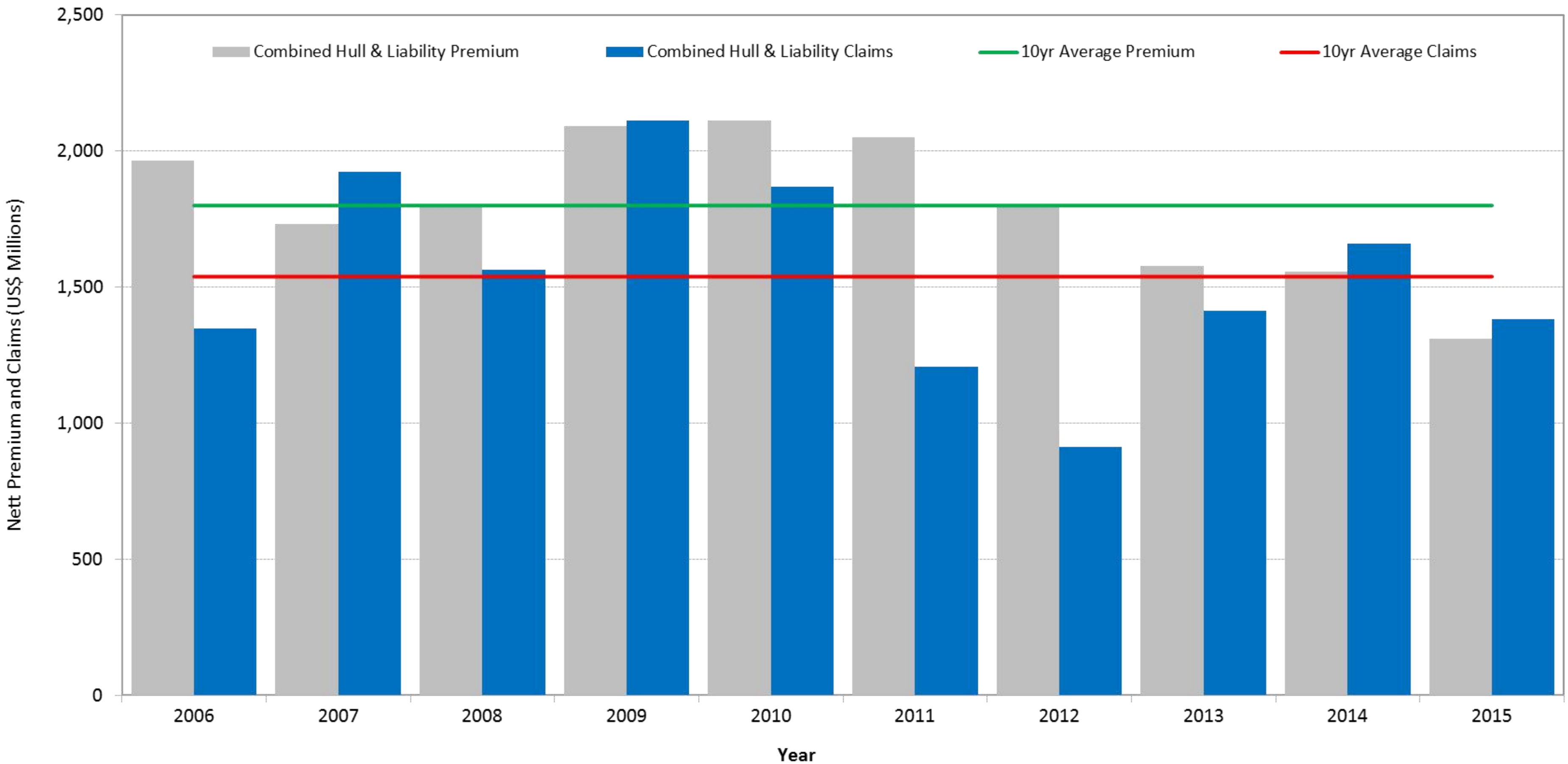
AIRLINE INSURANCE MARKET UPDATE

2016

GLOBAL AIRLINE HULL & LIABILITY PREMIUM AND CLAIMS



Source: JLT Aerospace Market Intelligence Database as at 11/01/2016
Notes: Based on London Lead Prices. Claims on a calendar year basis. Claims figures based on reported losses and reserves plus a pro-rata attritional estimate. Excludes War risks.

