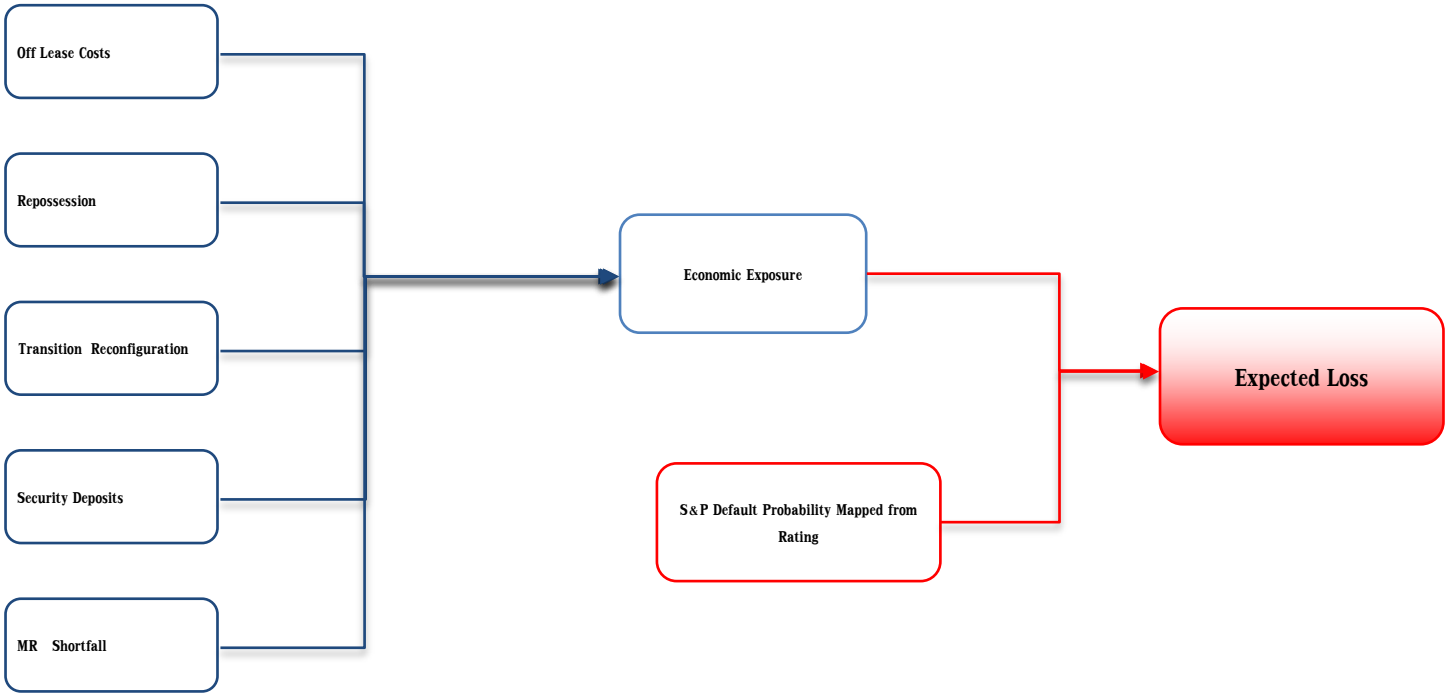
Rating as indication for default probability



Credit Risk – Indices for rating Airlines (sample)

❑ Competitive Profile	Size, Market Position, Management
❑ Operating Performance	EBITDAR, EBIT and NPAT margins
❑ Debt Service	EBITDAR/Interest + Rent EBITDA/Net interest
❑ Gearing	Total Debt (incl. off B/S)/Equity Total Debt (incl. off B/S)/EBITDAR
❑ Liquidity	Cash/Short Term Debt Cash/Revenues Current Ratio
❑ [shareholder] Equity Support	Ability and willingness of shareholders to provide support
❑ Sovereign Ratings (as operator rating is limited by sovereign rating)	Political Risk Transferability of foreign exchange

Credit Risk – Exposure and Uncertainty



Jurisdictional Risk and Repossession

Legal considerations

- Effectiveness of Judicial Process in a Default
  - Cape Town Treaty: improving;
  - Timing: ability to timely repossess, deregister and export aircraft is critical;
  - De-registration: POAs and IDERs not always effective;

- Liens
  - Airport and mechanic (incl. MROs);
  - En-route Navigation such as Eurocontrol, NAV Canada;
  - Governmental duties Customs duties, local and national taxes, Emission Charges;

Jurisdictional Risk and Repossession

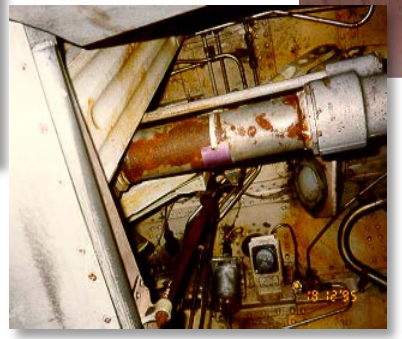
Repossession in practice has challenges:

- De-registration Power of Attorney (PoA) not recognized by local authority (DGCA)
  - Required “Non – Objection Certificate”;
  - Court finally ruled it was not required;
  - Aircraft was out of country in possession of lessor;
- Lien issues
  - Airplane deregistered and in possession of lessor but in country;
  - Subject to airport liens and other charges, finally released;
- Aircraft condition (including documentation/records!) important

Aircraft owners take residual value risk – i.e. lessors in case of operating lease

Asset risk – Great valuable aircraft, right?

