

## Waiting for Liftoff:

### Factors Inhibiting New GEO SATCOM Orders, and Reasons for Hope



Andrew Penn · Daniel Flesch · Michael Grasso

2016 GEO commercial satellite orders are off to one of the slowest starts in a decade—six to date—however, like 2015, evolving market forces suggest 2016 may be on its way to a strong finish.

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## Factors Inhibiting New GEO SATCOM Orders, and Reasons for Hope

**2016** was expected to be an above average year for the GEO communications satellite market, with integrators anticipating 20-25 orders. However, despite being well into Q3, only six\* commercial GEO communications satellites have been ordered to date. This paper explores several factors that could be contributing to the slow start—launch backlogs, potential bandwidth overcapacity, evolution in satellite architectures, uncertainty in satellite financing markets—and discusses why Q4 2016 and 2017 show signs of promise.

### Factors Inhibiting Orders:

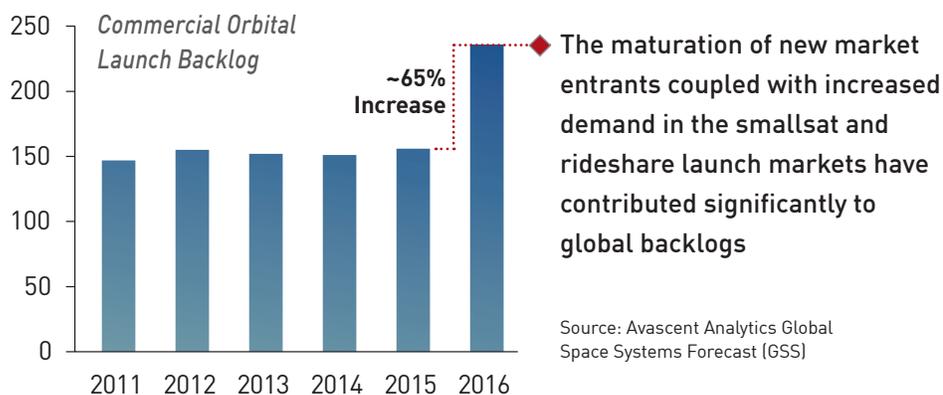
#### Launch Backlogs

Commercial launch backlogs have increased tremendously over the past year, resulting in the perception of a “launch bottleneck” among operators. The perception of packed manifests could be driving operators to postpone new orders, especially among cost-conscious providers. Because launch delays have costly implications such as storage fees and deferred revenue, several operators may have chosen to delay orders until stresses on the launch market abate.

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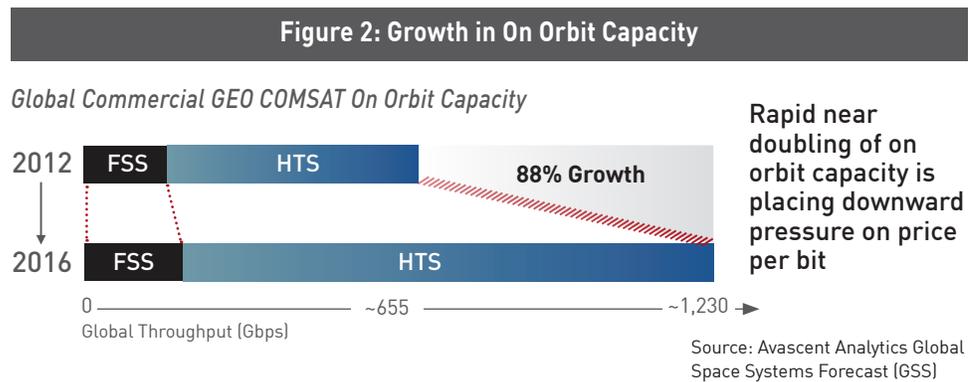
\* As of August 8th; excludes Russian orders

**Figure 1: Increasing Commercial Launch Backlog**



## Overcapacity

The advent and ultimate adoption of HTS satellites has resulted in a step-function leap in on orbit satellite bandwidth. Satellites offering 100+ Gbps are now providing equivalent regional throughput to the sum total of all traditional FSS satellites over the same footprint. With the flood of new capacity has come downward pressure on price, lower operator margins, and reduced free cash flow. Operators are looking at CAPEX reductions as a means of offsetting lower margins in the near-term. Though leaving overall fleet replenishment plans intact, the consideration and adoption of novel acquisition approaches such as hosted-payloads and “condosats” to minimize satellite integration and launch costs is likely contributing to reduced satellite orders.