2015 MAJOR AIRLINE LOSSES (>US$10M)

Loss Date	Operator	Aircraft Type	Hull All Risks	Passenger & Third Party	Excess AV52	Total Hull & Liabs	Airline Hull War	Market Total
10-Jan-15	Ethiopian Airlines	B737-400	$17,100,000	-	-	$17,100,000	-	$17,100,000
04-Feb-15	TransAsia Airways	ATR-72-600	$25,700,000	$45,000,000	-	$70,700,000	-	$70,700,000
04-Mar-15	Turkish Airlines	A330	$120,500,000	-	-	$120,500,000	-	$120,500,000
08-Mar-15	SpiceJet	Q400	$26,000,000	-	-	$26,000,000	-	$26,000,000
24-Mar-15	Germanwings	A320-200	-	$288,250,000	-	$288,250,000	$11,750,000	$300,000,000
29-Mar-15	Air Canada	A320-200	$10,000,000	-	-	$10,000,000	-	$10,000,000
10-Apr-15	Yemenia Airways	B747-SP	-	-	-	-	$40,000,000	$40,000,000
14-Apr-15	Asiana Airlines	A320-200	$56,881,307	-	-	$56,881,307	-	$56,881,307
25-Apr-15	Turkish Airlines	A320-200	$38,000,000	-	-	$38,000,000	-	$38,000,000
10-May-15	Joy Air	MA60	$16,750,000	-	-	$16,750,000	-	$16,750,000
16-Aug-15	Trigana Air	ATR-42-300	$3,000,000	$8,000,000	-	$11,000,000	-	$11,000,000
08-Sep-15	British Airways	B777-200ER	$21,400,000	-	-	$21,400,000	-	$21,400,000
31-Oct-15	MetroJet	A321-231	-	$84,000,000	-	$84,000,000	$23,820,765	$107,820,765
06-Nov-15	Batik Air	B737-9GPER	$10,250,000	-	-	$10,250,000	-	$10,250,000
04-Dec-15	SpiceJet	Q400	$27,000,000	-	-	$27,000,000	-	$27,000,000
		Total:	**$372,581,307**	**$425,250,000**	**$0**	**$797,831,307**	**$75,570,765**	**$873,402,072**

TOTAL HULL/LIABILITY *(INC. ATTRITIONAL ESTIMATE):*	$1,388,337,200
TOTAL AIRLINE HULL WAR *(INC. ATTRITIONAL ESTIMATE):*	$89,370,765
ESTIMATED OVERALL AIRLINE MARKET TOTAL:	**$1,487,202,072**

Note: Excludes General Aviation losses which can also be significant.
Source: JLT Aerospace Market Intelligence Database as at 11/01/2016.

2015 MAJOR AIRLINE LOSS SUMMARY

- Combined Hull and Liability loss figure (including an attritional estimate) was around USD1.38bn in 2015
- This is below the USD1.6bn recorded for 2014, but marginally above the 5-year average
- Our fatality figure for the year stood at 547, compared to 951 recorded in 2014
- The two biggest losses of 2015 (Germanwings and MetroJet) both involved “All Risks” and Hull War markets
- Whilst 2015 was a far better year for airline safety compared to 2014 - the airline insurance market is running at a loss with claims outstripping the premium generated
- Whilst the loss “miss factor” whereby not all markets are exposed to every loss, means that the claims experience of each underwriter is varied - any profit is likely to be minimal
- Once operational costs and expenses are also factored in then the financial position for underwriters becomes much worse

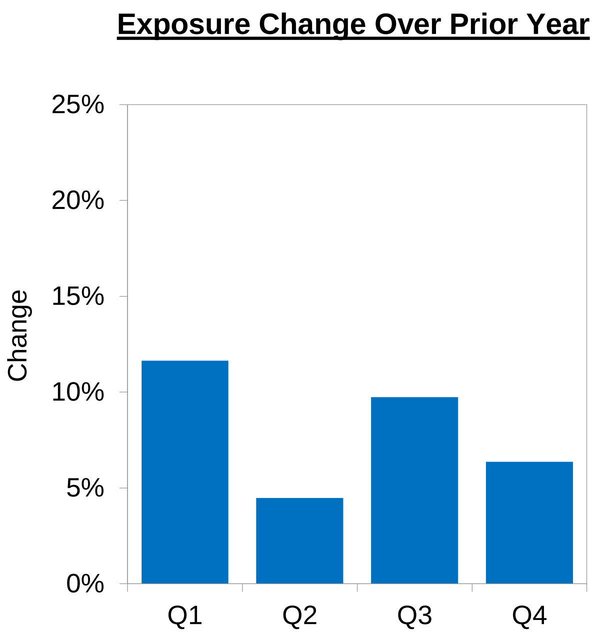
HULL & LIABILITY - EXPOSURE, RATES & PREMIUM

