Willis

Willis Inspace diferentiators
Satellite insurance market overview

Vyacheslav Andriyko
General Director
Willis Insurance Brokers Limited, Ukraine

Willis Facts with emphasis to Willis Inspace – the special division within the Willis Aerospace

Overview of Willis

- Willis founded in 1828 is currently one of the largest worldwide insurance and reinsurance brokers, NYSE listed since 2001
  - Solely focuses on risk management, insurance broking and consultancy
  - 15,800 professional associates worldwide
    - 300 offices providing representation in over 100 countries
  - Annual revenues in 2005 of USD2.3 billion
    - Over 50,000 clients in 180 countries
      - 30% of FTSE 100 companies
      - 20% of Fortune 500 companies
  - Market leader in specialty areas including Aerospace, Construction and Marine

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Overview of Willis Aerospace

- Willis Inspace is an operating division within Willis Aerospace
  - Similarly, insurers combine space and aviation divisions

- Willis Aerospace “market clout” translates into additional leverage for Willis Inspace when placing space insurance
- Willis Aerospace
  - 350 dedicated employees in 18 dedicated Aerospace offices

  - World’s largest professional risk and insurance advisor to the global aerospace industry

  - In 2005, handled over USD2.4 billion of aviation premium
    - 35% of all aviation premiums in the market
    - client list includes more than 320 airlines, 200 airport and related service company clients, and 150 manufacturing clients

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Willis Inspace structure

Philip Smaje
COO Aerospace

William Lloyd
Chairman & CEO

NEW YORK

Ray Duffy
Snr Vice President

WASHINGTON

Mark Quinn
US Practice Leader

Robert Scheige
Account Manager

Marylou Bono
Technical Assistant

LONDON

Charles Barder
UK Practice Leader

Anne Routledge
Ian George
Charles Wetton
Russell Sawyer (policies)
Alan Marsh (claims)
Executive Directors

Gareth Morgan
Janette Sunshine
Mark Harvey (premiums)
Clare Winner (claims)
Divisional Directors

Sally Topple
Client Service Executive

Sophie Wilson
Personal Assistant

Mark Williamson
Space Technology Consultant

PARIS

Philippe Montpert
Managing Director

Xavier Lacombe
Deputy Managing Director

Maryline Maintier
Executive Assistant

MADRID

Alberto Gallego
Deputy MD, Willis Iberia

Colin Terry
Director

KUALA LUMPUR

Mary Fernandez
Director, Asia

Marleene M. Seth
Account Manager

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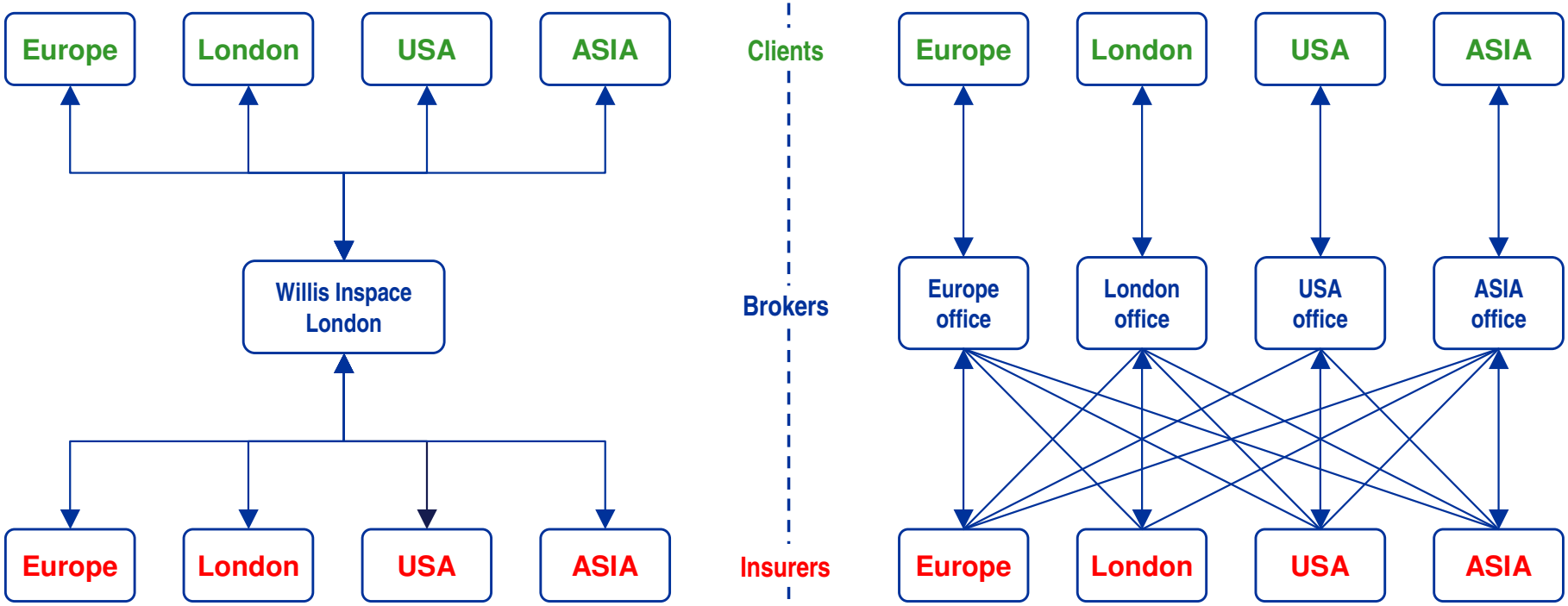
Willis Inspace centralised marketing

Willis Inspace

- Client focused single profit centre
- Centralised marketing leverage

Other brokers

- Broker focused regional profit centres
- Marketing “silos”



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Willis Inspace clients

- Satellite operators
  - Astro All Asia Networks plc
  - Broadcasting Satellite Corp (BSat)
  - DigitalGlobe
  - DIRECTV
  - EADS Space Management & Services Co
  - Eutelsat
  - Hellas Sat
  - Hisdesat
  - Hispasat
  - Loral Skynet
  - MEASAT Satellite Systems
  - Nilesat
  - NTT DoCoMo
  - OHB System
  - Orbimage
  - Paradigm Secure Communications
  - Primedia
  - Russian Satellite Communications Company
  - Satmex
  - Sirius Satellite Radio Inc
  - Space Communications Corp
  - Space Imaging
  - Thuraya
  - XTAR

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Willis Inspace clients (2)

- Launch vehicle providers
  - Orbital Sciences Corporation
- Satellite manufacturers
  - EADS Astrium
  - Orbital Sciences Corporation
  - Space Systems/Loral
- Various
  - Galileo Joint Undertaking
  - Japan Aerospace Exploration Agency (JAXA)
  - SPACEHAB
  - UK Ministry of Defence

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Willis Inspace market share – the facts

