

Air Transport, Air & Space Law and Regulation Conference

Satellite Financing – Current Challenges

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*This presentation is being made in my personal capacity and not as an associate at Milbank, Tweed, Hadley and McCloy LLP.



Outline

I. State of the Industry

II. Satellite Financing – Specific Elements

III. Current Trends in Satellite Financing

IV. What Will the Future Hold?

I. STATE OF THE INDUSTRY

There's No Business Like
Space Business

Key Satellite Industry Segments

- **Satellite Services**
- **Satellite Manufacturing** (SS/L, Thales Alenia, Boeing, Orbital Sciences)
- **Launch Industry** (Arianespace, Sea Launch, ILS, China Great Wall, MHI, SpaceX)
- **Ground Equipment**

Satellite Services

- **Mobile (Inmarsat, Iridium, Globalstar)**
 - Mobile Data
 - Mobile Voice
- **Fixed and Other Broadband (Intelsat, SES, Eutelsat, Telesat)**
 - End-User Broadband
 - Private Networks Management Services
 - Remote Sensing (Digital Globe, GeoEye, Imagesat)
- **Broadcasting (DirecTV, Dish Network, Sirius XM)**
 - Satellite Television
 - Satellite Radio
- **Navigation and Geo-Positioning (GPS, Galileo)**

State of the Industry

World satellite industry revenues reached US\$123 billion in 2007.

Average annual growth of 11.5% for the period of 2002 through 2007 and 16% between 2006 and 2007.

Satellite Services are the driver of the industry, accounting for 60% of the revenues in 2007.

Strong Financial Results in 2008

Leading FSS operators reported that demand for satellite capacity and associated services has increased in every part of the world during 2008.

FSS Operator	Capacity backlog	Revenue Increase 2008 vs. 2007
Intelsat	\$8.8b	8%
SES	\$8.2b	6%
Eutelsat	\$4.9b	7.9%
Telesat	\$4.3b	7%

Strong Financial Results in 2008

(cont.)

The **MSS Sector** also reported robust numbers:

- Iridium –23% revenue increase in 2008 compared to 2007
- Inmarsat – 13.9% revenue increase

Satellite Orders and Launches Up in 2008

- 21 commercial satellite orders (including one for a constellation of 16 satellites), an increase from last year's 18 orders
- 41 commercial satellites were successfully launched, compared to last year's 22 launches.

Satellite Industry: Proof of Resilience in Economic Downturn or a Case of Delayed Reaction?

Q: What is the vulnerability of the commercial space industry to unfavorable market conditions?

- One view is that the satellite sector performance indicates a fundamental robustness and flexibility to weather business cycles given the robust global demand for consumer satellite applications, mobility and convergence, including high-definition television, high-speed Internet, GPS/navigation-based services and broadband content.
- Others argue that generally the satellite industry indicators lag behind broader economic cycles by 18 months or more, reflecting what are typically multiyear, fixed-price contracts used to lease transponders on satellites.

II. SATELLITE FINANCING

SPECIFIC ELEMENTS

Capital Requirements for Satellite Projects

- **Space Segment – Satellite(s) in Orbit**
 - Construction of the satellite(s)
 - Launch services

- **Ground Segment**
 - TTC&M
(tracking, telemetry, control and monitoring)
 - Uplink and downlink facilities
 - Network control centers
 - Gateways

- **Insurance**
 - Launch and In-Orbit Insurance
 - Third Party Liability In-Orbit Insurance



Types of Risks in Satellite Financing

1. Credit Risk
 - Creditworthiness of satellite operator (e.g., start-up versus established operator)
 - Assessment of market/business plan
2. Technology Risk
 - Well-proven versus insufficiently-tested technologies
 - Insurability/extent of exclusions
3. Political and Regulatory Risk
 - Applicable to operator and the market
 - Applicable to satellite manufacturer and launch services provider
4. Market Risk
 - Fluctuation in demand for specific satellite services/competition
 - Inflation/Deflation/Currency exchange rate

Traditional Satellite Financing Structures

- Recourse Credit Facilities
- Project Financing
- Export Credit Agencies and Multilateral Agency Supported Credit Facilities
- Capital Markets Debt and Equity Offerings
- Manufacturer Support/Vendor Financing

13

Project Financing

Satellite project financings have followed traditional principles for project-based structures.

- Cash flows
- Construction risk
- Political Risk
- Recent example of Project Financing: New Dawn Satellite Company/ \$240 million financing secured by 85% non-recourse debt project finance (arranged by Nedbank and the Industrial Development Corporation of South Africa) and 15% equity

Export Credit Agency and Inter-Governmental Agency Support

- European and US export credit agencies: Coface of France, ECGD of the UK, SACE of Italy and the Export-Import Bank of the US
- Recent Example of Export Credit Agency Support: Coface guaranteed 90% of a proposed US\$574m senior secured credit facility from a syndicate of approximately five banks led by BNP Paribas, Natixis and Societe Generale for Globalstar (March 2009).