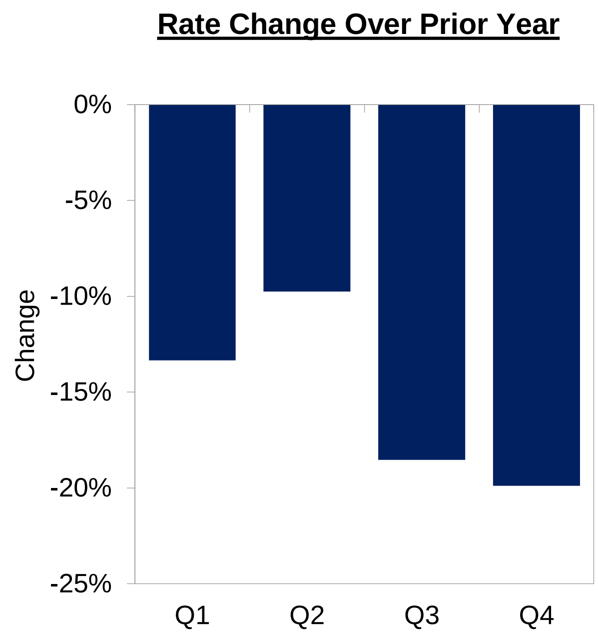
- The premium and rating reductions seen in 2015 are notably larger in comparison to those of 2014
- This disparity is due to the fact that many of 2014's renewals were negatively affected by a period of 'hard' market conditions at the end of the year following a series of major airline losses
- 2015 however witnessed a far more stable environment with the majority of accounts receiving reductions

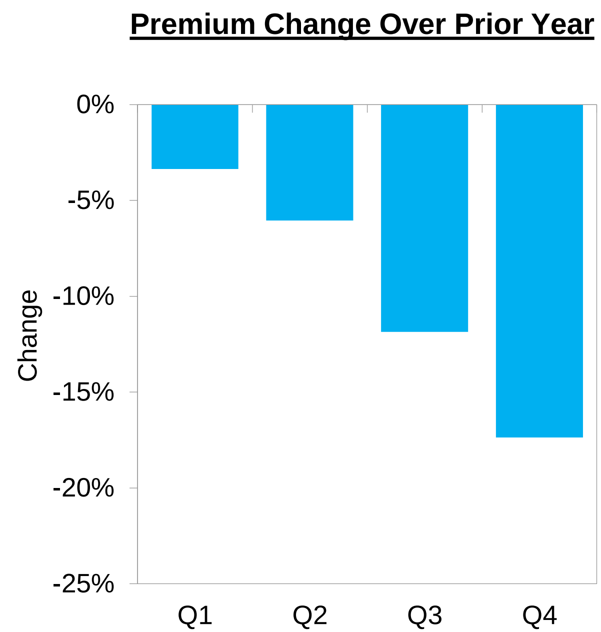
	Average Fleet Value % Change	Passengers % Change	Hull Rate % Change	Liability Rate % Change	Overall Premium % Change
2014	+6.7%	+5.3%	-12.94%	-6.13%	-3.4%
2015	**+6.2%**	**+6.9%**	**-16.11%**	**-19.05%**	**-12.5%**

Source: JLT Aerospace Market Intelligence Database as at 11/01/2016.