- 65 launch placements since 1998
  - Aggregate sum insured: USD9,345,169,793

- 193 in orbit placements since 1998

- Willis Inspace are the broker for 8 of the 23 launches anticipated in 2006
  - Hot Bird 7A - Eutelsat (launched successfully)
  - SpainSat - Hisdesat (launched successfully)
  - Satmex 6 – Satmex (launched successfully)
  - Hot Bird 8 – Eutelsat (launched successfully)
  - DIRECTV 9S – DIRECTV (launched successfully)
  - MEASAT 3 - Measat
  - Skynet 5A - Paradigm Secure Communications
  - SAR-Lupe 1 - OHB System

- Willis Inspace are the broker for 7 of the world's largest 20 satellite operators (as assessed by Space News)

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Unique operational structure of Willis Inspace

- Willis Inspace operates as a single profit centre
  - Our team's results are "income neutral", irrespective of the worldwide blend of insurers used to complete coverage
    - Insurers are chosen solely according to their coverage, price, security and claims payment record

- Willis Inspace market all of our business (and claims) centrally
  - Concentration and coordination of experience and knowledge
  - Placement structures and broking strategies that deliver optimal results
  - United and fully informed approaches to all insurers
    - Prevents insurers responding differently to each account executive
    - Full advantage taken of the portfolio of business that we present to insurers as a persuasive lever in obtaining their best terms
  - Favourable results are maximized, unfavourable results are minimized
  - Global benefits are available to all Willis clients regardless of their location

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Satellite Insurance Market overview

November 2006

Space insurance market overview

- Market capacity
  - Between 2000 and 2005, market capacity per launch decreased from USD900m to approximately USD400m
  - Capacity has already increased in 2006 in response to the significant improvement in the sector's profit/loss ratio over the last three years
  - 2006 capacity approximately USD475m for launch, USD300m for in orbit
  - LibSat now offering additional 'ad hoc' capacity of US$225m (currently in orbit only)
    - Appointment in June of Simon Clapham (ex BRIT/Marham)
- Premium rating
  - Rates increased from the late 1990s as a result of poor loss experience
  - However, further rate increases were not sustainable
    - Some insurers began adopting alternative risk management strategies
  - Rates are now reducing for both launch and in orbit business
    - Result of improved sector performance and subsequent 'overcapacity'

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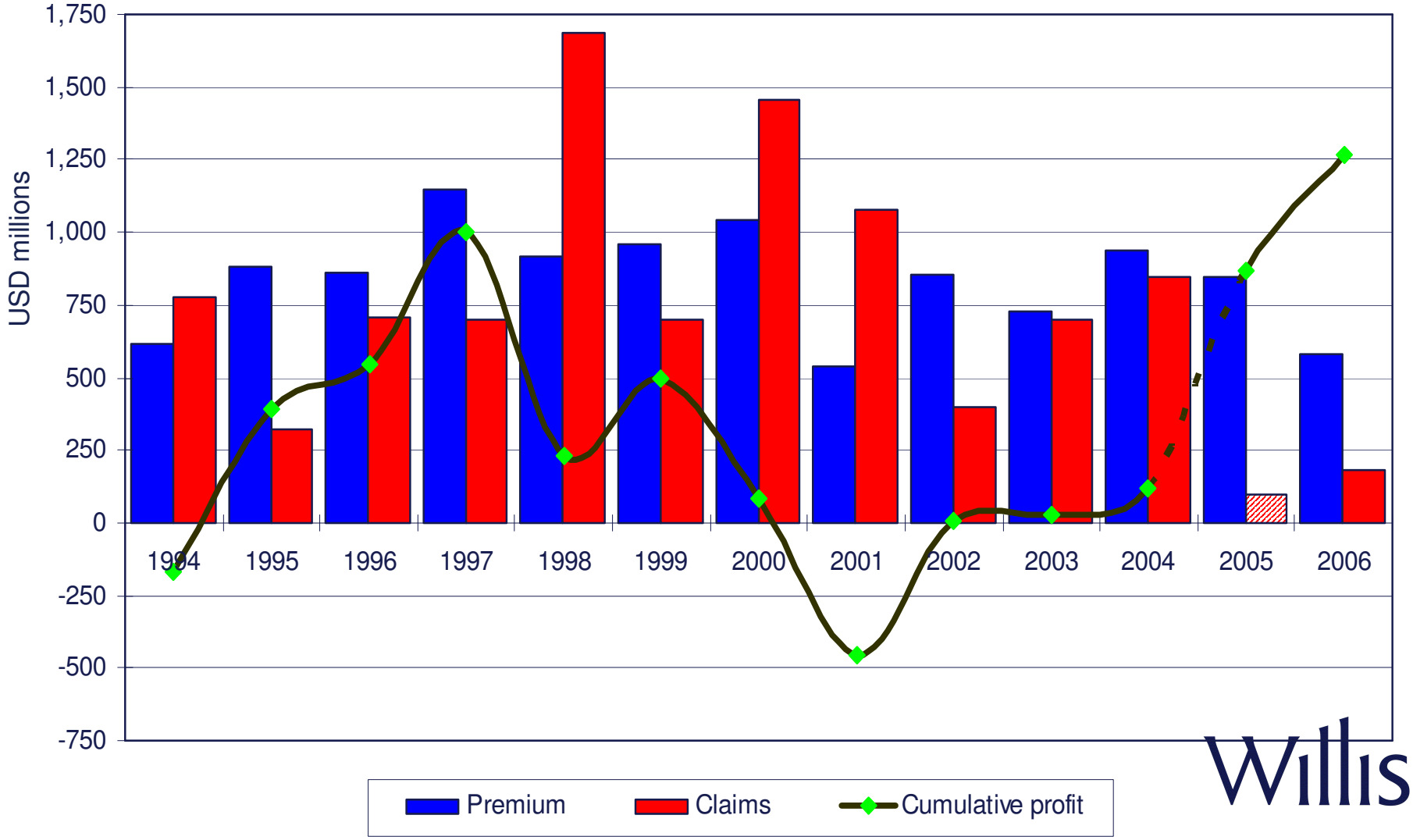
Premium and claims

- Insurers cumulative profit/loss since 1994



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2006 space insurance market capacity

Insurer	Country	Launch capacity (USD	In orbit capacity (USD)
Ace USA	USA	10,000,000	5,000,000
AIG	UK	15,000,000	-
Amlin	UK	5,000,000	1,000,000
Axa Space	USA	30,000,000	20,000,000
Brit	UK	30,000,000	22,000,000
Catlin	UK	25,000,000	15,000,000
Chaucer	UK	3,000,000	2,000,000
Glacier Re	Switzerland	10,000,000	-
Global (GAUM)	UK	15,000,000	8,500,000
Hannover Re	Germany	17,500,000	10,000,000
Hiscox	UK	20,000,000	15,000,000
Inter Aero (Arch)	USA	25,000,000	25,000,000
Liberty	UK	8,000,000	5,000,000
Korean Re	Korea	2,000,000	1,500,000
LRS	France	25,000,000	15,000,000
Mitsui Sumitomo	Japan	3,000,000	2,000,000
Munich Re	Germany	40,000,000	22,500,000
Nissay Dowa	Japan	2,000,000	2,000,000
Satec	Italy	35,000,000	20,000,000
Scor	France	20,000,000	12,000,000
Sompo	Japan	500,000	500,000
SpaceCo	France	45,000,000	36,000,000
Swiss Re	Switzerland	30,000,000	20,000,000
Tokio Marine & Nichido Fire	Japan	9,000,000	7,500,000
Watkins	UK	25,000,000	12,500,000
XL	USA	25,000,000	20,000,000
	TOTAL	**USD475,000,000**	**USD300,000,000**