Manufacturer Support/Vendor Financing

- Customary payment plan for satellite manufacturers and launch services providers provides that the price is fully payable before launch
- Support from manufacturers and providers may take various forms:
 - Payment schedule (backloading of installments, deferral post-launch and incentives)
 - Vendor financing
 - Guarantees
 - Equity
 - Ownership interest retention in satellite (transponders)
- Example of Recent Vendor Financing: arrangement between Thales Alenia Space and Gazprom for the procurement of Yamal-401 and Yamal-402 satellites (February 2009)

Security Interests in Satellite Financings

The value and quality of collateral determines the availability and the financing terms and conditions

➤ **Collateral Package in Satellite Project**

- **Orbiting satellites**
- **Ground facility and equipment** used for tracking, telemetry and control, including underlying real property
- **Ground segment infrastructure** (e.g. gateways, network operation center and interconnection facilities)
- **Intellectual property rights** and licenses needed to operate the system
- **Governmental authorizations** and licenses needed to operate the space and ground segments
- **Supply contracts** (satellite and ground segment manufacturing agreements, launch services agreement and service contracts)
- **Revenue-generating agreements** (transponder lease agreements and capacity agreements)
- **Launch and in-orbit insurance/proceeds**

17

Perfecting Security Interest in Collateral

- Rules of perfection of security interests in satellite or transponders in space are subject to the law applicable to the security document.
- Draft UNIDROIT Space Protocol – attempt to develop international uniform rules to address the recognition of foreign security interests in mobile equipment across international frontiers.

Events of Default in Satellite Financings

- Failure to obtain, maintain, renew or comply with all required licenses, permits, approvals
- Material breach or termination of any material project agreement.
- The frequency or orbital slot assigned to the system is for any reason not coordinated by affected telecommunications administrations resulting in the entry of the satellite in the Master Registry of the ITU Radiocommunication Bureau.

III. CURRENT TRENDS IN SATELLITE FINANCING

Representative Satellite Bank Credit Facilities - 2008

Company	Arrangers/Underwriters	Amount	Date
Intelsat	Credit Suisse, Banc of America, Morgan Stanley	\$5.1B	February
TerreStar Corp.	EchoStar Corp. Harbinger Capital Partners	\$300M	February
ICO Global	Jefferies Finance	\$40M	March
ProtoStar Ltd.	Credit Suisse Jefferies & Co.	\$40M	April
SES Global	ABN Amro, Bank of Tokyo Mitsubishi, BNP Paribas, Fortis Bank	€550M	May
IndoSat	DBS Bank, ING Bank	\$200M	May
SkyTerra/Mobile Satellite Ventures	Harbinger Capital Partners	\$500M	July
Al Yah Satellite Communications Company (Yahsat)	BNP Paribas	\$1.2B	August
WildBlue Communications	Liberty Media, Intelsat NPTC, Kleiner Perkins Caufield & Byers	\$50M	October
New Sawn Satellite	Nedbank Capital, Industrial Development Corporation of South Africa	\$240M	December

