



Society of Actuaries in Ireland

Banking and Aviation Finance Committee Networking Event

3rd October 2019

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily those of the Society of Actuaries in Ireland or their employers.



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Niall Dillon and Tom Matthews, AIB

3rd October 2019

Banking - Capital Management & ALM Roles

Capital Management

Forecasting & Stress Testing underpin

- ICAAP – Demonstrates robust capital base – ORSA equivalent
- Drives Dividend Capacity
- Recovery planning

RAROC – Risk adjusted Return on Capital, i.e. Risk based Pricing, including:

- *Loan Margins + other income, what other income?*
- *What funding cost, term?*
- *What expected credit loss? How incorporate recent crisis*
- *Cost allocation*
- *What Capital figure – economic capital, regulatory capital?*

Models - Internal Ratings Based Models, Economic Capital Models, IFRS 9 Models

Liquidity Management

- Current & future funding requirements, includes behavioural modelling of Assets & liabilities
- Funds Transfer Pricing

Interest Rate Risk Management

- Banks generally like upward sloping yield curves, borrow short, lending long (maturity mismatch).
- How much to hedge?
- What to hedge – duration, basis risk?

Transactions & Due Diligence

- Capital issuance
- IPO
- loan sales
- acquisitions
- Investors & Rating agencies

Bank ICAAP similar to ORSA

Banking ICAAP – Independent Capital Adequacy Assessment Process

Current & Forecast Capital (including Own Funds) under various scenarios versus

- a) Regulatory Capital Requirements (can be either standardised or internal model based)
- b) Economic Capital Requirements

Risks assessed under various scenarios include

- Credit Risk, i.e. credit losses. Non-performing loans tend to fair worst in a stress testing
- Net Interest Income (e.g. loan income less liability Outgo), Fee income (e.g. transaction fees)
- Market Risk
- Operational Risk
- Pension Risk

Basis of Preparation: Past experience overlaid with trends and macro economic environment – sound familiar – Mortality, persistency rates....

Insurance ORSA - Own Risk & Solvency Assessment – Is this not similar?

- Own Funds Vs SCR
- OSNA (Own Solvency Needs Assessment) – akin to Bank economic capital, used for internal buffer setting
- Scenarios similar – e.g. impacts of lower for longer interest rate environment

Moving from Insurance to Banking

Product development – design/pricing

- Protection (reserving, reinsurance strategies, benefit structures)
- Investments (investment/hedging strategies, asset liability matching)
- Pension (lifestyling approach, drawdown)

Propositions

- *Advice process/needs analysis*
- *How do we attract customers?*
- *How to present our offering?*
 - *Product led vs customer needs focus?*

Sales/business line management

- Strategic direction of the business
- Distribution strategies
 - Channel
 - Pricing



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John Caslin, Aviva & Joseph McGinley, AerCap

3rd October 2019

ARE YOUR SKILLS TRANSFERABLE TO THE AVIATION INDUSTRY?

John Caslin (Aviva) & Joseph McGinley (AerCap)

Thursday, 3 October 2019

Agenda

Focus on actuarial skills in:

- Asset-liability management
- Capital modelling

Why are these skills useful in the aviation industry?

Broad Nature of Assets

Life Assurance Company

- Debt and equity securities
- Direct property
- Illiquid assets

Aircraft Lessor

- Aircraft
- Aircraft leases

Broad Nature of Liabilities

Life Assurance Company

- Unit-linked liabilities
- Non-linked liabilities
 - Pension annuities

Aircraft Lessor

- Fixed and floating rate debt
 - Secured and unsecured

Term of Liabilities

Life Assurance Company

- From one day on unit-linked business to 50 years on deferred annuities

Aircraft Lessor

- Up to 12 years
 - Secured and unsecured debt
 - Amortising and Bullets
 - Varying duration
 - Senior and Junior

Liquidity Requirements

Life Assurance Company

- Ranges from relatively **low** (deferred annuities) to **very high** (linked and non-linked business)

Aircraft Lessor

- Flexibility to refinance debt
- Credit facilities without MAC clauses
- Ability to re-market aircraft
- Secondary market for older aircraft

Hedging Requirements

Life Assurance Company

- Foreign currency exposures
- Asset liability management of with-profit and annuity business: Interest rate, equity, inflation, volatility, and spread risk hedging

