

CEPA 2010

Aircraft Asset Management

- **Market Values**
- **Business Aircraft Finance Characteristics**
- **Analysis of Typical Transaction Structure**
- **New Rules Affecting the Asset Manager / Risk Management Considerations**



Swiss Aviation Consulting

Swiss Aviation Consulting - Background

→ Introduction



Swiss Aviation Consulting is an independent advisory group headquartered in Holzhäusern/Zug, Switzerland.

Our services consist of the following 4 elements:

- **Aviation Industry Advisory**
- **Aircraft Asset Management**
- **Aviation Executive Recruitment**
- **CAMO+**

Every consultant has a particular field of expertise and a wealth of other associated aviation experience. We not only conduct studies and audits, but also work with our clients on solution implementation.

Being Swiss we are multilingual, discrete, efficient and precise.

Swiss Aviation Consulting - Background

→ Aviation Industry Advisory

We have worked with many airlines, business aircraft operators, utility aviation companies and military air wings as well as manufacturers and MROs.

Projects include:

- Operational set-up of cargo airline according JAR/CAR Ops 1 standards (AOC)
- Advising national Civil Aviation Authority on aircraft registration and EASA compliance issues
- Study of European business aircraft charter market
- Acquisition and sale of business aviation company
- Airport Acquisition Support
- Planning of Maintenance and Repair Organisation (MRO)

Services:

- **Operations Consulting:** Business Process (Re)Engineering, QMS, AOC Application Support
- **Operator and Supplier Audits (EASA/JAA)**
- **Management Consulting**
- **M&A Services**



Swiss Aviation Consulting - Background

→ AAM Aircraft Asset Management

We consider ourselves trustees of the aircraft financiers.

We offer operational, market, technical plus financial and legal know-how from one source.

We offer a unique AAM approach which combines the traditional asset management services with human resource management.

Managing a costly asset like an aircraft means not only looking after the asset itself, but more importantly, carefully selecting, controlling and monitoring the risks associated with it.

- Services:**
- **AAM Cost Cap – Asset Management at Predetermined Cost**
(A/C inspection, operator audit, operation and contract monitoring, valuations)
 - **A/C Acquisition and Re-Marketing**
 - **Lease/Financing Contract Default Management**
 - **Individual Services: Appraisals, Audits, Inspections**
 - **Aircraft Repossessions**

Swiss Aviation Consulting - Background

→ Aviation Executive Recruitment

In no other field the specific knowledge of industry quality standards and related accountabilities is as important as in aviation.

SAC's professionals combine a wealth of frontline aviation experience with state of the art human resource management methods.

In close co-operation with our client SAC develops a recruitment strategy around the two main processes:

- **Advertised Search and Selection or**
- **Executive Direct Search**

depending on the individual confidentiality issues and 'scope of search' needs.



Swiss Aviation Consulting - Background

→ CAMO+

SAC Swiss Aviation Consultants are an approved, independent CAMO+ according to EASA 2042/2003, Part M, Subpart G with Approval Certificate Reference (CH.MG.7010).

The CAMO+ represents an ideal complement to our Aviation Advisory and Aircraft Asset Management services as the technical oversight of aircraft and the cost-controlled maintenance have gained importance.