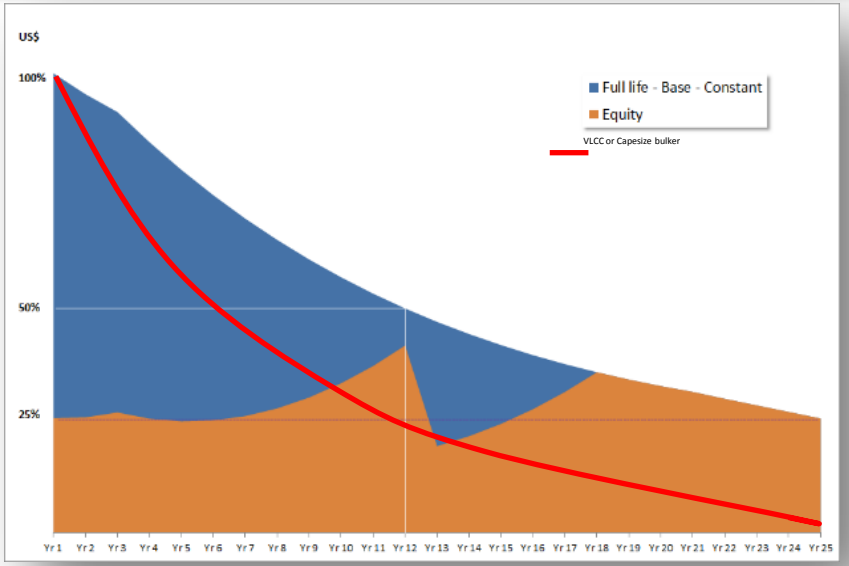
Asset risk – “The Lease After”



Asset risk – “The Lease After”

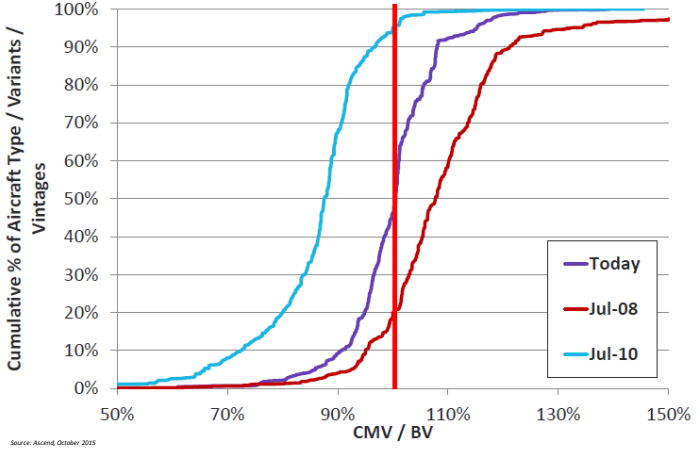
Asset risk – values

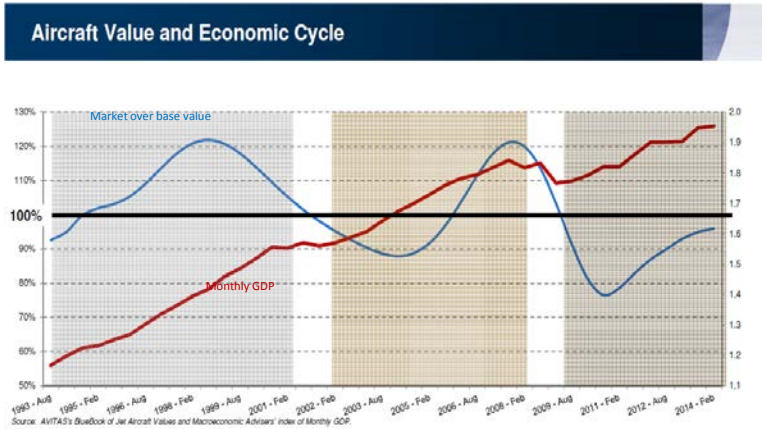
- Aircraft are physically mobile assets and can be deployed to other regions and airlines where the value can be maximized;
- Aircraft are financially liquid US$ assets and can be traded through their lifetime to investors with different risk and reward appetites;
- Typically after their 25 year economic life the “scrap value” is largely determined by the value of the aircraft engines, whose value remains high as long as engines and parts are needed and tradeable;
- Scrap values are typically at 20 – 25% of the value when new;
- Compared to Ship Values, aircraft tend to retain their values longer as well as with less volatility.