HULL & LIABILITY - 2015 EXPOSURE, RATES & PREMIUM

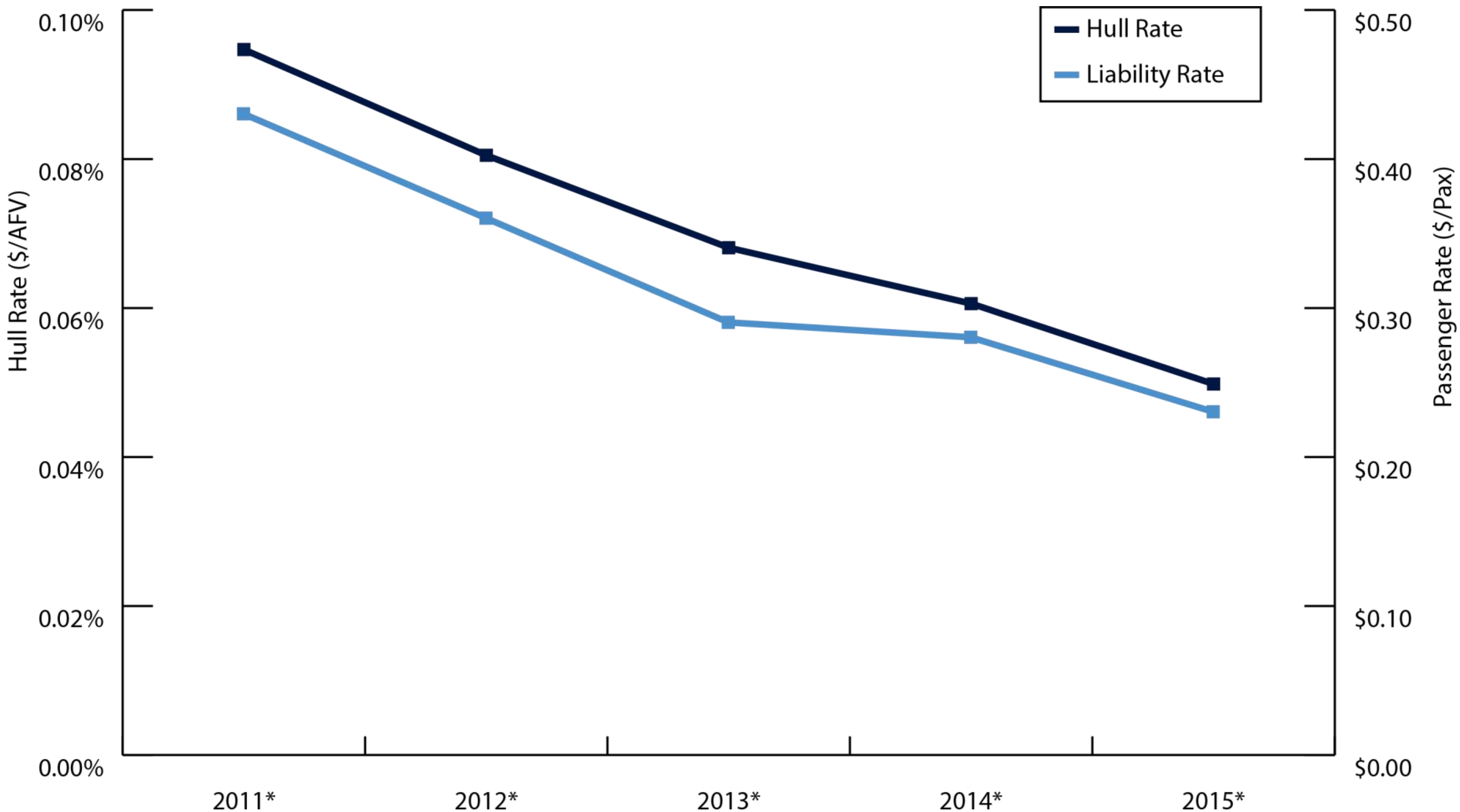






Risk exposure is increasing year on year but premium volumes continue to reduce - combined these factors have contributed to significant rate reductions.

