


ACI Risk Management Conference Issues for Airport Operators

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Topics to Discuss

- Aviation Insurance Industry Analysis
- Considerations for Airports

Section One

AVIATION INSURANCE INDUSTRY ANALYSIS



Overview of the Aviation Insurance Industry

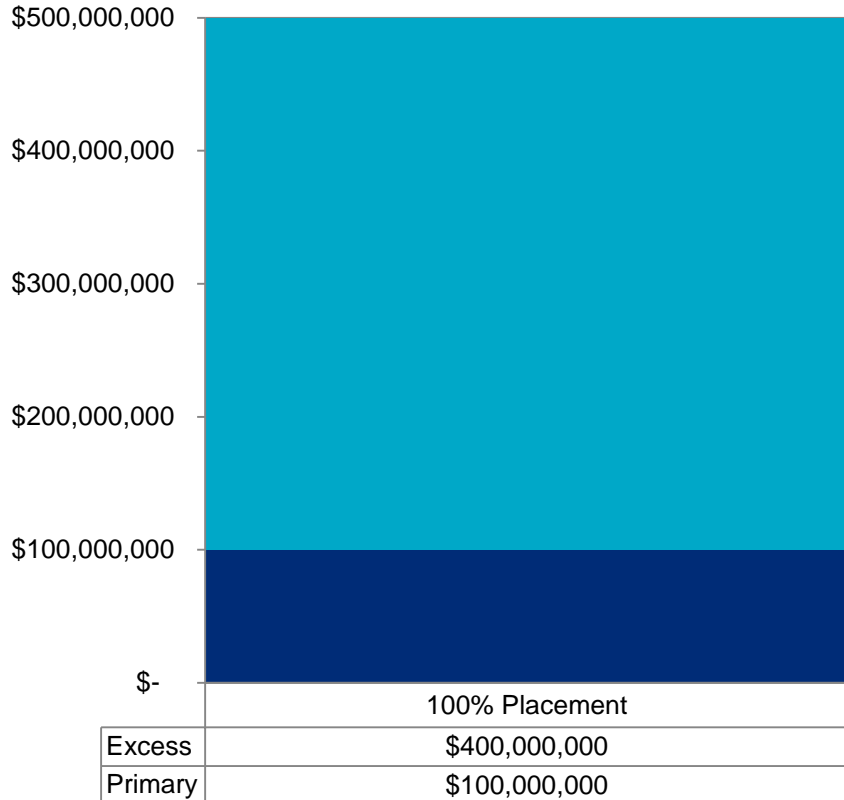
- 3 Main Sectors
 - Airlines (circa \$1 billion in premium)
 - Aerospace (circa \$800 million)
 - Major Manufacturers
 - Major U.S. (some) and International Airports
 - Service Providers
 - Banks/Leasing
 - General Aviation (unknown, but likely over \$2 billion)
 - Airports
 - Industrial Aid/Corporate
 - Helicopters
 - Components Products
 - Fixed Base Operators
 - Pleasure and Business
 - Non-owned Aircraft Liability
 - Unmanned Air Vehicles
 - Everything else

Characteristics of the Aviation Insurance Market

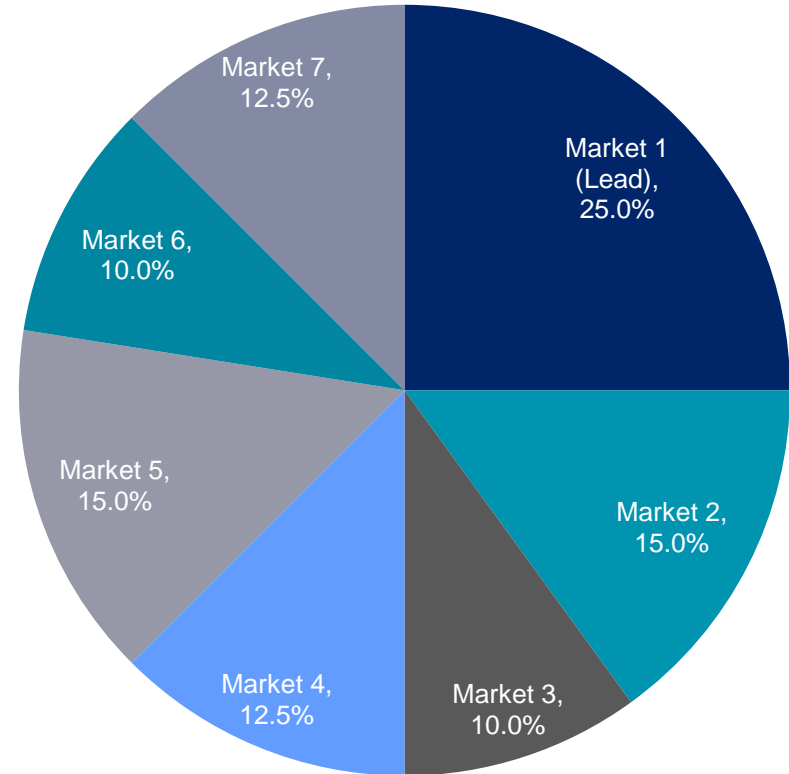
- Small niche market
- Diverse set of exposures
- Catastrophic loss potential
- Relatively small number of risks (defies law of large numbers)
- Mostly reinsurance dependent (spreads the risk where large numbers do not)
- Very broad policies, usually manuscript to individual needs
- Volatile marketplace
- Highly subjective rating methodology, influenced by actuarial models
- Human factors as the cause of major losses
- ***Market relationships are key – often a tricky issue in a public entity RFP or quotation process***