Managing values – through cycles

- Aircraft values are subject to market circumstances and thus a “current market value” is derived;
- Compared to Base Values (which are independent of that), market cyclicality can be illustrated:





Asset risk – maintenance collateral

Maintenance Reserves, or “Supplemental Rent”, are payments made by the lessee to the lessor based on the utilisation of the aircraft to provision for the cost of significant aircraft maintenance events.

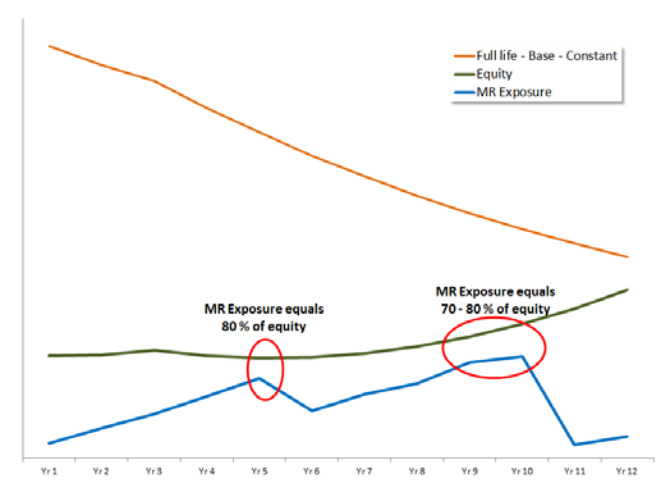
- Supplemental Rent is important:
  - Security to protect asset value and maintain lessor exposure;
  - Influences maintenance work-scope;
  - Means to monitor lessee contract compliance;
  - Encourages financial discipline;
- Supplemental Rent Options:
  - Cash Maintenance Reserves;
  - Letter of Credit (provided by a bank with an agreed rating an location);
  - Lease end adjustments;
  - Half life adjustments.

Managing maintenance collateral

- Best Practices
  - Clearly define qualifying maintenance;
  - Lessor approval for reimbursable work-scopes;
  - Modular approach to engine reimbursement;
  - Lessor attendance at MRO facilities during maintenance;
  - Good communication to forecast timing of maintenance and reimbursement;
  - Annual review of rates;
  - Aircraft specific accounts and component specific sub-accounts;
  - No co-mingling even across same lessee fleet;
  - Annual review of accounts with reconciliation as needed;
- End of life assets
  - Retain MR or Supplemental Rent in lieu of Return Conditions;
  - Engine and Component exchanges;
  - Fly to expiration.

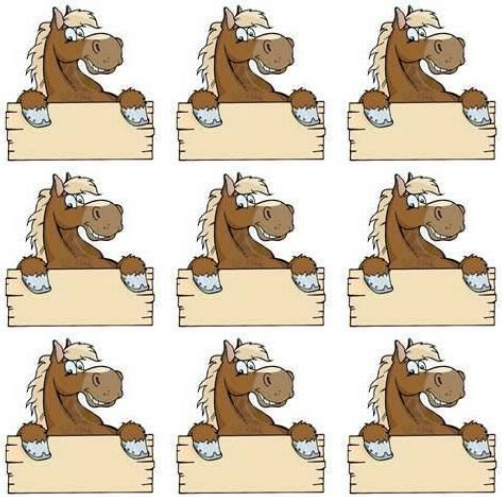
Equity – at risk over term of lease

- Operating lessors have a core competence in being able to manage risk;
- New lessors may not have a s strong a technical expertise as established lessors tend to have;
- This may be significant both during and at the end of the lease.



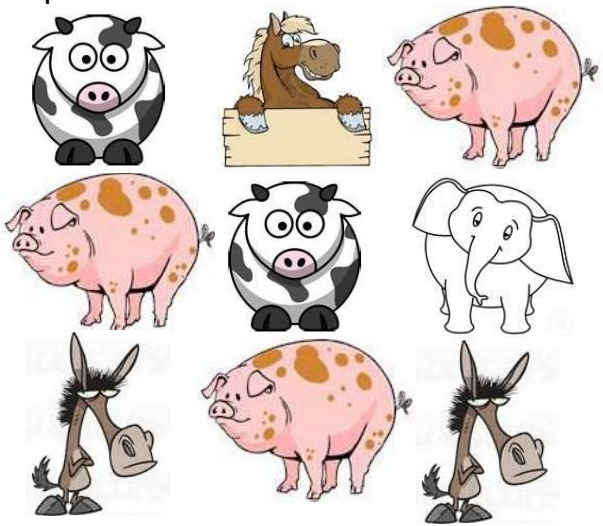
Building portfolios

Option 1



Airlines like sisterships

Option 2



Rating agencies like diversity

Choosing the right asset for your portfolio

Different interests (owner, operator, passenger) lead to different choices:

Thank you for your kind attention