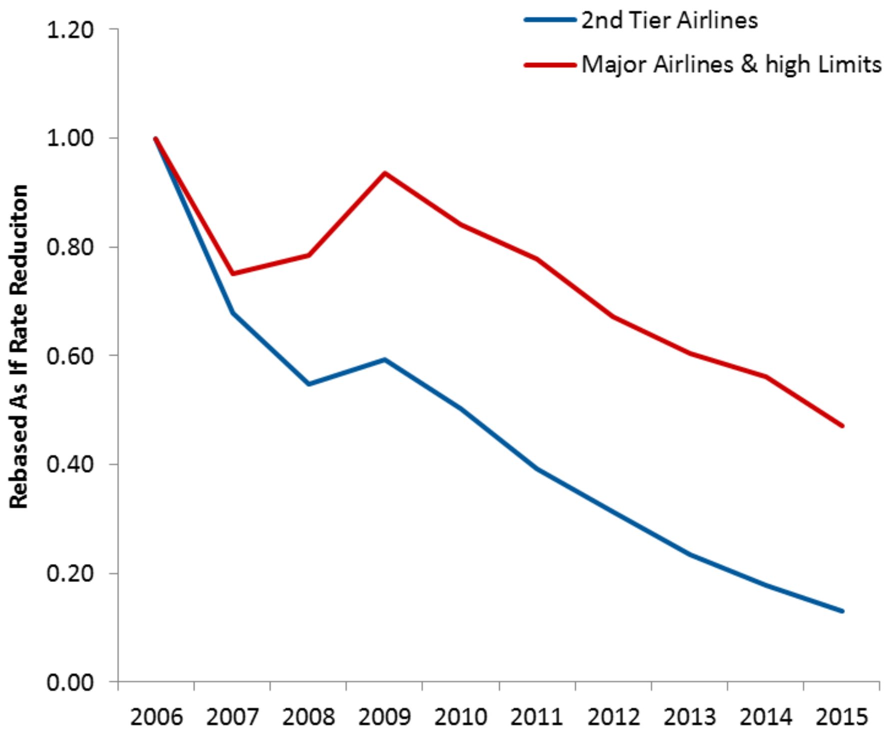
RATE REDUCTIONS OVER 5 YEARS



HULL & LIABILITY - EXPOSURE, RATES & PREMIUM

- Combined Hull and Liability losses of around $1.38bn in 2015 versus annual premium of around $1.32bn
- High capacity levels continue to dampen insurers' ability to increase pricing
- As such the market continues its downward rating trajectory - with double-digit reductions the 'norm'
- However renewal results are wide ranging - with distinctly different deals being done for individual risks
- Long-term deals are increasing as buyers become aware of the historically low rating we are witnessing
- Underwriters commit to these deals to improve client relationships and retain market share

MARKET TRENDS - CONTINUING TWO TIER MARKET



- Whilst the market continues its downward rating trajectory a ‘two-tiered’ market remains clearly evident in the renewal analysis
- In general lower limit carriers with strong exposure growth are experiencing more significant improvements in their rates over their high-limit counterparts
- Insurers now believe that most major legacy/ high-limit airlines have probably reached rock bottom in terms of pricing and so are resisting giving these carriers further major reductions

Major airlines defined as carriers with limits >US$1.5bn, with low growth <15% and loss ratio <200%.

2nd Tier airlines defined as carriers with limits ≤US$1.5bn, with high growth >15% and loss ratio <200%.

Rebased to show divergence and proportional differential over 10 years. Source: JLT Aerospace Market Intelligence Database.

सामान
LUGGAGE
उम
NC
98730
द्वितीय श्रेणी
SECOND CLASS

INTERNATIONAL MARKET CAPACITY - NON US AIRLINES

Based upon a liability limit of USD1.5bn we estimate the total ‘A’ rated capacity theoretically available for a “clean” non-US airline risk to be in the region of **224%.**

Note, the line sizes illustrated are theoretical only and any capacity deployed by an underwriter is subject to their individual criteria. A number of factors including, price, loss record, geographical restrictions, sanctions, etc. will effect an underwriters line size and whether or not they choose to write an account.

Market	Typical	S&P Rating
ACE Global Markets	10.00%	AA-
ADNIC	1.00%	A-
Africa Re	1.00%	A-
AIG Europe	12.50%	A+
Allianz (AGCS)	10.00%	AA
Allied World Europe	1.50%	A-
Altitude Risk Partners	5.00%	A (Pool)
Amlin Syndicate	6.00%	A+
Antares	1.50%	A+
Apollo Aviation	2.00%	A+
Argo Syndicate	1.00%	A-
ARK Syndicate	2.00%	A+
Asia Capital Re	5.00%	A-
Aspen	3.33%	A
Atrium	2.00%	A+
Aviabel	1.00%	A-
AXA Corporate Solutions	10.00%	A+
Axis Bermuda	1.00%	A+
Beazley	6.67%	A+
BRIT	5.00%	A+
Cathedral	2.00%	A+
Chaucer	3.00%	A+
Starr Insurance	2.50%	A+
Endurance Insurance	2.50%	A+
Faraday	3.00%	AA+
Fidelis Insurance	1.50%	A-