Two Main Types of Placements

Horizontal

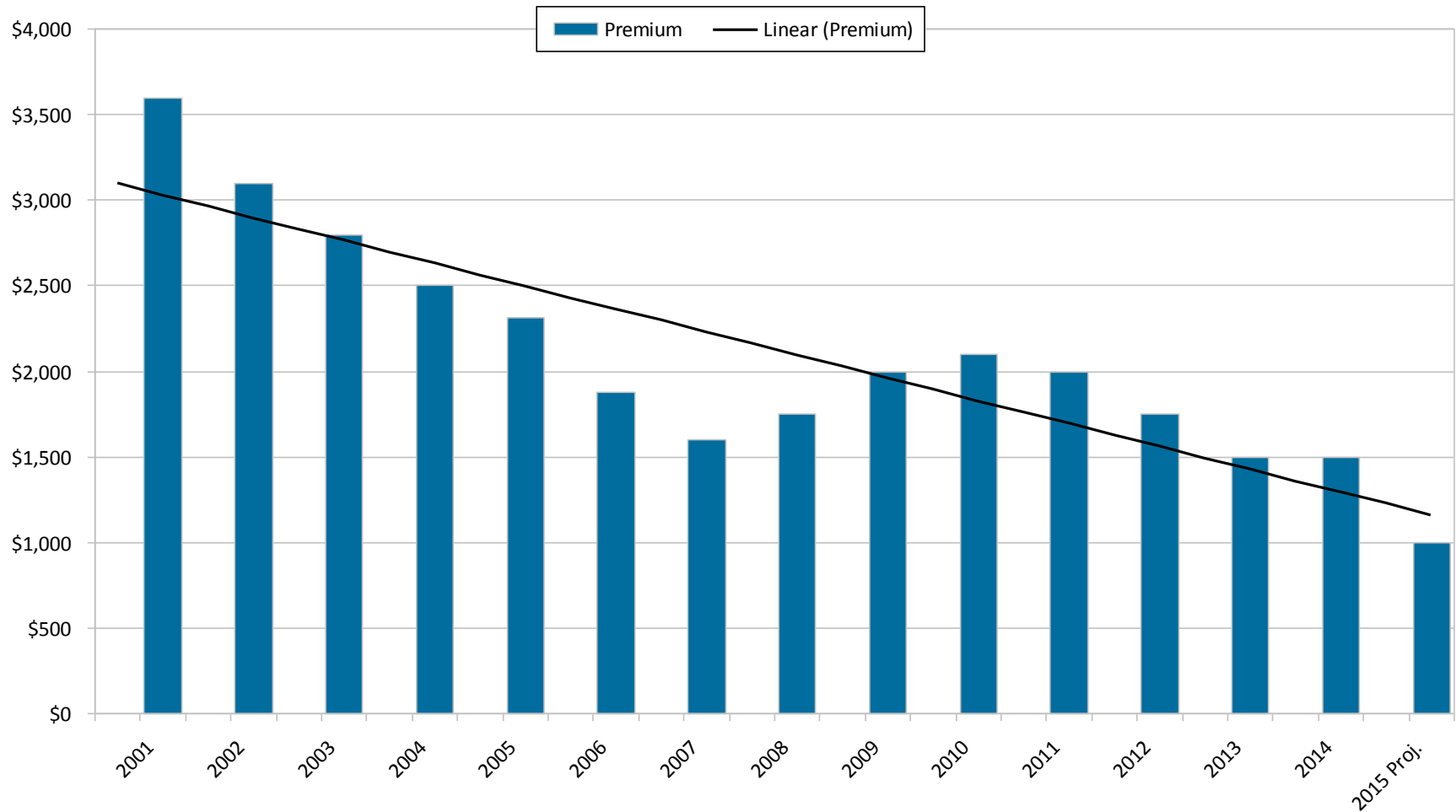


Vertical/Quota Share



Market Analysis – Airline Market Cycle (Indicative of Overall Market)