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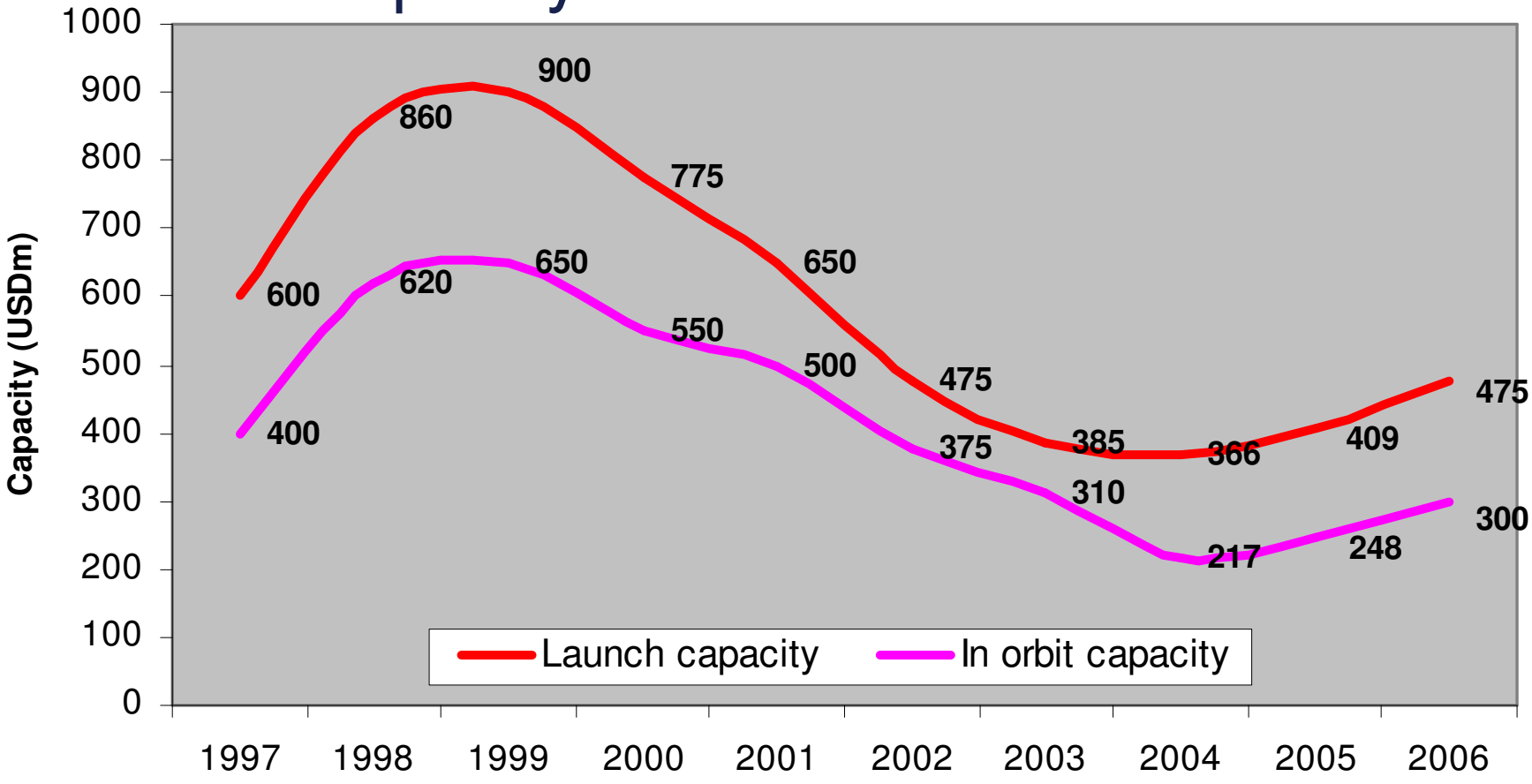
Market capacity evolution

- Market capacity evolution



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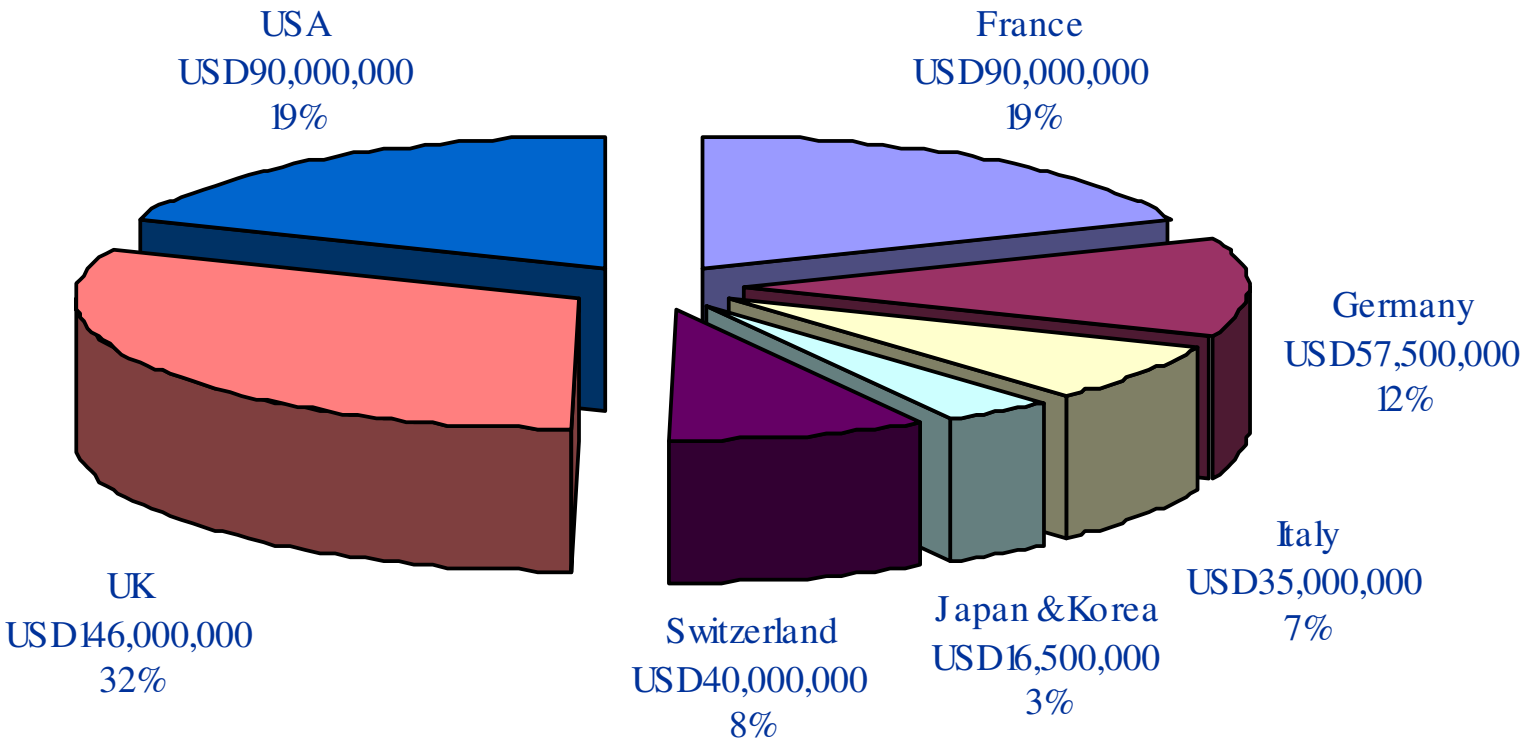
2006 launch capacity and market share by region



