SPACE FOUNDATION RESEARCH & ANALYSIS
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SOLUTIONS FROM SPACE:

SUMMARY: COVID-19 AND THE VENTURE CAPITAL MARKET

QUILTY analytics

SPACE FOUNDATION

Evaluating the Space Industry in an Era of Coronavirus and Economic Tumult

OneWeb likely won't be the only space company to founder in the post-coronavirus economy.

The satellite internet startup filed for Chapter 11 bankruptcy on March 27 after its largest investor, Softbank, rejected a request for additional funding. The funding denial prompted OneWeb to lay off about 450 of its 531 employees.

As the space industry and the global economy as a whole struggle to regain balance, *The Space Report* recognizes the need for more timely insight and analysis of the companies, governments, and investors involved.

In the pages that follow, Quilty Analytics, a St. Petersburg, Florida, a boutique financial services company, offers summary of the venture capital market and likely outcomes for investors and companies. This is a complimentary executive summary.

Across a variety of sectors, there is recognition of sweeping change to come. Pentagon officials reported this week that the small space launch sector is one of the most vulnerable markets. The pandemic has expedited the shakeup the market was anticipating that would narrow a field of 100 small providers to as few as two or three. Quilty Analytics also identifies synthetic aperture radar (SAR) constellations, weather systems, low Earth orbit broadband, and space-based internet-of-things as vulnerable markets.

Vulnerability leads to difficult decisions. Bigelow Aerospace in March announced it would lay off its 88 employees. The Samara Space Center in Russia announced it was halting production of Soyuz-2 rockets, and NASA closed facilities in Louisiana and Mississippi after an employee tested positive for coronavirus. Northrop Grumman notified the Securities and Exchange Commission that the ongoing coronavirus pandemic could take a toll on the company by disrupting its supply chain and increasing the cost of capital.

Yet, largely aided by the stability of big government, existing contracts and long-range plans will sustain many companies, some of them fledgling enterprises. NASA, ESA, and the U.S. Air Force announced efforts to provide funding for coronavirus-related research. Demo-2, the first launch of astronauts from American soil since 2011, is a joint NASA/SpaceX venture set for May 27. Earlier this month, the U.S. Office of Space Commerce announced eight new contracts were being awarded to companies for satellite mission and instrument design analysis for NOAA projects.

In the midst of the uncertainty, there is even room for celebration. On Saturday, the U.S. Air Force Academy graduated 967 cadets, more than 85 of them headed for the Space Force. They stood 8 feet apart on the parade field, their faces masked. But they threw their hats skyward and shared a certainty of a future in space that awaits us all.

- The Space Report Team

Key Takeaways

BY CHRIS QUILTY AND JUSTIN CADMAN

It has been a golden age for venture space investment. From 2015-2019, $11 billion has been invested in Venture Space, roughly 10x the annual pace of the preceding five years. There are more than 800 venture space companies, though the bulk of dollars have flowed to a small list of companies (roughly half went to **SpaceX** and **OneWeb** alone). Among the many drivers for this order-of-magnitude increase in space investment, two are foundational and will transcend the economic cycle: (1) "low-cost" space and (2) trends in data. On the other hand, we expect one key driver to reverse course, as investors that had piled into venture space for outsized returns in recent years see "for sale" signs in other, less-risky industry sectors. Only a subset of space investors are battle-hardened veterans; most of the investment in the last three years has been from newer investors to the sector, some of whom will lack the stomach to continue.

The venture space culling has arrived. The COVID-19-induced recession will accelerate a "culling of the herd" that was likely to happen anyway. Less than half of venture space companies are revenue-generating today and very few are profitable, making them highly dependent on raising external capital (or achieving an exit). We examined sector analogs and deal activity during the Great Recession to understand likely investor behavior going forward. We expect VCs to favor current portfolio companies over new investments. "Frontier" investment opportunities like space will see a bigger hit than other sectors.

The Space opportunity is exciting despite its immaturity. Despite having immaterial revenue impact on the broader space industry today, the opportunities (and threats) arising from venture space are anything but inconsequential to the large, traditional Satellite & Space incumbents. Defense and intelligence customers, for example, are excited about the innovations promised by such players.

Cash is king. While theoretically, the "best" companies should survive, dumb luck will also play a role. Marginal companies that recently raised substantial capital could survive, while good companies may fail.

Sector exposure matters. Given the dependency of venture space on external financing, vulnerability is driven not only by company-specific fundamentals but also by sector-driven investor preferences such as market dynamics, capital intensity, and competitive field. The field of >100 small launch companies will be hit, and hard. Conversely, companies in EO analytics should be broadly insulated. We explore a range of sector and company-specific considerations in our report.

A silver lining for the future. The venture space ecosystem will emerge stronger, as shakier businesses that "make noise but not hay" cease their operations. Stronger players will reap handsome rewards from a more benign competitive field. And active buyers and investors will see unique opportunities.

This special edition summary is being provided to readers of Quilty Analytics LLC and *The Space Report*, a publication of the Space Foundation. For more information on receiving a full copy of the analysis and other valuable research, please contact Info@QuiltyAnalytics.com. To receive the full report and access to all data and content of *The Space Report*, subscribe at https://thespacereport.org/pricing/.

About the Authors

Chris Quilty
Chris Quilty is the founder and a partner of Quilty Analytics, an independent boutique offering subscription research, strategic advisory, and investment banking services across all aspects of the satellite and space industry.

Prior to establishing Quilty Analytics in 2016, Chris served as a sell side research analyst with Raymond James for 20 years, focusing on the industrial, defense, space, wireless, and communications industries. Chris has participated in 30+ capital markets transactions over the past five years valued at over $2.5 billion.

He received a bachelor's degree in systems engineering from the United States Naval Academy in 1989 and an MBA from the University of Chicago in 1994.

Reach him at chris@quiltyanalytics.com.

Justin Cadman
Justin Cadman is a partner with Quilty Analytics. He has more than 15 years of investment banking and capital markets experience, having successfully completed approximately 90 advisory and capital raising transactions for private and public company clients.

Prior to Quilty Analytics, Justin spent 12 years as an investment banker with Raymond James, the last eight focused heavily on clients in the satellite and space ecosystem, where he has completed more than 30 transactions across most industry sub-segments.

He began his career in software equity research and has held corporate finance roles at a leading public wireless infrastructure company in the U.S. He received a bachelor's degree in finance with honors from the University of Florida.

Reach him at justin@quiltyanalytics.com.

The Space Report

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For questions about *The Space Report,* contact the Space Foundation Research & Analysis team at research@spacefoundation.org.

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