Aircraft Lessor

- Interest rate hedging – caps & swaps
- Minimal foreign currency exposure
- Duration matching

Credit Risk Management

Life Assurance Company

- Counterparty risk management
 - Margining and collateral
- Managing spread risk using credit default swaps

Aircraft Lessor

- Lessee credit risk management
 - Security deposit
 - Lease rate adjustment
 - Maintenance Reserves
- Correlation of credit exposures across lessees

Modelling of Assets & Liabilities

Life Assurance Company

- Important to understand sensitivity of assets & liabilities to a range of risks

Aircraft Lessor

- Cash flow modelling of lease income, maintenance reserves, and sales proceeds ***relative to*** debt repayments & maintenance events
- Stress scenario modelling

Regulation of Asset-Liability Management

Life Assurance Company

- Solvency II
- Central Bank of Ireland

Aircraft Lessor

- No corresponding regulatory requirements
- Shareholder oversight of risk policy

Regulatory Capital

- **Life Assurance Company**

- Solvency II capital requirements for a range of risks

- **Aircraft Lessor**

- No regulatory capital requirements

Summary

Life assurance asset-liability management skills and capital modelling skills are readily transferable to the aircraft lessor industry



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Andrew Cashlin, Zurich & Dominic Ryan, Avolon

3rd October 2019

If you can price a life policy, can
you price an aircraft lease?



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Eoin O'Connor, PTSB

3rd October 2019

Eoin O'Connor, Senior Analyst (PTSB), Capital Modelling

- **Current Role**

- **Capital:**

- Production of capital forecasts for internal and regulatory requirements.
 - Forecasting & Stress Testing underpin
 - ICAAP – Demonstrates robust capital base – ORSA equivalent.
 - Drives Dividend Capacity
 - Recovery Planning

- **Skills required**

- **Understanding of:-**

- Unexpected loss (capital)
 - Risk Regulation

- **Technical skills**

- Information & Data Analysis
 - SAS coding skills
 - Risk analysis
 - Risk Regulation
 - Judgement

- **Professional skills**

- Communications & Influencing
 - Problem Solving & Decision Making



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Lee Naicker, ABL Aviation

3rd October 2019

NEW HORIZONS *Together*



Leeren Naicker
ABL Aviation

Independent Aircraft Investment Manager

Society of Actuaries' of Ireland Presentation
2019



About ABL Aviation



AIRCRAFT
ORIGINATED & MANAGED

23

AIRCRAFT INVESTMENT
ORIGINATED

+US\$650M

SOURCED
OPPORTUNITIES

+1500

GLOBAL PRESENCE



Company Profile

- Full-service global aircraft investment manager
- Founded in (Q4) 2014
- Independent (unique in today's market)
- Entire life-cycle commercial aircraft expertise

Presence

- Dublin (HQ)
- New York
- Casablanca
- Hong Kong
- Dubai

Services

- Deal origination & remarketing
- Structuring aircraft transactions
- Aircraft technical management
- Lease management
- Capital sourcing and debt restructuring



Background

- **Current Role:**
Senior VP Modelling & Technology
- **Prior Actuarial Roles:**
Actuarial Consultant - Lloyd's Banking Group
Actuary (Technical Services, Finance, Product Development) - Zurich Life Assurance plc.
- **Education:**
BSc (Hons) Computer Science – UCD
FIA - Finance and Investment



Responsibilities

- Transaction Structuring and modelling
- Pricing & credit analysis
- Developing and maintaining financial models
- Developing infrastructure to increase automation and improve efficiency

Actuary: “A Perfect Fit”



Relevant Skillset

- Application of ASP's, TAS's and Actuaries' Code
- Modelling and insightful analysis
- Financial and commercial acumen
- Analytical thinking, project management and problem-solving skills
- Accuracy, attention to detail and a culture of peer-review
- Self motivated & well organised



Employment Prospects

- Developing Industry - Long term forecasted global demand (↑ demand for air travel = ↑ need for aircraft)
- Transferrable, sought after skillset
- Dublin – A major global hub for leasing and aviation finance
- “Hurdles”
 - Lack of industry experience
 - Available opportunities