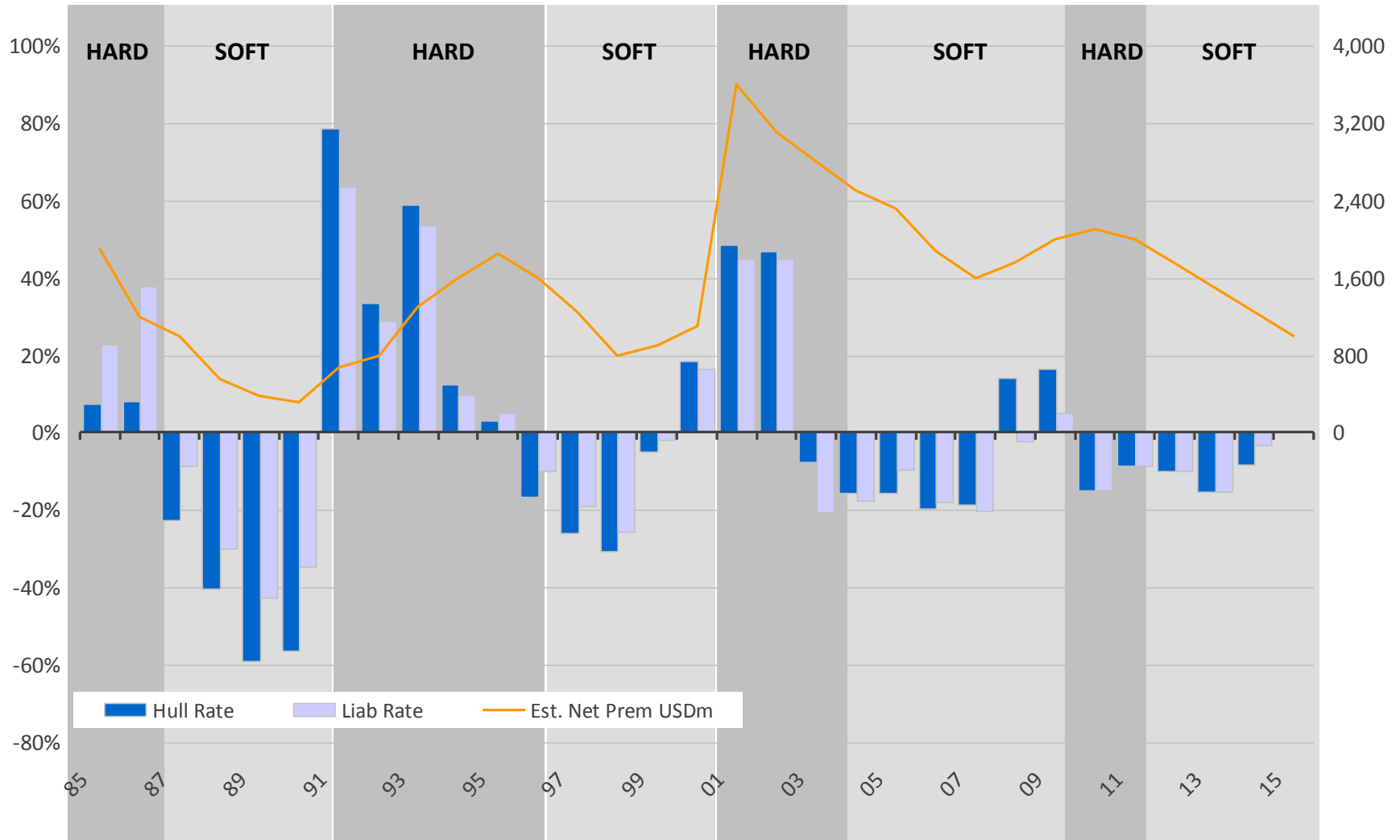
Airline Market Since 9/11



Figures as at August 2015

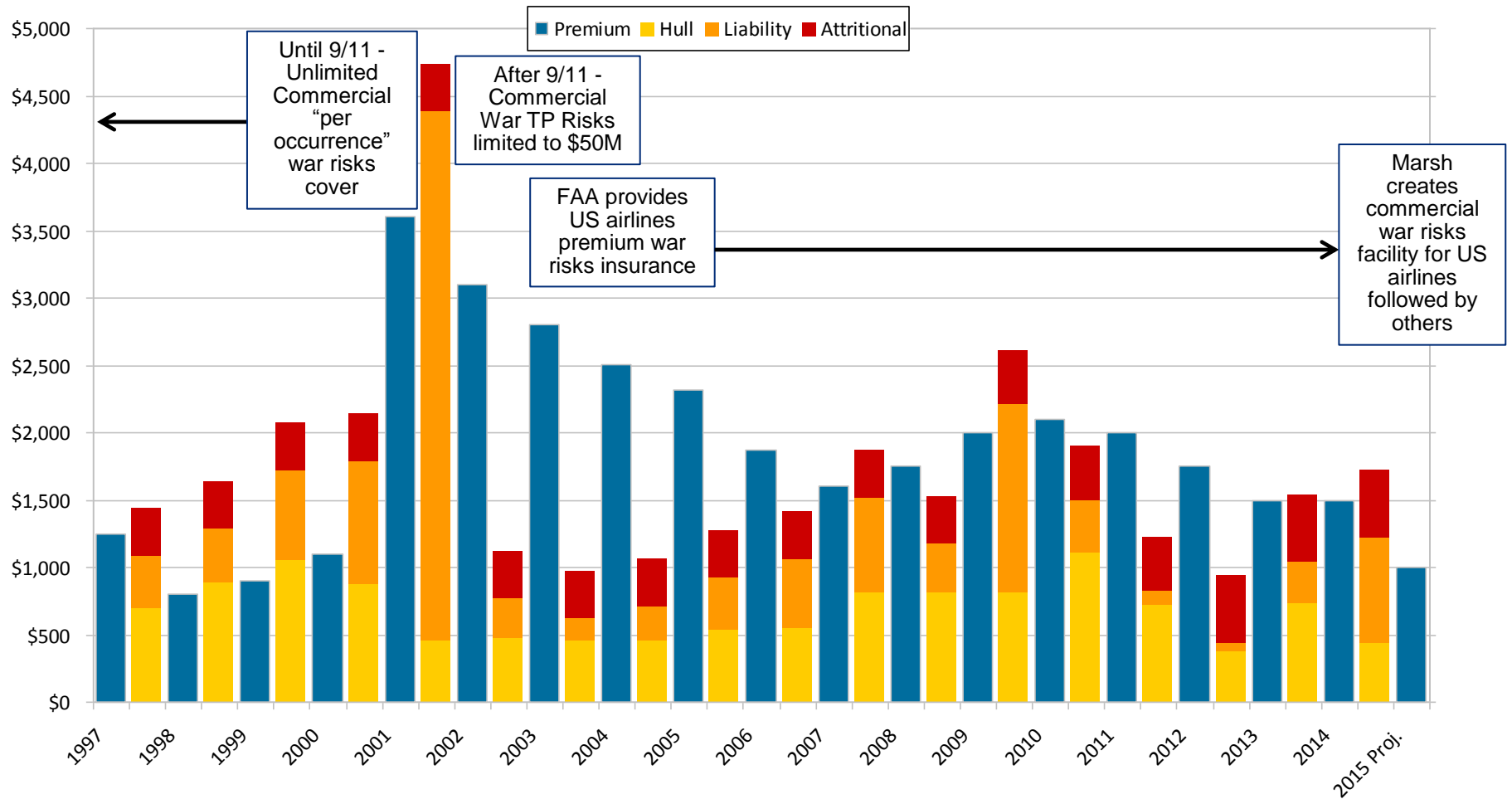
Market Analysis – Airline Market Cycle (Indicative of Overall Market)