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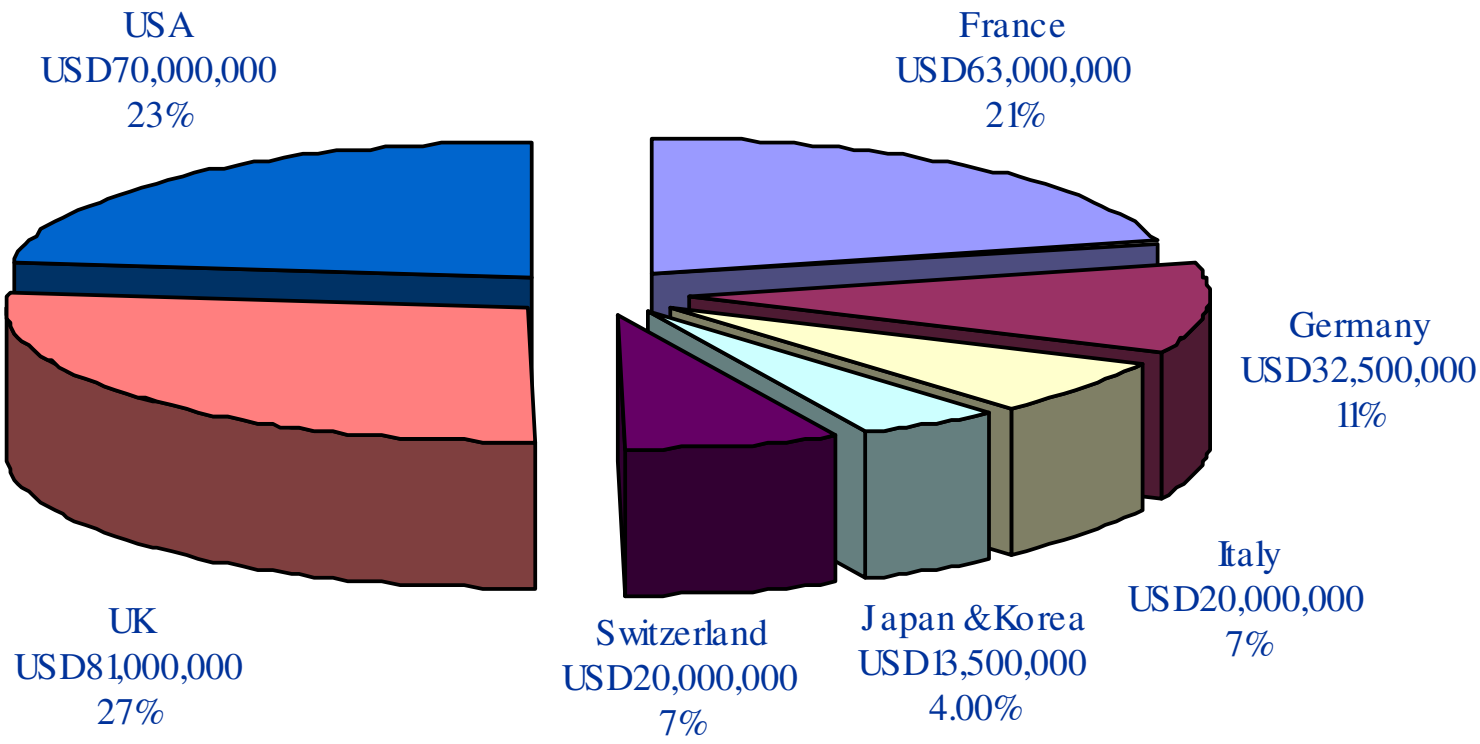
2006 in orbit capacity and market share by region