Market	Typical	S&P Rating
Generali	0.75%	A (AM Best)
GICI	2.00%	A- (AM Best)
Global Aerospace (GAUM)	10.00%	AA- (Pool)
Hiscox	3.00%	A+
Houston Casualty Co. (HCC)	3.33%	AA-
Inter Hannover	3.00%	AA-
Kiln	1.00%	A+
KRIC	2.00%	A-
La Reunion Aerienne	13.00%	AA
Liberty Mutual	4.00%	A+
Mapfre Global Risks	5.00%	A
Mitsui	5.00%	A+
Munich Re	10.00%	AA-
New India	2.00%	A- (AM Best)
Oman Insurance Company	2.00%	A-
Partner Re	5.00%	A+
MSP. Pritchard	3.00%	A+
SCOR	2.00%	AA-
Sirius	2.00%	A-
Swiss Re	10.00%	AA-
Talbot	7.50%	A+
Tokio Marine & Fire	2.00%	AA-
Torus Insurance	4.00%	A- (AM Best)
Travelers Syndicate	2.50%	A+
W.R. Berkley	3.33%	A+
XL Catlin	10.00%	A

INTERNATIONAL MARKET CAPACITY - US AIRLINES

Based upon a liability limit of USD1.5bn we estimate the total ‘A’ rated capacity theoretically available for a “clean” US airline risk to be in the region of 191%.

Note, the line sizes illustrated are theoretical only and any capacity deployed by an underwriter is subject to their individual criteria. A number of factors including, price, loss record, geographical restrictions, sanctions, etc. will effect an underwriters line size and whether or not they choose to write an account.

Market	Typical	S&P Rating
ACE Global Markets	7.50%	AA-
AIG	12.50%	A+
Allianz	12.50%	AA
Allied World	3.50%	A
Altitude Risk Partners	2.00%	A (Pool)
Amlin Syndicate	6.00%	A+
Antares	1.50%	A+
Argo Syndicate	1.00%	A-
AXA Corporate Solutions	5.00%	A+
Axis Bermuda	1.00%	A+
Brit	5.00%	A+
Catlin Syndicate	5.00%	A
Starr Insurance	12.50%	A-
Endurance Insurance	2.50%	A+
Faraday	3.00%	AA+
Fidelis	1.50%	A-
Generali	0.75%	A (AM Best)
Global Aerospace	10.00%	AA- (Pool)

Market	Typical	S&P Rating
Hiscox	3.00%	A+
Inter Hannover	3.00%	AA-
La Reunion Aerienne	13.00%	AA
Liberty Mutual	2.50%	A+
Mapfre Global Risks	5.00%	A-
Mitsui	5.00%	A+
Munich Re	10.00%	AA-
Old Republic	5.00%	A+
Partner Re	5.00%	A+
Sirius	2.00%	A-
Swiss Re	10.00%	AA-
Talbot	5.00%	A+
Tokio Marine & Fire	2.00%	AA-
Torus Insurance	5.00%	A- (AM Best)
Travelers Syndicate	2.50%	A+
USAIG	10.00%	A+
W.R. Berkley	5.00%	A+
XL Catlin	5.00%	A

AIRLINE INSURANCE INTERNATIONAL MARKET CAPACITY

- Capacity levels remain plentiful and continue to provide significant levels of competition in the market
- In 2015, we witnessed new aviation market entrants, including Apollo, Fidelis, Endurance, HDFC Ergo
- We are yet to see any major markets withdraw from the class altogether - the situation remains fragile
- Markets are monitoring certain coverage's, such as Hull War, as they now deem the business unprofitable
- Underwriters are becoming increasingly selective in their rating of different risk profiles
- Recent insurer consolidation suggested a restriction in capacity was possible as underwriting shares merged
- This has not yet happened - but the real effect of these mergers could become clearer during 2016
- Plentiful capacity levels continue to influence the supply and demand equation in the market

2015 AIRLINE LEADER CHANGES (LONDON LEAD)

- A number of accounts changed their Lead insurer in 2015 as can be seen in the tables below and overleaf.

INSURED	RENEWAL DATE	BROKER	AFV (USD)	FROM	TO
Israir Airlines	01/01/15	JLT	137,854,795	AIG	XL Catlin
Mistral Air	19/01/15	Willis	85,058,219	AXA	Brit
ACT Airlines	12/02/15	JLT	271,541,667	AXA	XL Catlin
Myanma Airways	01/04/15	JLT	139,117,397	Liberty	Altitude
BH Air	10/05/15	Aon	211,530,000	AIG	Travelers
Euro Atlantic Airways	17/06/15	Willis	238,669,166	CV Starr	XL Catlin
Volga Dnepr	01/07/15	Willis	2,848,513,907	AIG	Aspen
Srilankan Airlines	11/07/15	Willis	1,424,869,399	Global	Ace
Binter Canarias	26/07/15	Willis	261,500,000	HCC	Brit
IndiGo India	28/07/15	Willis	4,611,869,099	Allianz	AXA
Tarom	01/09/15	Aon	200,000,000	XL Catlin	WR. Berkley