Rate and Premium Changes



Market Analysis – Airline Market Cycle (Indicative of Overall Market)

Airline Historical Premium and Claims



Figures as at August 2015

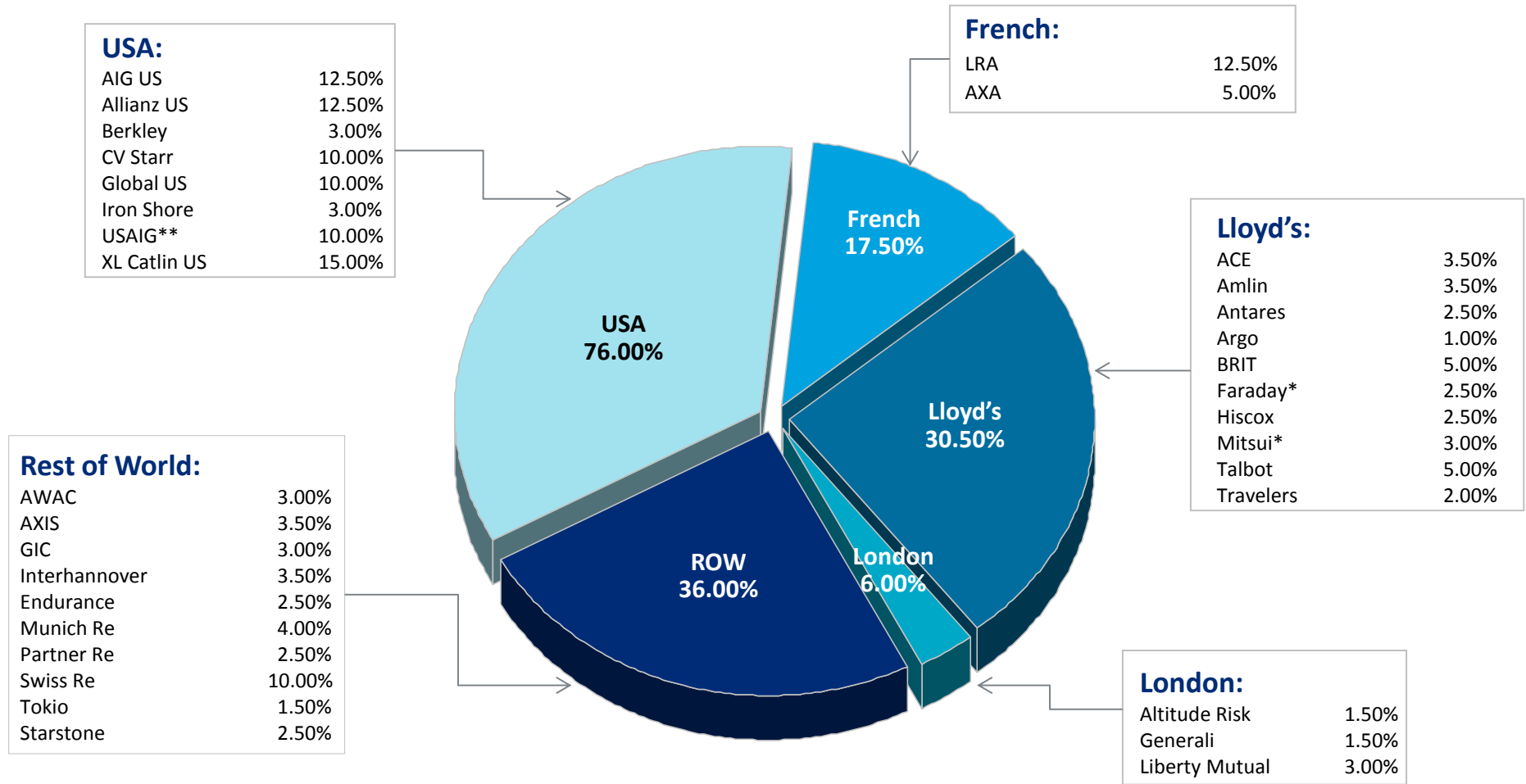
Main Factors Affecting the Market Cycle

- Available capacity (either actual or deployed)
- Loss activity
- Multi-line insurers
- Catastrophe losses (aviation or non-aviation)
- Geopolitical environment
- Reinsurance costs & availability
- Investment results