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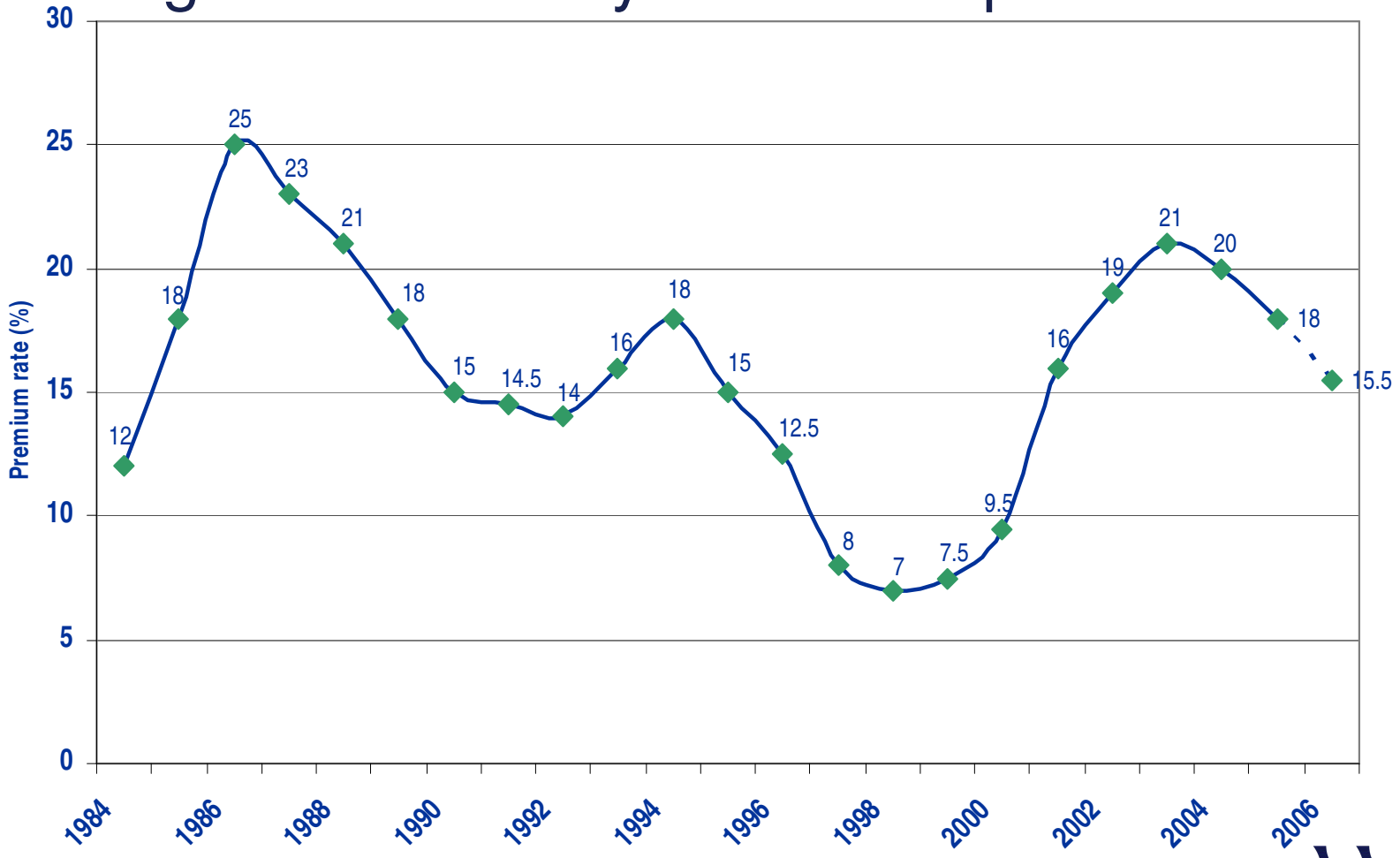
Coverage conditions and premium rates

- Average Launch + 1 year in orbit premium rates



(All rates 'normalised' to launch + 1 year (in respect of long term policies) for meaningful comparison)

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Recent launch and in orbit placements

Date	Satellite	Launch Vehicle	Satellite type	Sum insured	Gross rate	Comments
Autumn 2004	Telkom II	Ariane 5ECA	Star 2	USD190m	21.25%	Net
Nov-04	iPSTAR	Ariane 5G	LS-1300SX	USD300m	20.36%	USD 85m LRG
Dec-04	X-TAR	Ariane 5 ECA	LS-1300	USD295m	31.80%	
Jan-05	IA-8	Sea Launch	LS-1300HL	USD275m	24.00%	
Jan-05	Express AM2	Proton K	Express AM	USD98m	19.70%	Net
Jan-05	Express AM3	Proton K	Express AM	USD98m	19.70%	Net
Feb-05	APT VI	Longmarch	Spacebus 4000C1	USD175m	20.80%	
Mar-05	Optus D1	Ariane 5	Star 2	USD130m	19.40%	Inc to 20.5% if Ariane 5 ECA
Apr-05	DirecTV-8	Proton Breeze-M	LS-1300	USD115m	8.68%	Launch Vehicle Flight only
Apr-05	Goes-N	Boeing Delta IV	Boeing 601	USD150m	15.63%	
May-05	Insat 4A	Ariane 5	Insat 4	USD120m	19.25%	Net & USD 60m LRG
Aug-05	Arabsat 4A	Proton Breeze-M	Eurostar	USD 175m	16.50%	Net

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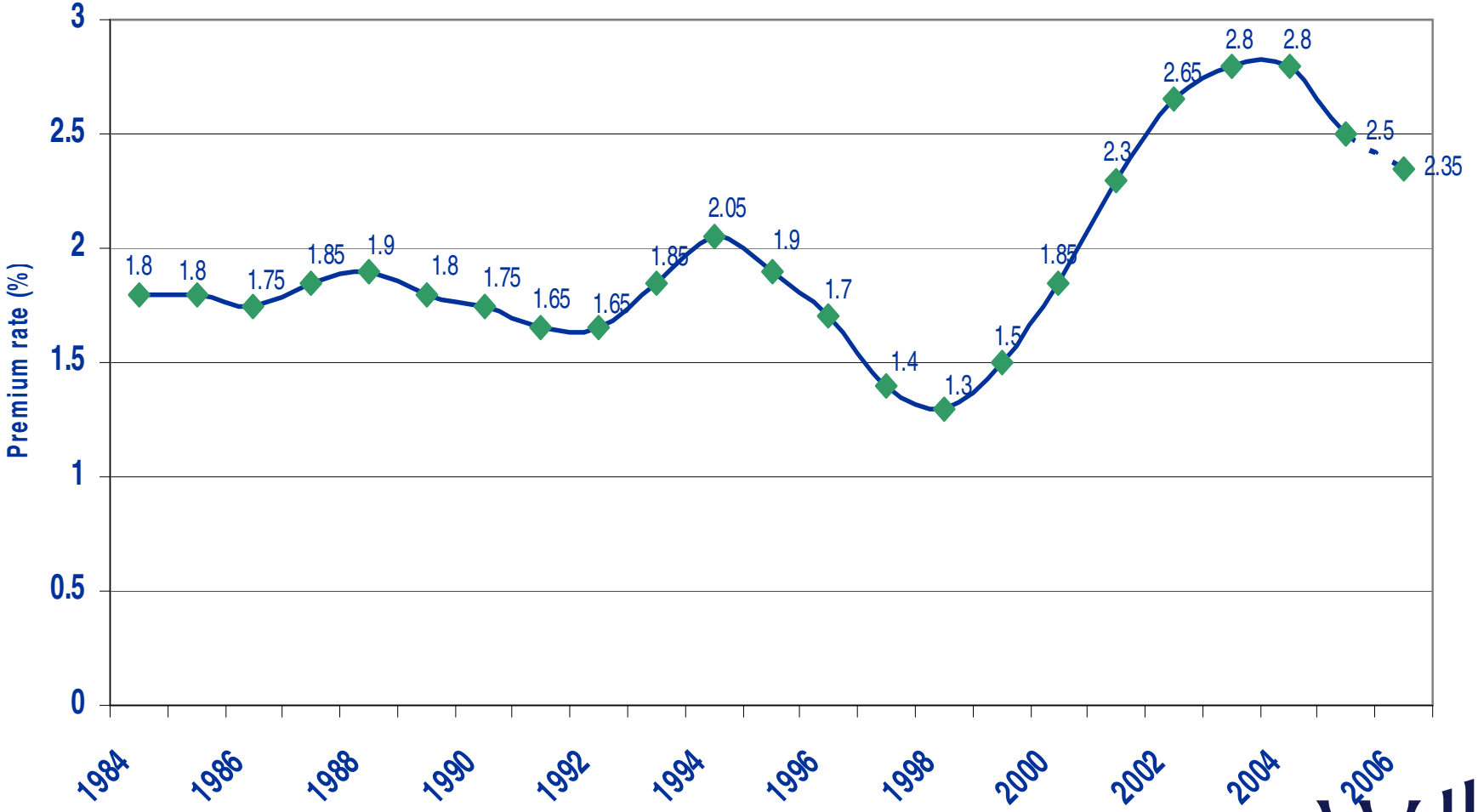
Coverage conditions and premium rates