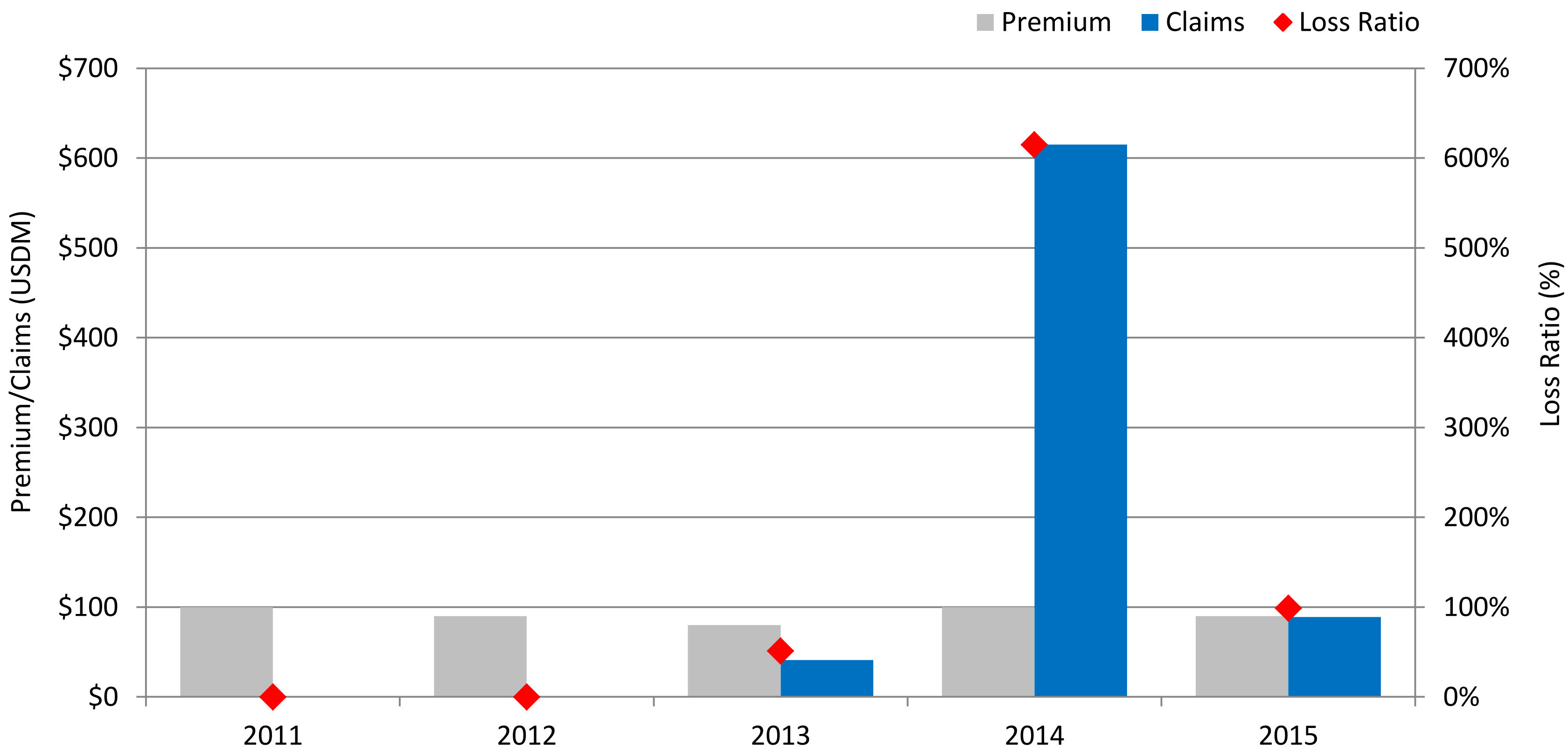
Source: JLT Aerospace Market Intelligence Database.