2016 Overview

Theoretical Airline Capacity

Based on a US major airline with a CSL of \geq \$1.5bn



* Can, but do not tend to participate
 ** Traditionally lead only

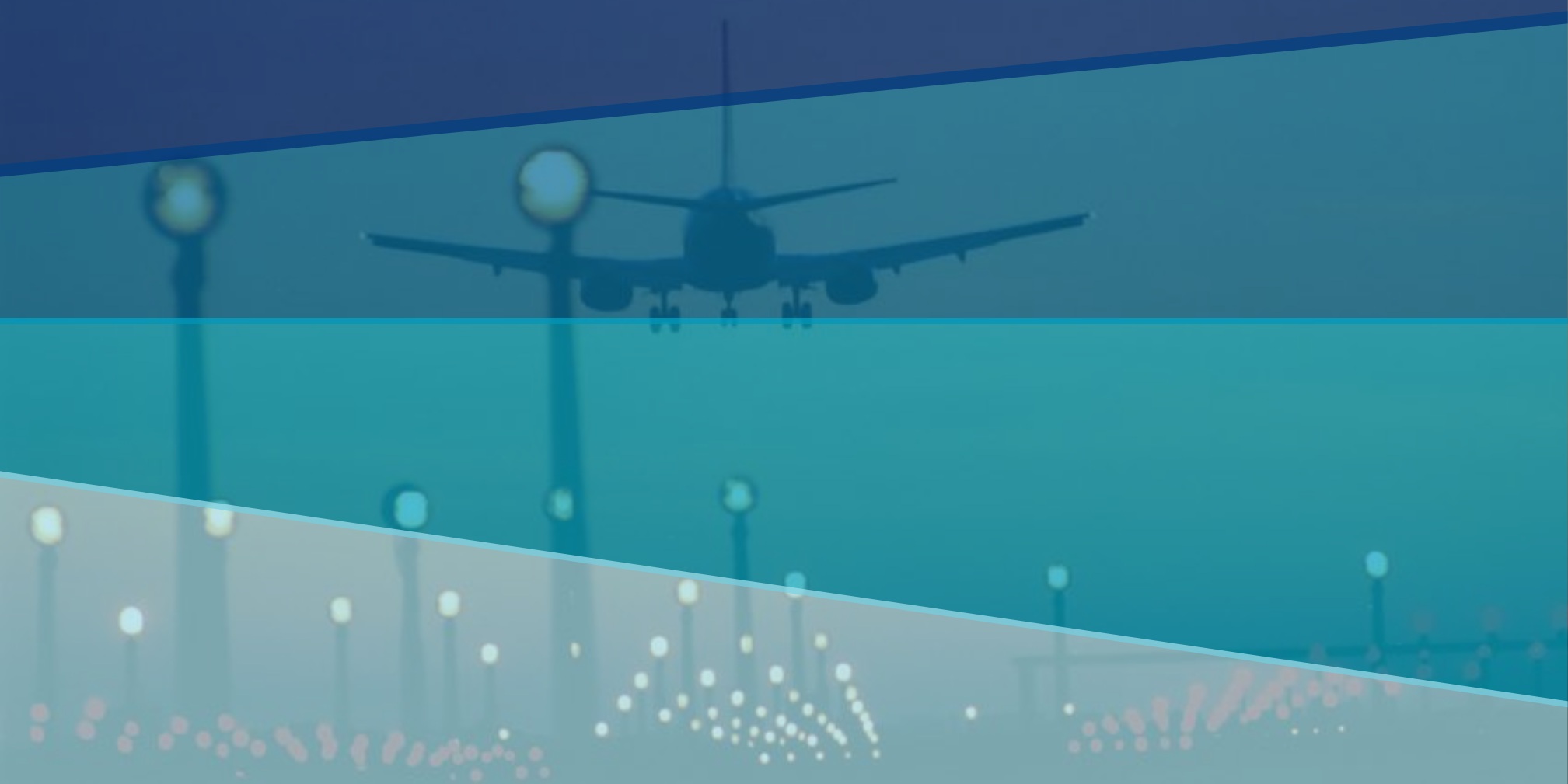
Total Capacity: 166.00 %

Something to Watch - Recent Merger Activity

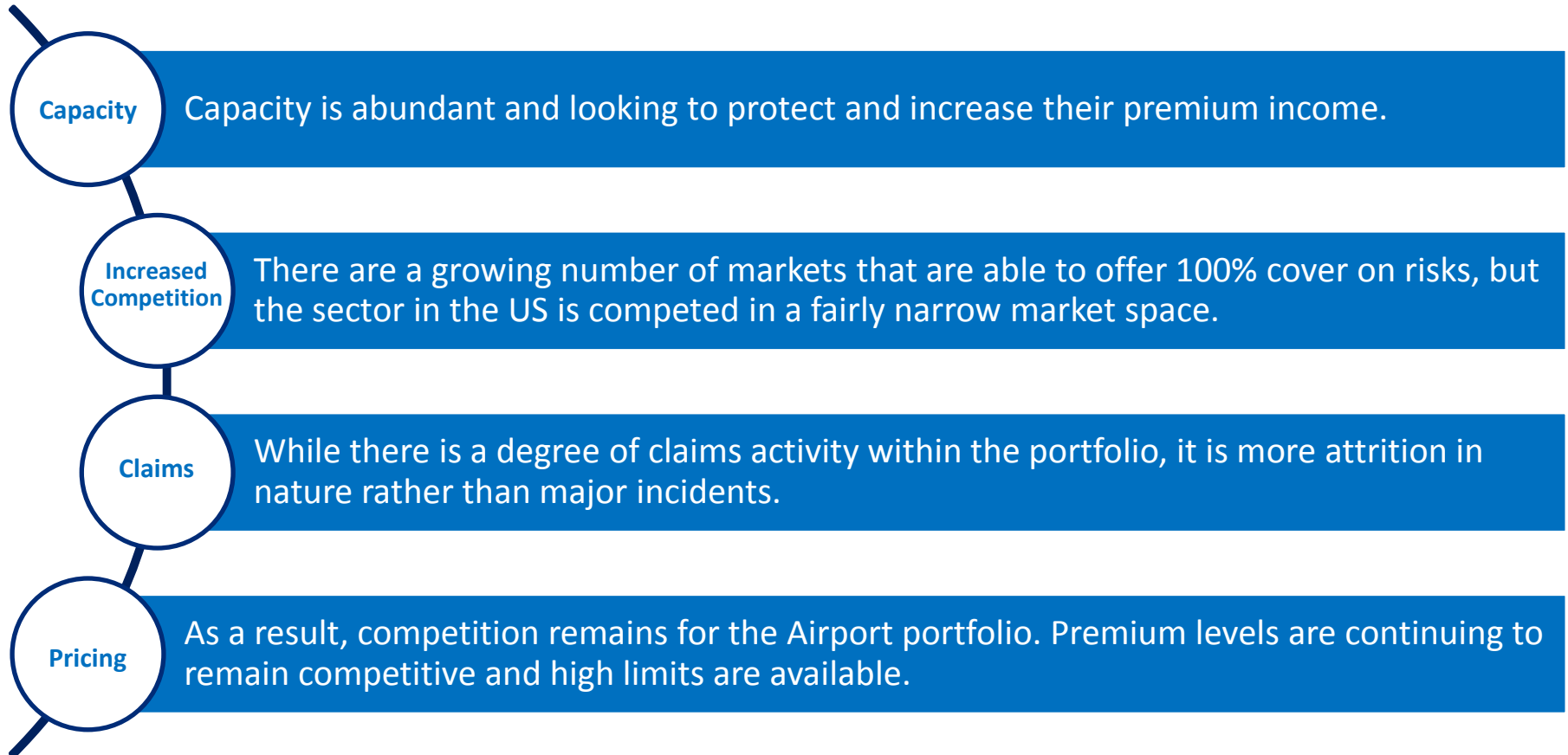
- XL - Catlin – Completed (each previously 7.5% now 15% & W. Brown & Associates changes from Catlin paper to Endurance)
- Partner Re – Axis (terminated in favor of Exor acquiring Partner Re)
- ACE – Chubb (expected to be completed 1st quarter 2016)
- Amlin – Mitsui (each 3-3.5% shares)