- Average 12 Month in orbit premium rates



(All rates 'normalised' to launch + 1 year (in respect of long term policies) for meaningful comparison)

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Recent in orbit placements

Satellite Type	Renewal	Sum Insured	Gross Rate	CTL Point
Spacebus 3000B2	Sep-04	EUR146.1m	2.60%	75%
LS1300	Oct-04	USD147.2m	3.16%	75%
LS1300	Oct-04	USD157.4m	3.00%	75%
Boeing 601	Nov-04	USD35m	2.75%	100%
Boeing 601	Dec-04	USD75m	3.06%	75%
Boeing 601	Jan-05	USD50m	2.85%	75%
Boeing 601	Feb-05	USD175m	3.049%	75%
A2100	Feb-05	USD135m	2.694%	75%
Boeing 601	Feb-05	USD90m	3.154%	75%
Star 1	Mar-05	USD45m	3.225%	75%
Eurostar 2000+	Apr-05	USD170m	2.30%	90%
LS-1300	Jun-05	USD58m	2.722%	75%
LS-1300	Jun-05	USD100m	2.375%	100%

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Satellite insurance market outlook

- Space insurance market results since 2002 have been good
  - 2006 launch capacity has increased from USD411m to USD475m
- Relatively stable number of launches per year
  - But reduced purchase by operators of in orbit insurance
- Insurers hungry to ensure their share of limited premium income
- LibSat may provide in excess of USD200m for certain risks
- Arabsat 4A loss of 28 February 2006: paid claim of USD179.2m
  - However, clear-cut circumstances and the market has moved on

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Satellite insurance market outlook (2)

- These factors are resulting in a softening of terms
  - Nett premium rates for major launch placements reducing from 19-20% at the start of 2005 to below 15% in August 2006
  - Nett premium rates for in orbit placements approximately 2.35% for a standard three axis stabilised satellite
  - Certain insurers are now receptive to “Vertical Marketing”
  - Certain insurers are now prepared to offer longer periods of Attachment of Risk for favoured clients

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Matching the marketing strategy to the risk

- Our experience proves that depending upon the client's risk profile, either a competitive or consensus mode of marketing should be pursued

- Competitive marketing
  - An aggressive approach used for 'attractive' risks where we anticipate that insurers will be particularly keen to participate
  - For such risks, capacity offered will exceed that required, therefore allowing us to drive down the premium rate

- Consensus marketing
  - A more sympathetic strategy used for 'difficult' risks where support for the risk has to be built with insurers

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Matching the marketing strategy to the risk (2)

- For each client our risk analysis will include consideration of the critical risk profile elements, as in the example below
  - In this case a two-year duration of coverage was the only ‘difficult’ factor

Risk profile element	**Competitive**	**Consensus**
Success record of the chosen satellite platform	✓	
Success record of the chosen launch vehicle	✓	
Sum to be insured for the launch and post-separation phases: - Client retention (coinsurance), if applicable	✓	
Duration of coverage required		✓
Client’s reputation with respect to quality control	✓	
Client’s accumulated credit/debit premium/claims balance	✓	
Prevailing market conditions at the time of placement	✓	

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Vertical Marketing

- In 2005 Willis Inspace became the first broker to successfully employ “vertical marketing” in the space insurance market
  - Clients should not have to accept the “highest common denominator”
    - European Union may decide that insurers’ imposition of “subject best market terms” is anti-competitive
  - Each insurer is made aware that their line size will be determined by their offered premium rate
    - We do not accept the “subject best market terms” stipulation
  - Following receipt of first round offers, subsequent rounds of marketing will be used to force down terms as far as possible to the “lowest common denominator”
  - Leading the field, Willis Inspace have now completed verticalised placements for 6 satellites

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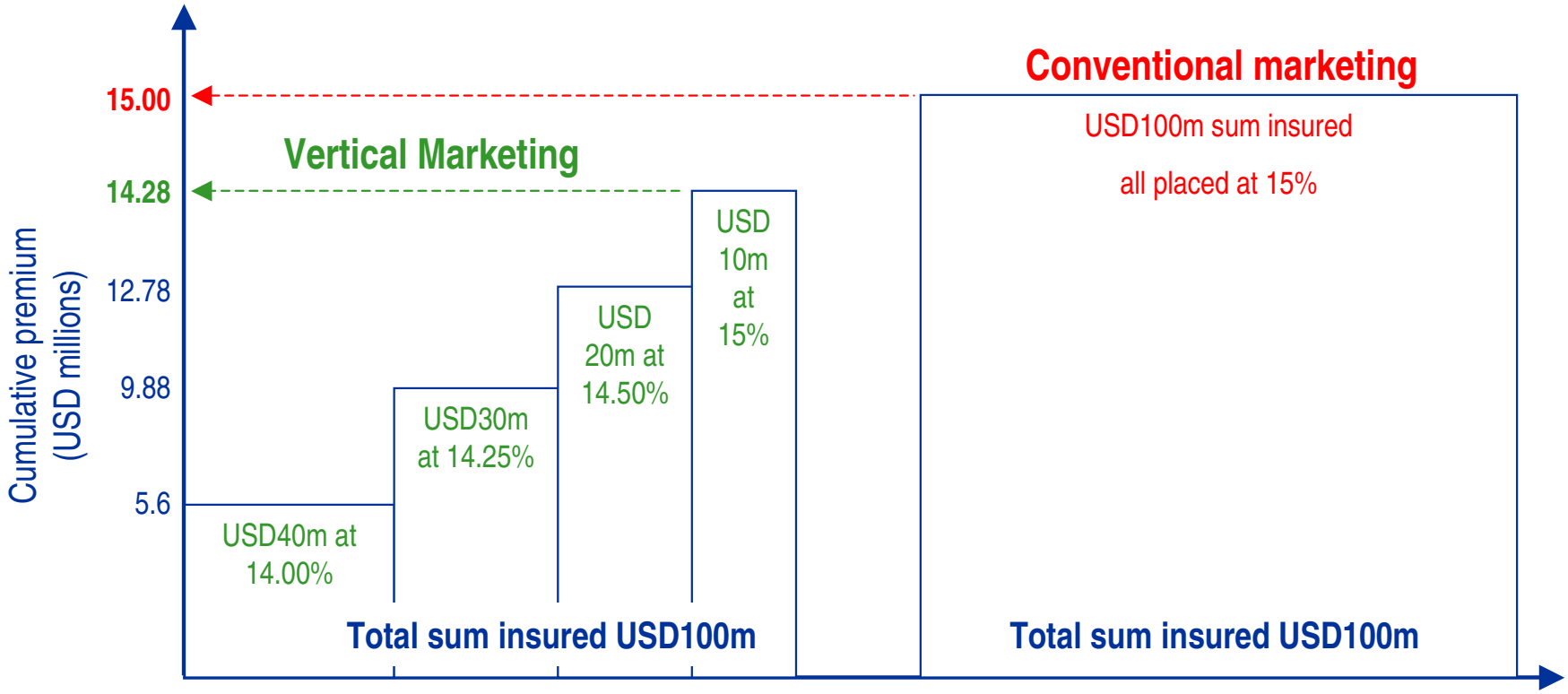
Vertical Marketing (2)

