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BUSINESS CASES FOR SPACE CREDIT – OPPORTUNITIES AND CHALLENGES

**Abstract**

Today, the space industry is approximately USD 350B. By 2040, it is projected to exceed USD 1T. Growth comes from shrinking launch and manufacturing costs and NextGen constellations with novel applications.

Space finance has not kept pace. Seed and venture financing – long-time staples in Silicon Valley – accounted for 94 percent of space capital investment in 2019. Mature space companies tend to rely on corporate secured debt and export credit agency loans. A variety of financial structures of traditional industries have yet to migrate into space, creating opportunities for entrepreneurs in the financial sector.

Trends indicate that the space industry is ripe for traditional financial structures augmented by novel finance tools. Small satellites shifted the industry toward lower start-up costs and early-stage cashflows. Traditional GEO operators are considering hybrid LEO-GEO constellations. New flexible-use GEO satellites suggest opportunities for on-orbit sale in the case of default.

LEO constellations require high, annually recurring capital expenditures for satellite deployment. In non-space industries, recurring capex is serviced by credit – more efficient than equity, freeing capital reserves for growth opportunities. Annual capex for LEO constellations and on-orbit sale of flexible use GEO satellites present cases for asset-based loans. As on-orbit servicing matures, ABLs will become more compelling.

From smart contracts to fractional ownership of tokenized assets to blockchain registries, advancing fintech is laying groundwork for new capital flows into the space economy. Though some newer entrants recently went public, it can be expected that SPACs will receive closer regulatory scrutiny in coming years and may no longer provide a viable or sustainable model for many space operators. Synergies with space insurance and ABLs are apparent.

This paper presents business cases for space ABLs with focus on perfection of space security interests, regulatory challenges, and precedents for orbital repossession and sale. The purpose of the Cape Town Convention is to harmonize differing approaches of legal systems to security and title reservation rights. Though questioned by legacy satellite companies, increasing diversity of space operators shifts the landscape for the Space Protocol. Additionally, creditors face regulatory hurdles and export controls. Nevertheless, precedents exist for on-orbit repossession and sale, demonstrating the viability of

space ABLs. Through entrepreneurs' first-hand perspectives on efforts to establish space credit financial products, potential benefits to current operators, as well as longer-term growth strategies for provision of credit to emerging space operators, are demonstrated.