Section Two

CONSIDERATIONS FOR AIRPORTS



Current Market Conditions



Positive conditions for Insurance Buyers

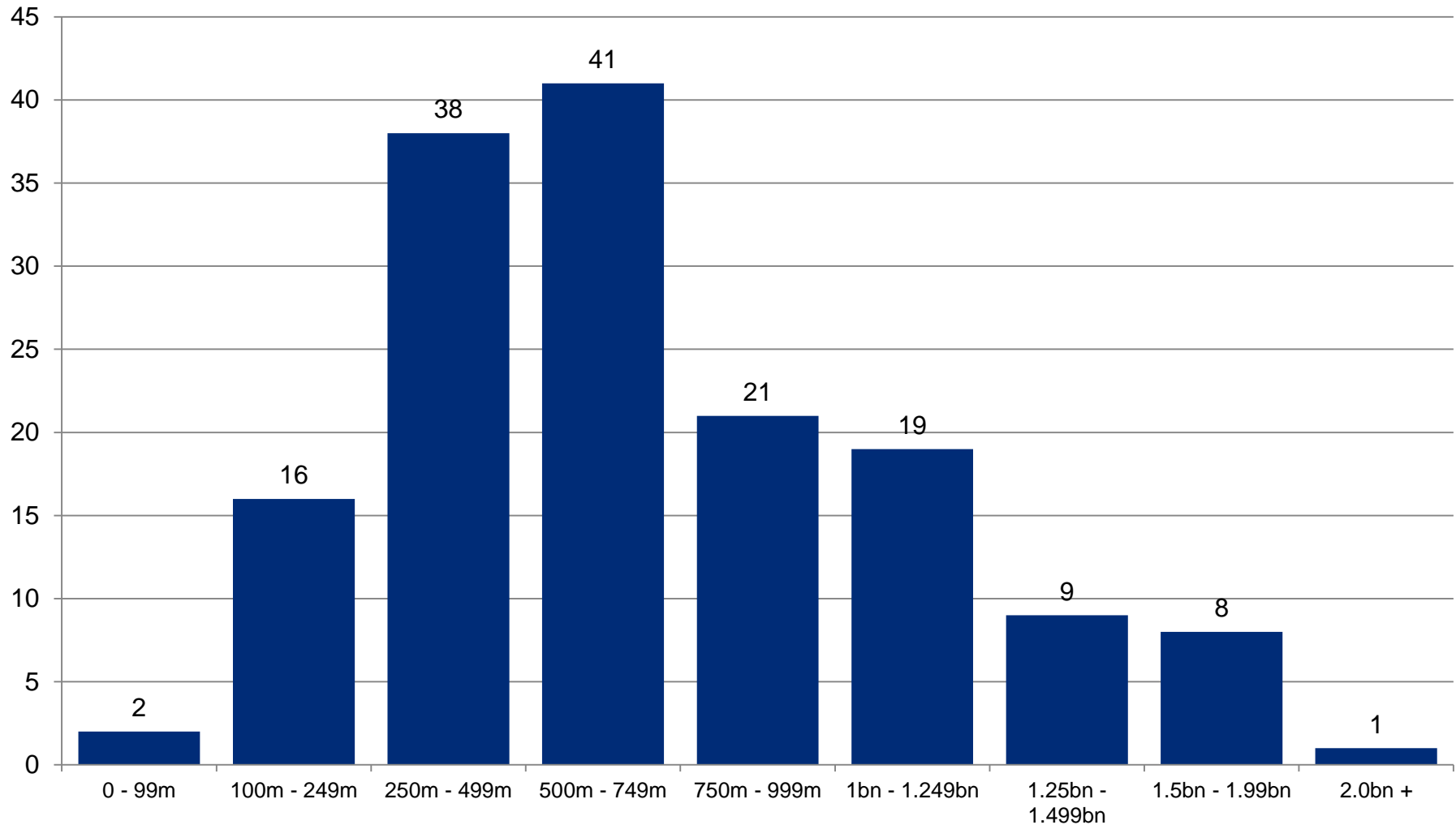
Market Analysis – Diverse Airport Risk Characteristics

- Airports differ in their exposures
 - Some are part of a Port with significant non-aviation exposures while others are pure aviation exposures
 - Different exposures exist (i.e. some have police exposures, some have operational exposures, risk transfer issues, etc.)
 - State and local jurisdictions can impact legal liability exposure
 - There are no standard limits carried in the US, from as low as \$50M to over \$1 billion (capacity exceeds \$2 billion)
 - Most buy War & Allied Perils and TRIA/TRIPRA, but some do not based on a theory of sovereign immunity
 - Deductibles/SIRs vary based upon loss experience and risk management philosophy
 - Contractual risk transfer to operators is usually extremely strong
 - Strong insurance limit requirements are essential to success of the contract risk transfer
- Therefore, it is important to work with your broker and insurer(s) to identify the best financial decision based on benchmarking, risk appetite and individual exposures