- An example of the premium cost benefit of “Vertical Marketing” based in each case, on a sum insured of USD100m



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Willis Inspace service milestones

- Willis Inspace will work with clients to ensure completion of
  - Technical review
  - Contractual review
  - Financial/commercial review
  - Insurance programme design
  - Technical presentations
  - Assistance with any applicable export licenses and documentation
  - ‘Slip’ preparation and agreement by the client
  - Initial negotiations with leading insurers
  - Completion of coverage
  - Policy wording development and agreement
  - Premium payment
  - Account servicing
  - Claims advice/negotiation/settlement

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Coverage periods and duration of coverage

- Where required by the client, Willis Inspace will now seek to extend the period of attachment of coverage from 12 months to 18+ months
  - Allows client greater marketing flexibility
  - Coverage surety should the launch of the satellite be delayed
  - Even at the height of the hard market in 2002 to 2004, Willis Inspace achieved periods of attachment in excess of 12 months
    - Package placement for Space Systems/Loral completed by Willis Inspace for six of their satellites incepted in December 2002: the last satellite to attach under this policy did not launch until 2005!

- Where required by the client, Willis Inspace will now seek to extend the duration of coverage
  - Our market knowledge indicates that for selected placements coverage periods may be increased from Launch + 1 year to Launch + 2 years or more

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Constructive Total Loss (CTL) thresholds

- Insurers will consider CTL thresholds of lower than 75% if there are demonstrable technical and/or commercial reasons
  - Currently the market's standard starting point is 75%
- Alternative 1: primary mission transponders/elements may be weighted
  - Their loss will accelerate point at which Actual Communications Capability divided by Stated Communications Capability is less than 25%
- Alternative 2: coverage may be bought back between the client's required CTL point and 75%

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Unique supporting services offered by Willis Inspace

- Willis Inspace provide bespoke training services either in London offices or at the client's offices, depending upon the client's preference

- Willis Inspace regularly arrange insurer 'tours' with our clients to raise their market profile
  - Underwriters gain a better understanding of the client's business, risks and insurance needs and will be more willing to provide these when coverage is placed
  - In addition, Willis Inspace recommend that the client invites insurers to their facilities and arranges on-site presentations, thus further enhancing insurers' relationship with and appreciation of the client

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Unique supporting services offered by Willis Inspace

- Specialist contractual advice for satellite procurement contracts, launch service agreements and transponder lease agreements
  - Key added value to our clients during contractual negotiations

- Dedicated satellite engineer
  - Technical presentations are presented as positively as possible
  - Coverage is designed that accurately reflects the technical risks
  - The technical aspects of complex claims are fully understood

- Dedicated policy wording director
  - Works with our client advocates to provide a centre of excellence
    - Detailed policy construction based upon our clients' obligations under their satellite procurement contracts
    - Policy negotiation and policy language improvements
    - Contract certainty assured and policies issued at completion of placement

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Key insurance policy elements

- Willis Inspace will achieve contract certainty at the time of placement – an essential valued added element where we are ahead of our competitors
  - Basis of Insuring agreement
    - Agreed asset value, based on “to pay” rather than “to indemnify”
  - Intended Communications Purpose
    - Stated in policy and agreed by Insurers
  - Weighted transponder values
  - Coverage for loss of switching capability as required
  - Specified transponder back off schedules and switch-off schedules
  - Definition of date of loss
    - Avoidance of “occurrence” language
    - Reference to date when event expected to result in (immediate or future) loss of satellite performance manifests itself
  - Specified claims treatment of events that will result in future loss of satellite performance

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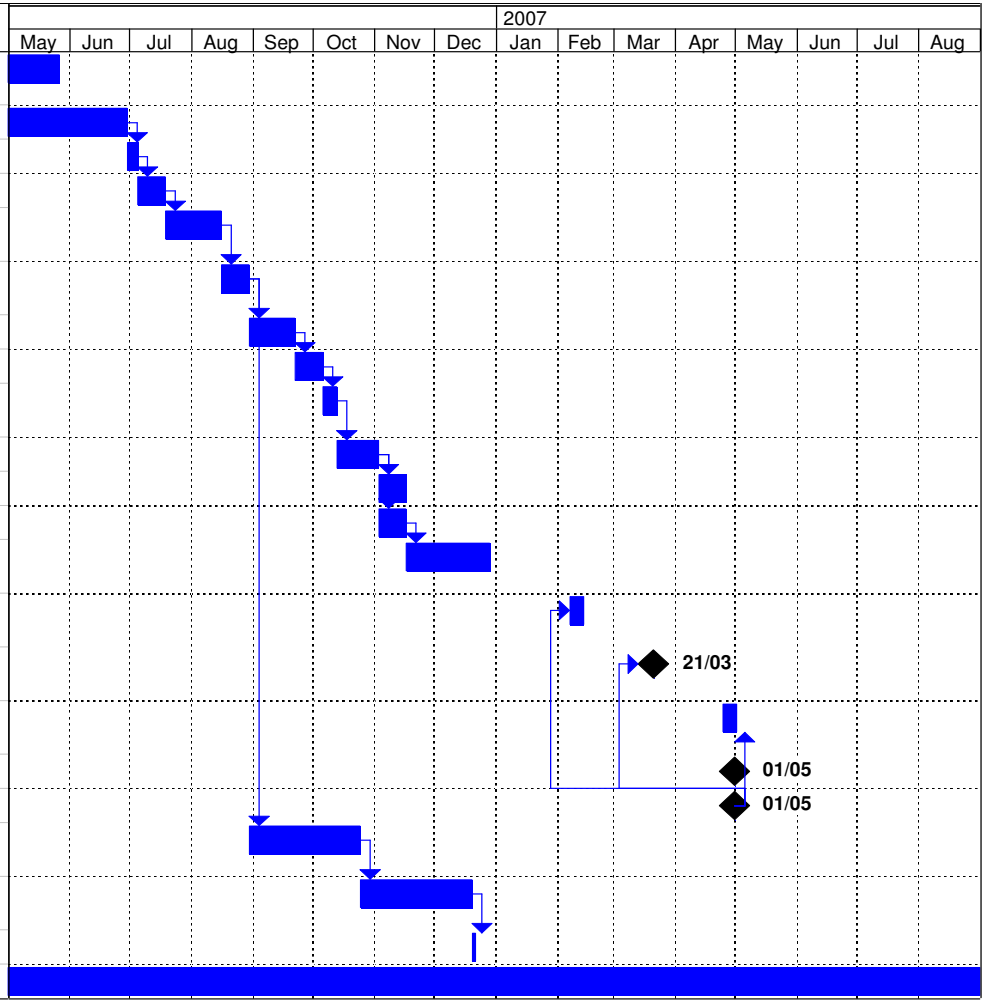
Willis Inspace planning for control and success