2015 AIRLINE LEADER CHANGES (LONDON LEAD)

INSURED	RENEWAL DATE	BROKER	AFV (USD)	FROM	TO
Air Mandalay	15/10/15	Willis	17,500,000	Kiln	QBE
Cargojet	01/11/15	Willis	447,100,000	Chaucer	Brit
Star Air	01/11/15	Aon	169,400,000	Global	Brit
Etihad Group	16/11/15	Willis	36,222,602,894	Allianz	Global
Jazeera Airways	16/11/15	JLT	350,000,000	Allianz	AIG
Jet Time	01/12/15	JLT	415,350,595	AIG	Global
American Airlines	22/12/15	Willis	37,938,034,369	Ace	Brit
Royal Jordanian	22/12/15	Willis	1,840,845,586	Allianz	Ace

Source: JLT Aerospace Market Intelligence Database.

GLOBAL AIRLINE HULL WAR PREMIUM AND CLAIMS



5 Year Average Premium = $92 million
5 Year Average Claims = $149 million

Source: JLT. Excludes General Aviation losses which can also be significant.

MAJOR AIRLINE HULL WAR LOSSES IN 2015

- Airline Hull War losses continued in 2015 following claims of over USD615 million in 2014

- Whilst the cost of the airline Hull War losses in 2015 was relatively small in comparison to 2014, on average most underwriters in the sector will have still suffered a consecutive loss making year - especially once other smaller claims, and their operational costs and expenses are factored in

Loss Date	Operator	Aircraft Type	Net Hull Reserve
24-Mar-15	Germanwings	A320-200	$11,750,000
Apr-15	Yemania Airlines	B747-SP	$40,000,000
28-Apr-15	Felix Airways	CRJ-701ER	$4,800,000
31-Oct-15	MetroJet	A321-231	$23,820,765
23-Dec-15	Pegasus Airlines	B737-800	$9,000,000
		Total:	**$89,370,765**

Note: The total loss figure above only includes major known and confirmed airline losses above US$10 million. Excludes General Aviation losses which can also be significant.
Source: JLT Aerospace Market Intelligence Database.

AIRLINE HULL WAR INSURANCE - MARKET CONDITIONS

- Global airline Hull War premium estimated at USD90 million in 2015 versus losses of around USD89m
- Global political unrest and increased terrorist threat due to ISIS.
- Reduction in capacity of over USD 100M during 2015 (Aegis, Arch, Ascot, Hardy, Pembroke). Other carriers show reduced interest (Starr, Ace)
- Despite the above Hull War market is relatively stable - we are once again seeing reductions, albeit at varied levels
- Renewals are however being treated on a case by case basis, making it hard to establish a common trend
- Large additional premiums charged for flights into “conflict areas” or “hot-spots”
- Hull War capacity remains plentiful - however many markets now deem this business unprofitable
- A continuation of losses in 2016 could well have a significant impact on both pricing and capacity levels and as such the market situation remains fragile

EXCESS AVN52E INSURANCE MARKET

- This sector of the market remains claims free since it's formation in 2001 following 9/11
- Capacity levels remain high - new markets entered the class in 2015 further adding to this
- Broker facilities dominate the market
- Premium income continues to decline - was USD1.5bn in 2002 compared to around USD80m in 2015
- Whilst not directly linked - significant Hull War losses can negatively affect pricing in this coverage
  - German Wings crash could easily have occurred over populated area
- Airlines are switching from “difference between” to an “excess basis”
- Tied to the Hull and Liability placement - a trend of larger “primary” coverage has reduced excess AVN52E placement requirements

HULL DEDUCTIBLE INSURANCE MARKET

- Limited number of Insurers which offer capacity
- Package deals with main placement – this has seen some major airlines change their deductible Insurer
- Always on 100% basis - no quota share
- Pricing is claims sensitive and usually five year average claims will determine premium level
- Insurers are looking to offer new ways other than price to entice new business - this includes:
  - Long-term (3 year) policies
  - Aggregate cover limits up to USD10m
  - Profit commissions payable up front
- Can provide terms excluding any losses covered under ‘total care package’
- Despite being loss driven, Insurers readily compete against each other for the profitable business

MARKET SUMMARY

- Conditions on the whole look set to continue excluding a series of major incidents or an external influence
- But after another loss making year in 2015 underwriters are expected to ‘push-back’ against pressure to give significant rate reductions
- As such the early 2016 renewals might prove challenging as underwriter’s test the water with what is possible
- That said the all-pervading overcapacity will likely continue to dampen underwriters ability to increase pricing
- This will keep pressure on rates and so undoubtedly reductions will still result
- However we expect to continue to see distinctly different deals being done for individual risks
- In reality this scenario is not that dissimilar to what happened in 2015 if you look at the analysis of each individual Airline’s result - so more of the same but perhaps not quite so extreme?