Market Analysis – Main US Airport Market Capacity

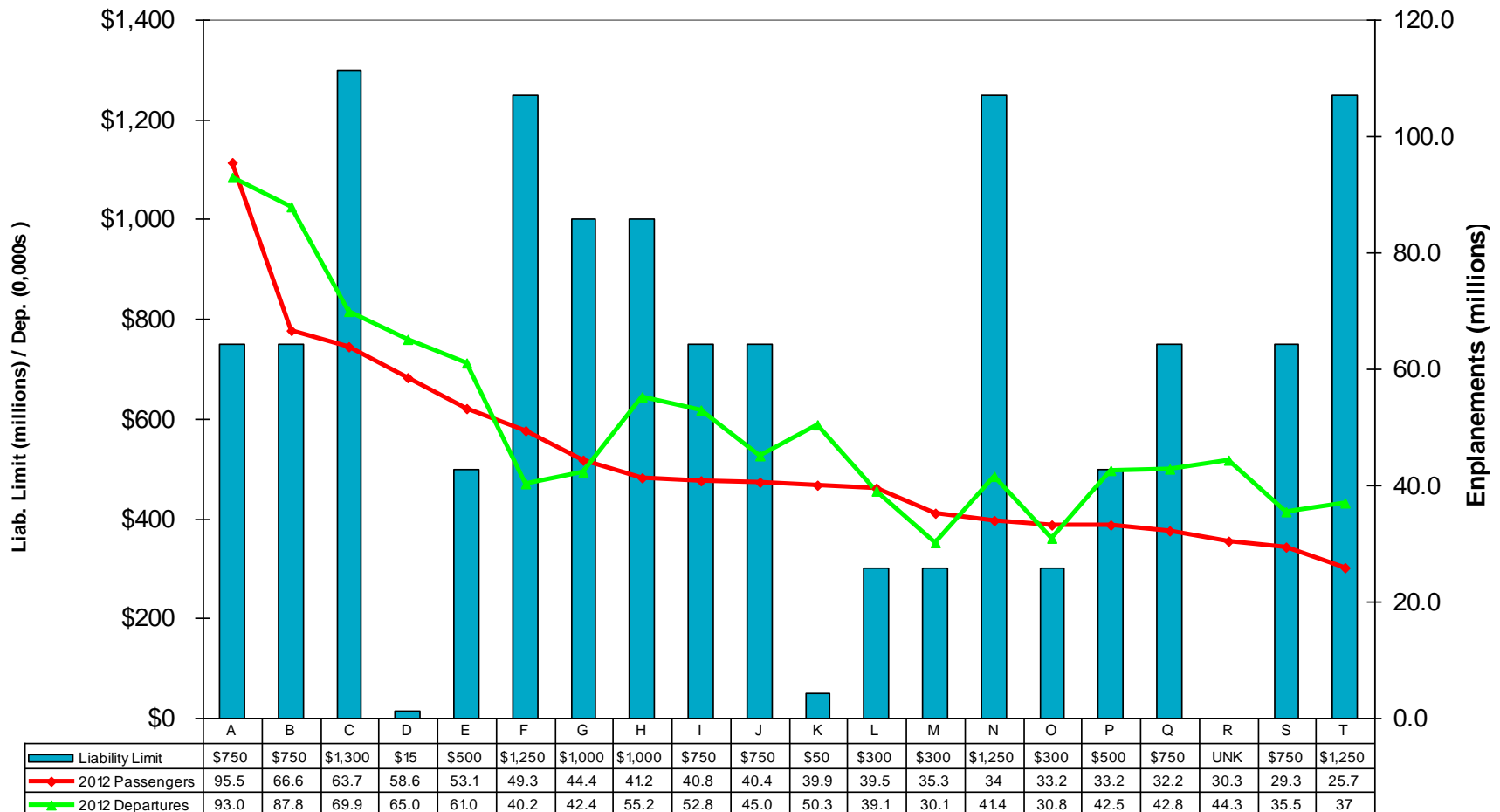
Company	Insurer	Max Limits	Vertical / 100%	Excess War (AVN 52)	Comments
ACE USA	ACE Property & Casualty Insurance Company	\$750,000,000	100%	Yes	Primary Liability: \$100M Excess War Liability max \$150M
AIG	Commerce and Industry Insurance Company or National Union Fire Insurance Co.	\$1,000,000,000	Both	Yes	Excess War Liability:\$150M
Allianz	Allianz Global Risk US Company	\$300,000,000	Vertical	Yes	Started in US in 2005
Berkley Aviation	StarNet or Gemini	\$100,000,000	Both	No	Started in Aviation in 2005 100% @ \$50M with enplanement limits and will offer a small vertical placement
C. V. Starr	Federal Insurance Company or Starr Indemnity	\$500,000,000	Both	Yes	Started in US in 2005 Enplanements < 5,000,000: 100% >5,000,000: Quota Share
Global Aerospace	Member Companies	\$300,000,000	Both	No	
Old Republic (fka Phoenix Aviation Mgrs)	Old Republic Insurance Company	\$100,000,000	100%	N/A	
QBE	QBE of the Americas	\$250,000,000	100%	Yes	Started in the US in 2011 Excess Liability: Max \$500M
Swiss Re	North America Elite	\$300,000,000	100%	N/A	Started in the US in 2011 Claims and Loss Control Team–will use outside adjusters for large claims.
W. Brown & Associates	Catlin Insurance Group (4/1 to be Endurance)	\$300,000,000	100%	N/A	Limits are reviewed on case-by-case basis.

Airport Limit Study – 155 Airports Worldwide



US Airports – Limits Carried

Top 20 Airports by Enplanements



Note: Source for passengers and departures is the ACI database.