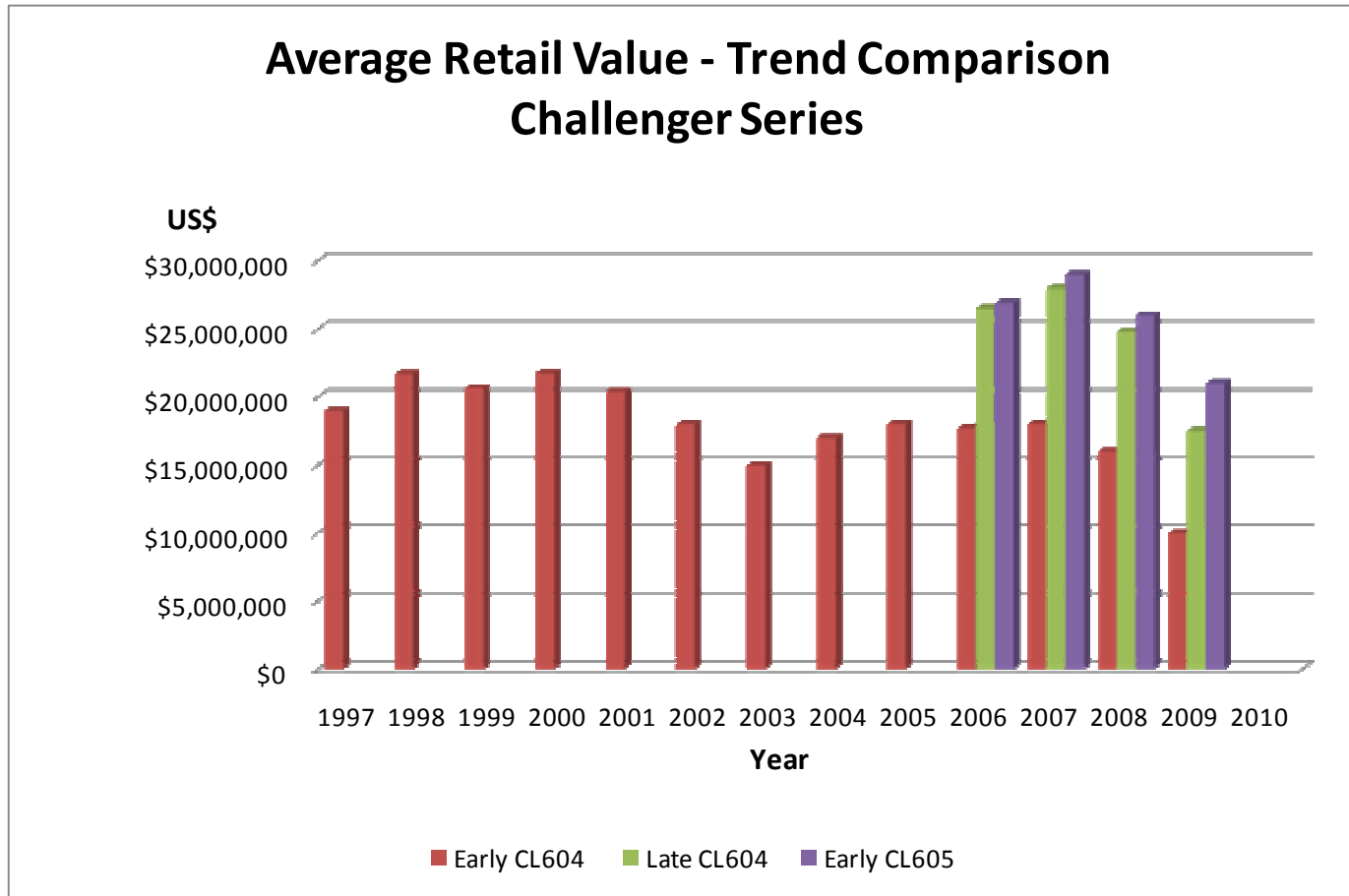


Services: • Continuing Airworthiness Management

- Airworthiness Review
- Documentation of Airworthiness Review Tasks
- Management and Review of all Maintenance carried out

Market Value (Deterioration)

Aircraft Asset Management → Market Value



Source: Aircraft Bluebook

Aircraft Asset Management → Market Value

Challenger Series % Decrease from Peak Average Retail vs. Today

<u>Type</u>	<u>Peak (USD)</u>	<u>Q4 2009 (USD)</u>	<u>% Decrease</u>
CL604 (1996)	\$21,750,000	\$10,000,000	54%
CL604 (2006)	\$28,000,000	\$17,500,000	38%
CL605 (2006)	\$29,000,000	\$21,000,000	28%

Source: Aircraft Bluebook

Aircraft Asset Management

→ Market Value



Source: Aircraft Bluebook

Aircraft Asset Management

→ Market Value

Legacy			
% Decrease from Peak Average Retail vs. Today			
<u>Type</u>	<u>Peak (USD)</u>	<u>Q4 2009 (USD)</u>	<u>% Decrease</u>
Legacy (2006)	\$20,000,000	\$14,000,000	30%
Legacy (2007)	\$25,000,000	\$18,500,000	26%

Source: Aircraft Bluebook

Market Value Deterioration

- Value of one and the same aircraft has risen up to 10% above initial acquisition price during peaks.
- Value correction during crisis has fallen some 25% to 60% compared to peak.
- Lessee's equity shares in aircraft (at typical initial "Loan to Value" ratios of 70% to 85%) have been wiped out by market deterioration.

