

Commercial Launch Faces Economic Reality, Again

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Investments require a return

Commercial Satellite operators all strive to generate adequate returns on their investment. They continually invest in upgrades and expansion to their satellite fleets, ground networks, and user equipment with a keen eye on a return to their shareholders and a competitive offering to profitably grow their business. Consolidating over the last 10 years and remaining profitable and competitive has been crucial to their success.



The commercial space market is benefiting from this balanced and disciplined approach. However, there is a misperception that commercial launch can somehow defy the laws of economics. Launch services are often thought of as a commodity, provided by governments and often taken for granted that those services will be available at prices that do not generate an adequate return to the supplier. Providing launch services is a high tech, challenging, risky and expensive business over long product life cycles. Launch systems require significant investment to develop and maintain production, processing, and launch infrastructure, let alone investment in new capabilities. The engineering and manufacturing talent required needs to be the best. Without an adequate return on that investment, the commercial launch services industry will not attract capital and talent to survive or better yet, thrive.

The commercial launch systems that have lost significant money in the commercial market (Delta III, Atlas III, Atlas V, Delta IV and Sea Launch) have incurred over \$5.5 billion dollars in losses by my rough estimates. The losses on these launch vehicles are staggering. In the bankruptcy filing for Sea Launch alone, the simple math is in the neighborhood of \$2 billion dollars in accumulated liabilities over 30 launches or potentially \$65 million dollars lost per launch.

More isn't always better

While more launch suppliers would benefit satellite operators in theory, healthy suppliers are more important to their business. Theoretically, more launch suppliers would lead to greater competition and lower prices. While this was certainly the case in the earlier part of this decade when competition led to dramatic drops in pricing, the situation was not sustainable in the long term. Basic market economics dictate that when the supply structure is too high in comparison to demand, the weak will exit the

business or consolidate. This was inevitable and it has happened. As in any other market, structural imbalance resulting in oversupply of the launch market creates instability and inevitably leads to rationalization by market forces and shareholders. These laws apply to all of the commercial space value chain including satellites and launch vehicles.

Recent history has shown that having even one unstable player in the launch market is more damaging to the operators than having a smaller healthy supplier base. Over the last two and a half years, the financial and operational instability of Sea Launch/Land Launch has left many customers unsure of the status of their launch contracts creating significant disruption and loss of value. Hughes, Intelsat, SES, AsiaSat and SkyTerra and others sought to secure alternative launch arrangements to secure their businesses and mitigate the damages. This circumstance is a negative reflection on the risk profile of the entire industry. Of course, without learning, history can repeat itself for a short period but economic forces will govern the outcome and the long term health of the industry.

Starting several years ago, International Launch Services (ILS) increased production and launch capacity with a disciplined focus on the market for heavy satellites. Proton executed 12 successful launches in the last 12 months and is currently maintaining a production rate of 12 to 14 per year, including 7-8 commercial missions. Also, Arianespace announced in late 2006 its plan to increase capacity to up to 8 Ariane 5 ECA launches per year. ILS continues to operate in heated competition with Arianespace, keeping prices and terms competitive and creating real value to the operators. In addition to this launch capacity and competition among the existing players, a new player in the market is on the horizon. The SpaceX/Falcon 9 vehicle is planning its maiden flight in 2009, and SpaceX has a backlog of over 20 missions.



Striking the right balance

While Sea Launch stands out as the only one of the major launch providers not to benefit from government contracts, support and investment, in the end, market economics still drive long-term success. Launch companies that enjoy both a government and commercial customer base are more likely to survive in the long run because of the overall economies of scale, underwriting of development cost and in the case of Arianespace, substantial direct subsidies --almost 1 billion euros (\$1.39 billion) over the last five years by my estimation. Launch vehicles require government support and backlog to maintain a healthy and economically viable production yielding reliability, quality and a robust launch rate. However, as we have seen with the Atlas and Delta vehicles, a healthy government business does not guarantee a successful commercial business. We see that SpaceX is trying to break the mold and has acquired significant government business base, there are logical reasons for this.

Striking the right balance is not a given.

Based on the 2009 study released by the French government the European community is coming around to the realization that there are limits to funding Arianespace gaining commercial market share at significant costs to the taxpayers.

ILS has worked hard in the last three years to strike the right balance and discipline to have the entire equation work and succeed as a stable, financially viable launch services provider serving our customers. Of course, I have a bias in this regard but I think the facts support the claim.

Going Forward

By most measures the commercial space industry has a bright and positive future. However, current events in the commercial launch industry serve as an economic "reality check". The commercial launch industry is challenging and complex and should not be underestimated in terms of the required talent, investment and profitability necessary for a sustainable business model. Industry structure and a balanced government base are key determinants in the stability, long term viability and health of commercial launch and therefore continued success, of commercial space. With the prospect of a strong future for the commercial space based industry, the team at ILS is dedicated to contributing to the success of our customers across the globe.

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