Airport Owners & Operators and Service Providers Involvement in Major Losses

Date of Loss	Operator	Description	Fatal/Inj.	Involvement	Estimated Loss	Overall Loss
09/11/2001	A	Claims arising out of the terrorist attacks	3209	Airport Authority	USD 45,000,000	USD 4,230.0m
10/08/2001	B	MD87 & Cessna Citation collided during foggy weather	118	Airport / CAA	EUR 78,000,000	USD 160.0m
07/01/2002	C	Mid-air collision over Southern Germany between B757 cargo aircraft and TU-154. Error by ATC failed to prevent collision	71	ATC	CHF 48.810,000 + GBP 750,000 (fees)	USD 125.3m
05/23/2004	D	Collapse of Terminal building	2	Airport	EUR 28,00,000	USD 28.0m
05/07/2005	E	Metro 23 crashed on approach to Airport Dispute over ATC data provided to airline	13	ATC / CAA	USD 9,822,469	USD 27.2m
08/02/2005	F	A340 overran runway on landing at Airport	0 + 43 inj.	ATC / Airport	CAD 14,215,462	USD 179.9m
05/05/2006	G	Various aircraft destroyed when fire broke out in a hangar at airport	Nil	Airport	USD 30,000,000 + GBP 2,585,690 fess	USD 164.3m
05/24/2006	H	Fire broke out in the Cargo holding area at the airport destroying various spares and cargo	Nil	Airport	USD 25,958,075 EUR 4,362,784	USD 41.6m

Airport Owners & Operators and Service Providers Involvement in Major Losses

Date of Loss	Operator	Description	Fatalities	Involvement	Estimated Loss	Overall Loss
05/24/2006	I	Fire broke out in the Cargo holding area at the airport destroying various spares and cargo	Nil	Airport	USD 25,958,075 EUR 4,362,784	USD 41.6m
07/17/2007	J	A320 skidded off the runway on landing at airport during a severe rain storm	199 + 17	Airport	USD 35,000,000 + GBP 850,000 fees	USD 559.0m
09/16/2011	K	Crash of aircraft into the crowd during the air races	11	Event	USD 105,853,863	USD 105.8m
06/13/2012	L	Employee of airport contractor was struck by an Authority Police vehicle while he was crossing the road, resulting in severe brain injuries	1 inj.	Airport	USD 28,000,000 + fees	USD 28.0m
07/06/2013	M	Crash of B777-200ER on landing after hitting an airport perimeter wall	3 + 93	Airport	USD 1,400,000	USD 380.1m
04/28/2014	N	A vehicle hit concrete separating barriers which were incorrectly linked and collapsed onto plaintiff resulting in the loss of both legs	1 inj.	Airport	USD 14,100,000	USD 14.1m
05/07/2015	O	Fire broke out in terminal which was triggered by an electrical fault	Nil	Airport	TBA	TBA

“War Risks Coverage” – Why is it important?

WAR, HI-JACKING AND OTHER PERILS EXCLUSION CLAUSE (AVIATION)

This Policy does not cover claims caused by

- (a) War, invasion, acts of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, martial law, military or usurped power or attempts at usurpation of power.
- (b) Any hostile detonation of any weapon of war employing atomic or nuclear fission and/or fusion or other like reaction or radioactive force or matter.
- (c) Strikes, riots, civil commotions or labour disturbances.
- (d) Any act of one or more persons, whether or not agents of a sovereign Power, for political or terrorist purposes and whether the loss or damage resulting therefrom is accidental or intentional.
- (e) Any malicious act or act of sabotage.
- (f) Confiscation, nationalisation, seizure, restraint, detention, appropriation, requisition for title or use by or under the order of any Government (whether civil military or de facto) or public or local authority.
- (g) Hi-jacking or any unlawful seizure or wrongful exercise of control of the Aircraft or crew in flight (including any attempt at such seizure or control) made by any person or persons on board the Aircraft acting without the consent of the Insured.

Furthermore this Policy does not cover claims arising whilst the Aircraft is outside the control of the Insured by reason of any of the above perils. The Aircraft shall be deemed to have been restored to the control of the Insured on the safe return of the Aircraft to the Insured at an airfield not excluded by the geographical limits of this Policy, and entirely suitable for the operation of the Aircraft (such safe return shall require that the Aircraft be parked with engines shut down and under no duress).

Perils covered by Extended Coverage Endorsement

AVN48B
1.10.96

Important Provisions of Extended Coverage Endorsement (paraphrased)

- **Aggregate** sublimit available up to \$150,000,000 embedded on most U.S. insurer policies where written 100% (higher limits are available through a separate placement)
- Automatic termination in respect of sub-paragraph (a) of War, Hi-jacking and Other Perils Exclusion Clause AVN48B
 - Upon the hostile detonation of any weapon of war employing atomic or nuclear fission and/or fusion; or
 - Other like reaction or radioactive force or matter wheresoever or whensoever such detonation may occur and whether or not the insured aircraft may be involved;
 - All coverage in respect of any of the insured aircraft requisitioned for either title or use upon such requisition.
- Other Provisions
 - Review of Premium or Geographic Limits – 7 days notice
 - Perils Insured under Paragraphs (c) to (g) – 48 hours in the event of a hostile detonation as above
 - Cancellation – 7 days notice

Other Issues for Airports

- Incoming certificate and limit requirements
- TRIA/TRIPRA
- Coordination of non-aviation coverages (such as Automobile Liability, General Liability, etc.)
- Significant exclusions (such as such as Noise/Pollution, Asbestos, etc.)
- Claims coordination – broker resources, insurer claims personnel, outside counsel, claimants, etc.
- Status of FAA SMS requirements for Airports
- Utilizing the loss control services available from Insurers
- Cyber exposures
- Developing issues, i.e., drones/UAVs, TNCs, etc.