## Technical Uncertainty

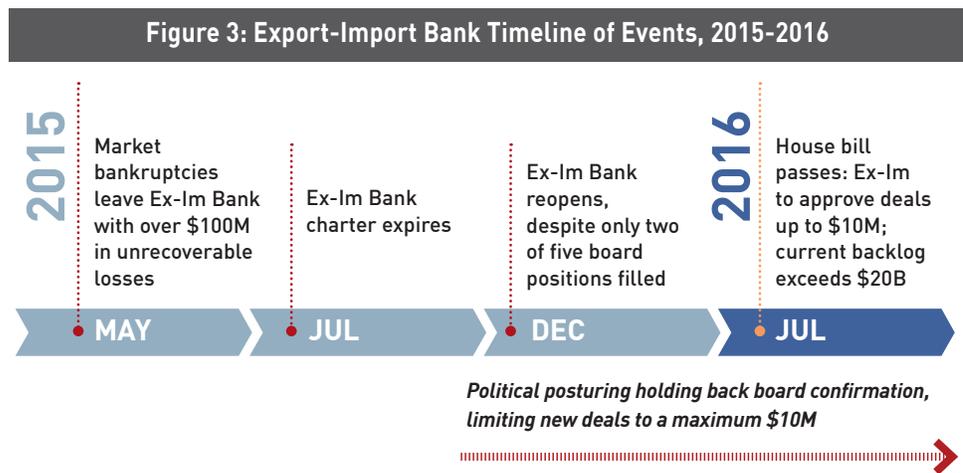
The maturation of new satellite architectures and technologies such as flexible payloads, small-sat LEO constellations, and on-orbit servicing, to name a few, has some operators taking time for pause to evaluate their technology roadmaps. Flexible payloads de-risk on orbit capacity by allowing operators to dynamically

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reallocate bandwidth and power in response to shifting demand, potentially reducing the number of required satellites on orbit. On orbit servicing promises to extend the life of existing satellites up to five years, while small-sat LEO constellations may prove to be more effective at servicing certain markets than GEO satellites. When viewed collectively, operators are spending more time sitting on RFIs and evaluating large CAPEX outlays to better understand these new technologies—and which offer the best competitive advantage.

### Satellite Financing

The market for US satellite financing has undergone a recent upheaval. Defaults have left the U.S. Export-Import (Ex-Im) Bank, which helps facilitate transactions between domestic and foreign firms, on the hook for over \$100 million. Meanwhile, the Ex-Im’s charter expired, requiring reinstatement and appointment of new board members. Absent a full board of directors, the Bank’s authority has been limited to deals worth \$10 million or less. And making matters worse, Congressional maneuvering has stonewalled the renewal process. Though operators can continue to access financing from foreign manufacturer’s national Ex-Im equivalents, the resultant reduced global competition or preference for US platforms has already held back at least one deal, with others likely hanging in the balance.



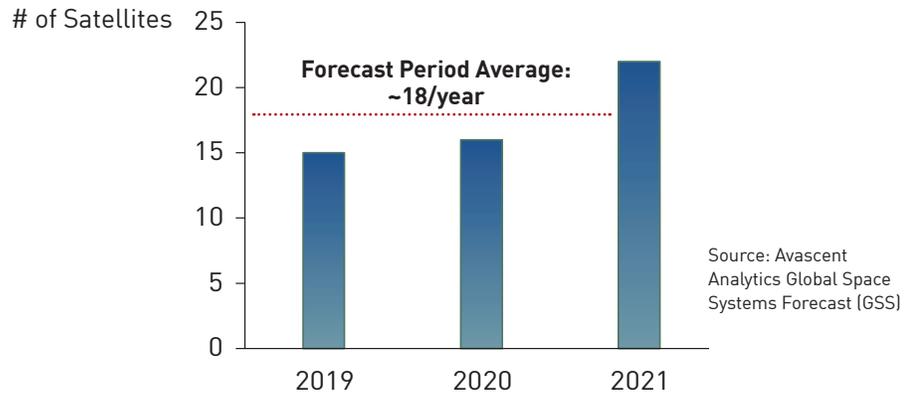
### The Future Looking Up:

Despite 2016’s slow start, there is good reason to believe that this year will emulate 2015’s strong finish. Avascent’s Global Space Systems Forecast (GSS),

**“Reduced technology risk and financial uncertainty will help operators cement CAPEX plans, paving the way for new orders.”**

which tracks satellite end-of-life (EOL) expectancy, identifies 53 satellites reaching EOL in the next 3-5 years. Given traditional three-year lag periods from order to launch, Avascent expects an average of 18 satellite orders per year over the next three years—before factoring in new business ventures and growth markets. Likewise, reduced technology risk and financial uncertainty will help operators cement CAPEX plans, paving the way for new orders.

**Figure 4: Commercial GEO COMSATs Reaching 15-Year End of Life, 2019-2021**



## Options for Manufacturers:

In the meantime—and in anticipation of future order troughs—satellite manufactures should consider innovative business models to alleviate the uncertainty facing operators and facilitate new orders. Some potential methods include:

- Creative financing offers, comparable to airline manufacturer capital departments, to provide alternative near-term financing
- Option-based sales which allow operators to commit through a certain design phase (e.g., CDR) and then evaluate based on market conditions if they would like to proceed or delay
- Co-ownership/sales models, with option to sell-back share

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### About the Authors

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### About Avascent

Avascent is the leading strategy and management consulting firm serving clients operating in government-driven markets. Working with corporate leaders and financial investors, Avascent delivers sophisticated, fact-based solutions in the areas of strategic growth, value capture, and mergers and acquisition support. With deep sector expertise, analytically rigorous consulting methodologies, and a uniquely flexible service model, Avascent provides clients with the insights and advice they need to succeed in dynamic customer environments.

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