Market Value Deterioration

- Typically, Lessee's suffer liquidity constraints and receive "marching calls" from their Lessors to re-inject equity at the same time.
- "Aircraft on Market" Inventories rocket to the sky. Aircraft transactions come to a full stop. "Aircraft Fair Market Values" become a theoretical measurement.
- Aircraft are grounded but comparatively few are re-possessed by Lessors.

Business Aircraft Finance Characteristics

Aircraft Asset Management

→ Business Aircraft Finance Characteristics

Business Aircraft Finance in Europe has followed a more conservative pattern than in the US and has often kept a closer watch on the debtors and lessors. Compared to the US fewer repossessions have taken place in Europe.

European Aircraft financiers have been less aggressive than their American counterparts. Aircraft financings had seen Loan to Value Ratios of 70 to 85 %.

Typically business aircraft financing takes the format of finance lease structures and aircraft loans secured by mortgages. Often dedicated legal entities (“Special Purpose Vehicles”) are set up.

Some financial institutions introduced the services of aircraft asset managers to safeguard their asset. Others simply banked on continuously increasing asset values outgrowing potential technical shortfalls.

Aircraft Asset Management

→ Business Aircraft Finance Characteristics

Most business aircraft in Europe are used for private transportation needs. These aircraft are mostly handed over to commercial operators or private aircraft management companies.

Have these structures and principles been sufficient to protect the lenders in this latest global crisis?

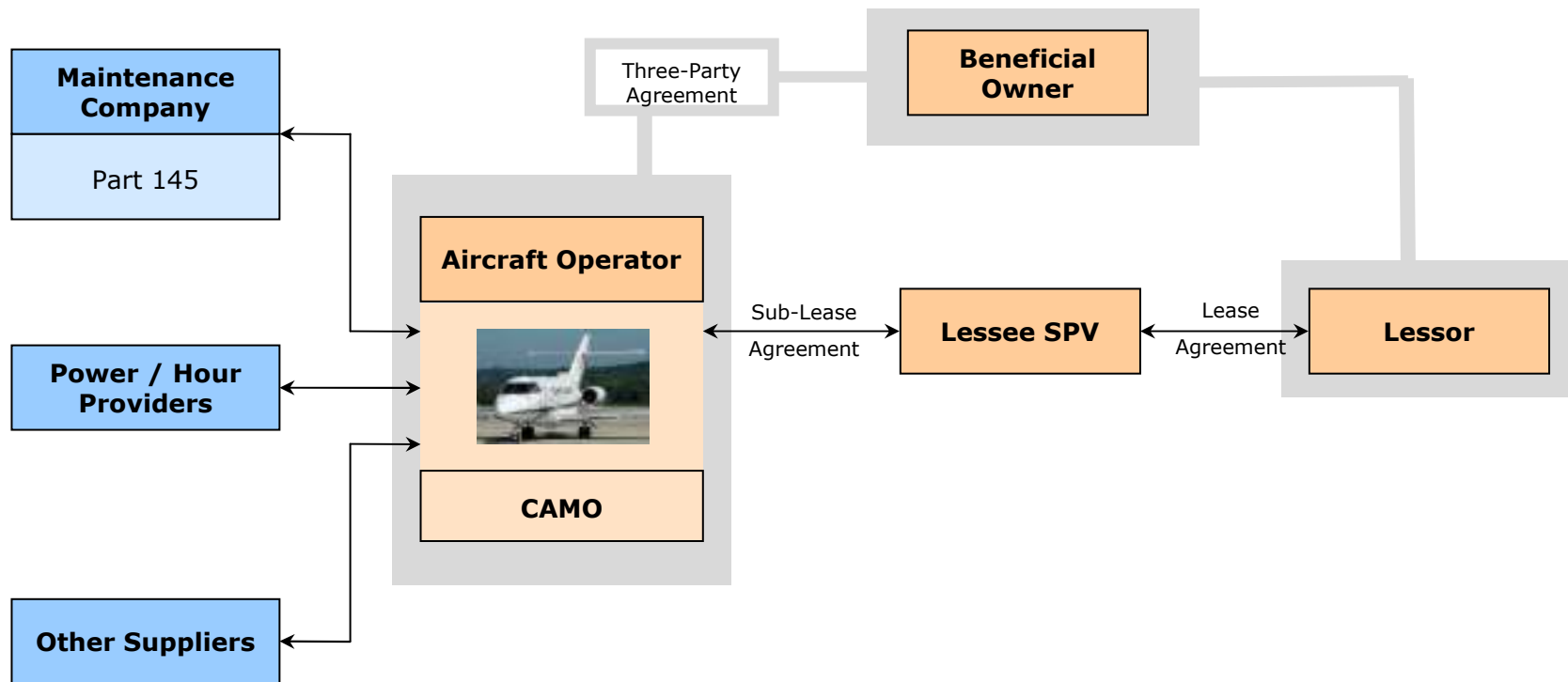
Having witnessed close to a dozen repossessions during the last 12 months we must say: yes, they can.