Representative Satellite Capital Markets Debt Offerings - 2008

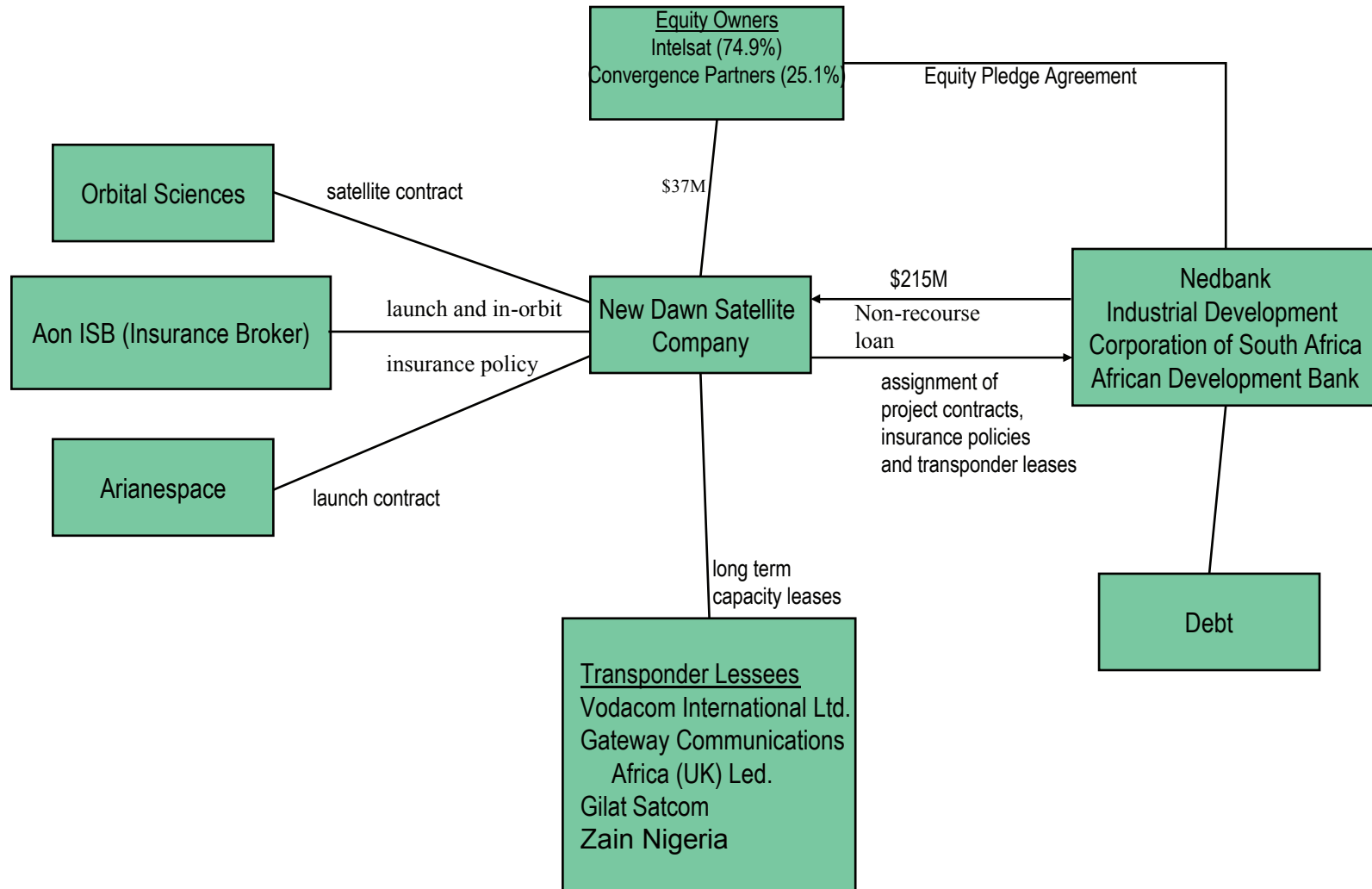
Company	Structure	Arrangers/Underwriters	Amount	Date
MSV/Mobile Satellite Ventures	senior unsecured notes	Harbinger Capital Partners	\$150M (5 year)	January
GlobalStar	Convertible senior notes	Merrill Lynch Deutsche Bank	\$135M (20 year)	April
DIRECTV	Rule 144A senior notes		\$2.5B (8 year)	May
EchoStar DBS Corp.	senior notes	Credit Suisse	\$750M (7 year)	May
Telesat Canada	Rule 144 A senior notes and senior subordinated notes	Morgan Stanley, UBS, JPMorgan Chase, Scotia Capital, Jefferies & Co.	\$692.825M (7 year) senior; \$217.175M (9 year) senior sub.	June
Intelsat (Bermuda)	Rule 144A senior/senior PIK notes	Credit Suisse, Banc of America Securities, Morgan Stanley	\$2.805B (9 year) senior; \$2.231 (9 year) senior PIK	July
XM Satellite	senior notes	JPMorgan, Morgan Stanley, UBS	\$778.5M (6 year)	July

Representative Satellite IPOs and Other Equity Offerings- 2008

Company	Arrangers/Underwriters	Amount	Date
ProtoStar Ltd	Credit Suisse, Jefferies & Co.	\$45M (common stock)	April
Hughes Communications Inc.		\$112M (common stock)	May
Sirius Satellite	Morgan Stanley, UBS	\$275.5M (common stock)	July
WildBlue Communications	Liberty Media, Intelsat, NRTC, Kleiner Perkins, Caufield & Byers	\$50M (common stock)	September

- No IPOs since September 2008.

CASE STUDY - New Dawn Non Recourse Project Financing



IV. WHAT WILL THE FUTURE HOLD?

Future Financing Conditions

- With the global debt markets reluctant to fund anything other than investment grade companies and equity markets falling dramatically, securing substantial financing facilities has become increasingly difficult and has determined the investors to focus more on the fundamental elements of the project.
 - Business plan viability
 - Operational excellence
 - Regulatory challenges
 - Timely performance of the project contracts

Likely financings of the near future

- Project financing per New Dawn's model
- Export credit supported finance (COFACE, EXIM)
- Vendor financings
- In addition, we are likely to see the emergence of new ways of raising financing:
 - Government-private partnerships
 - Condosat (Hosted Payload) arrangements
 - Restructuring through hedge funds and private equity

The Future of the Industry

- For now, the satellite market continues to demonstrate remarkable stability and, in some regions, significant growth.
- The Middle East and North Africa are expected to continue to push demand, with what has been described in industry publications as “a voracious appetite for capacity” in a region that is considered “among the world’s most dramatic”.
- The satellite industry has always been bullish in its nature and the current economic downturn may be just another barrier to cross.

There's no business like space business

- There may be trouble ahead but the satellite sector remains one of the most robust, forward looking and optimistic industries to be in.