- Placements timelines are created for all of our clients

ID		Task Name
1		Arrange for all potential insurers to sign an NDA with client
2		Client develops technical presentation
3		Technical presentation to insurers
4		Written technical questions submitted to client
5		Written technical questions answered by client
6		Proposed basis of coverage (slip) sent by Willis to client
7		Willis develop optimal marketing strategy
8		Obtain quotations from selected leading insurers
9		Client issues order to bind coverage based on leading quotations
10		Coverage completed by leading and following markets
11		Cover note issued to client
12		Debit note issued to client
13		5% deposit premium paid by client via Willis to insurers
14		Pre-shipment reviews for satellite and launch vehicle sent to insurers for approval
15		95% balance of premium paid by client via Willis to insurers 30 days prior to scheduled launch
16		Flight readiness reviews for satellite and launch vehicle sent to insurers for approval
17		Risk attaches at intentional ignition (or as otherwise defined)
18		Launch of satellite
19		Development of draft policy wording by Willis and client
20		Negotiation and agreement of policy wording by Willis with insurers
21		Policy wording issued by Willis to client
22		Ongoing account servicing



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Willis Inspace claims collection track record

- Ultimately, our service to our clients is measured by our claims collection capability
  - Willis Inspace has collected over USD1.5 billion relating to 19 claims since 1996

- Successful collection of (often complex) claims involves
  - The Client Advocate and Claims Executive Director working in unison
  - Support from our dedicated satellite engineer and policy wording director

- In today's satellite insurance market
  - Insurers' management require closer scrutiny of claims
  - Insurers are prone to form Claims Coordination Committees (CCCs)
  - Using CCCs for 702 claims, insurers obtained settlements of ~50%
    - This "success" has emboldened insurers to challenge claims

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Client satisfaction with Willis Inspace claims service

- 9 August 2005: email to Mark Quinn regarding the Estrela Do Sul claims settlement

"Mark:

Congratulations!!!

I share your viewpoint that the entire team worked very well together and should be extremely proud of the results we achieved. Your email, however, failed to note that the glue that held it all together was the Willis team. The efforts made on our behalf by you, Bill, Rob and the rest of the Willis participants were exemplary, throughout you demonstrated exceedingly good judgment and professionalism. Your advice was unfailing and your perseverance was unflagging.

Best regards,

Eric Zahler

Loral Space & Communications
President and Chief Operating Officer"

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Willis Inspace get claims paid

- Ultimately, our service to our clients is measured by our claims collection capability
- Since 1996 Willis Inspace has collected over USD1.65 bn relating to 21 claims
- The Client Advocate and Claims Executive Director work in unison throughout the claim process
- Support from our dedicated space technology consultant and policy wording Executive Director
- We resist Claims Co-ordination Committees, successfully dividing and conquering “difficult” insurers

Satellite	Loss type	Loss date	Paid claim (USD millions)
Asiasat	Launch	Jan 1996	36.00
Earlybird 1	In orbit	Dec 1997	29.00
BATSAT	In orbit	Mar 1998	14.85
Cakrawarta 1	In orbit	Mar 1998	18.80
Skynet 4D	In orbit	Mar 1998	21.70
Globalstar	Launch	Sep 1998	162.00
Orion 3	Launch	May 1999	265.60
Skynet 4E	In orbit	Q4 1999	7.70
Quickbird 1	Launch	Nov 2000	265.00
Orbcomm various	In orbit	Dec 2000	1.20
BSAT 2b	Launch	Jul 2001	37.50
Orbview 4	Launch	Sep 2001	74.00
Quiktoms	Launch	Sep 2001	0.90
Tempo 2	In orbit	Oct 2001	17.50
Telstar 5	In orbit	Mar 2002	9.00
Atlantic Bird 1	In orbit	Feb 2003	64.40
Eurasiasat	In orbit	Apr/May	26.10
Telstar 4	In orbit	Sep 2003	141.00
Superbird 6	In orbit	Apr 2004	225.00
Estrela Do Sul	Launch	Jan 2004	205.00
Amazonas	In orbit	Aug 2004	31.41
Eutelsat W1	In orbit	Aug 2005	4.26
		TOTAL	**1,657.92**

(Interim)

Conclusions

- Willis, Willis Aerospace and Willis Inspace have worldwide client bases and proven credentials
- The Willis Inspace marketing, technical and policy specialists offered to our clients have consistently achieved outstanding results
- Our unique operating structure and centralized marketing philosophy ensure proactive marketing strategies making optimum use of the satellite insurance market's constantly evolving dynamics
- Willis Inspace has a superior claims negotiation philosophy that leads to higher settlements

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The Willis Client Bill of Rights

Our Client Bill of Rights is our commitment to upholding the highest standards of integrity in our industry and how we deliver the Willis Value Experience. At Willis, our culture and our actions are guided by the following principles:

1. Willis represents the client's best interests through our client advocacy model. Willis' global resources and services are committed to understanding the client's company, its industry and its individual needs. Willis' customized recommendations and solutions will be driven by what is in the client's best interests. This is the centerpiece of the value Willis provides its clients.

2. At the commencement of every new engagement and at renewal thereafter Willis will describe the service and value it provides and how it is compensated for it - in plain and simple language as part of our Terms of Business Agreement and our Client Service model.

3. Willis will listen before it acts. Its partnerships with clients will be typified by clear, complete and candid communication.

4. Clients will have a toll-free number to give Willis feedback on the quality of its services. Clients can comment, critique and suggest areas for improvement. Willis values client input.

5. Willis will require that the training its Associates receive includes enhanced emphasis on their duty of care, undivided loyalty and full disclosure to clients.

6. Willis Associates are prohibited from accepting any gifts, entertainment or trips from insurers that could create the appearance of a conflict of interest with its clients.

7. Willis will not accept contingency compensation from insurers.

8. We will conduct our business in accordance with our "best practices" guidelines, which are incorporated in our Willis Excellence Model.

9. Willis clients will receive the benefits of our glocal approach to service: Our global resources delivered locally to help clients realize their highest risk management and business objectives regardless of geography.

10. Adherence to these principles will be monitored by a series of internal controls, including regular compliance reviews, audits and review by the Audit Committee of the Willis Board of Directors.

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Willis 2007 new office

Willis