However, **the cost of recovering the aircraft is being underestimated** entirely.

Analysis of Typical Transaction Structure

Aircraft Asset Management → Typical Transaction Structure

Typical Business Aircraft Financing Structure (Finance Lease)



Aircraft Asset Management

→ Typical Transaction Structure

Issues Inherent in Structure

Structure is very complicated and involves many different parties.

1. Lessor-Lessee Relationship

Lessor is the last-to-know about cash flow difficulties in the structure. Payments of leasing rates are stopped last.

2. Operator-Beneficial Owner Relationship

Owner has to assume all cost of the aircraft operation. Supplier invoices may come in very late. Operator to B/O billing lags behind. A/R and A/P management is critical.

Aircraft Asset Management

→ Typical Transaction Structure

3. Operator-Supplier Relationships

Critical relationship between Operator and MX Facility:

Retention Rights?

Maintenance Service Plan Providers: billing information and funds are furnished by Operator. Information of Lessor only on default.

4. Aircraft Value Retention

Aircraft value is (partially) driven by documents. Document quality ("back to birth traceability, Release to Service") is important for value retention.

In default situations: physical access to aircraft is easier than to aircraft documents.

As a result: quality of Continuing Airworthiness Management Organizations (CAMO) is as important as (public transport) / even more important than (private operations) of the Operator.

Risk Management Considerations

Aircraft Asset Management

→ Risk Management Considerations

Future Consequences for Business Aircraft Financing

As a result it is our opinion that the following consequences will be seen in business aircraft financing in the future:

1. Lease transactions will continue to prevail for their relative ease in repossessions.
2. Purely asset based aircraft financing will disappear almost entirely, borrowers will be closer evaluated and more involved.
3. Therefore, the financing of business aircraft for purely commercial purpose (charter) will become more difficult.
4. Loan to value ratios will remain conservative.

Aircraft Asset Management

→ Risk Management Considerations

Future Consequences for Business Aircraft Financing

As a result it is our opinion that the following consequences will be seen in business aircraft financing in the future:

5. The value of an individual asset will be more closely assessed and monitored over the financing period.
6. The asset itself and the entities managing it – both technically and operationally – will be more firmly monitored.
7. Whereas the aircraft will remain entrusted to an operator the managing of the documents (or their archive) will be separated from the operator. In Europe and in the Overseas Territory this trend is facilitated by the possibility of isolating maintenance control from operation by the appointment of an independent Continuing Airworthiness Management Organisation (“CAMO”).

Aircraft Asset Management

→ Risk Management Considerations

Future Consequences for Business Aircraft Financing

8. The cost of financing will increase being reflected in higher margins of the financing institutes.
9. The amortizations built into the leases will remain given the lower pricing level of the assets upfront.
10. Public transport category operation will gradually replace private aircraft management.

The good news is that business aircraft financing is still possible given the current reasonable values of assets in the market. However, the financing institutes will be even more careful with whom they work and whom they entrust the management of the aircraft.

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