Brief: Risks and Benefits of Venture Capital for Space Firms

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Findings

Rotoiti interviewed several finance experts in the space industry. This brief, based on those conversations, summarizes the risks and benefits that venture capital poses to space firms.

Many firms assume that they must attract venture capital (VC) in order to succeed, but it is important to first define success and then assess if VC is necessary to achieve that success. The definition of success depends on the firm. VC tends to invest in high-risk, high-reward propositions. VC is arguably appropriate – even necessary – for some firms, such as those whose business is capital-intensive, transformational, or high growth-seeking. For firms that do not have such business, on the other hand, VC is arguably not necessary to achieve success.

- **Capital-intensive business:** Some businesses require more capital expenses than others. Developing a launch vehicle, for instance, may require more capital than developing an algorithm to analyze Earth observation data. VC is arguably more appropriate for capital-intensive businesses since they need to spend money up front to succeed.

- **Transformational business:** In exchange for high risk tolerance, VC expects high potential rewards, often linked to portfolio firms' potential to transform the industry. The more transformational, the more the potential reward. For example, an on-orbit manufacturing firm is arguably more transformative than yet another thruster firm.

- **High growth-seeking business:** Some firms want or need to grow more quickly than others and often must spend money to do so. VC is arguably suited to helping firms that seek rapid growth, particularly firms in a pre-revenue stage; other traditional financing options, such as bank loans, are difficult to access without preexisting cash flows.

It is strongly recommended that founders of space firms conduct due diligence when engaging VC. Even if VC makes sense given business objectives, VC should be approached with caution. An inherent information asymmetry exists between VC fund managers and founders. Fund managers are regularly interacting with firms and are well-versed in financial markets. Founders, in comparison, rarely interact with fund managers and have less understanding of financial markets. Receiving VC funding is like "getting married" – it is a long-term relationship which, if there is disagreement, can be very painful to end. Founders should strive to overcome their inherent information disadvantage before entering into a relationship with a VC fund.

VC dilutes ownership and may lessen the value of founders' stakes. In exchange for financing, founders must give stakes in their firm to the VC fund. Founders must "dilute" their ownership, in other words. All else equal, this lowers the value of founders' stakes; 50% ownership of a firm is worth less than 100% ownership of a firm. Of course, VC's purpose is usually to multiply a firm's valuation, so diluted ownership may end up being more valuable than undiluted ownership. To know if dilution is worth VC investment depends on future valuation multiples.

- VC fund managers will often argue for lower valuations of firms in which they are investing. This is because if a firm has a lower valuation, then the fund manager can more easily demand more ownership. Founders negotiating with VC fund managers should thus be wary of undervaluations that lead to giving away too much ownership.

- VC investors are moreover incentivized to argue for low valuations because this helps improve returns on investments. When VC investors exit a firm, the size of their return is informed by how much a firm's valuation has multiplied since they invested in it. The lower the initial valuation, all else equal, the more impressive will be later multiples.

- For these reasons, founders may feel compelled in negotiations with VC to argue for higher valuations. They should be wary, though, to avoid overvaluations. If a firm's valuation is too high, this sets unrealistic expectations for growth. Subsequent funding rounds can have flat or even lower valuations, which damages business prospects.

VC constrains decision-making by prioritizing fund managers' expectations about valuation multiples. The general goal for VC fund managers is to, across a portfolio of firms in which they invest, achieve a valuation multiple in a certain time frame. Valuations are estimates of portfolio firms' worth. In exchange for receiving financing from a VC fund, portfolio firms will come under pressure to achieve desired valuation multiples. Often this influence is formalized in board membership. Different fund managers have different ways of determining firms' valuations and there is no uniformly agreed upon way to determine valuations – valuations are debatable and different stakeholders are incentivized to over- or underestimate them.

- There is no single way to define a firm's valuation, but some metrics are more important for fund managers than other metrics. This can be problematic because ignoring other metrics that are not important for valuations may negatively affect business. Sales, for instance, may be more important than profits in terms of determining valuation, but firms with large sales can still fail to make profit and thus be in precarious positions.

- Sometimes focusing on sales over profits makes sense, depending on business strategy. If the goal is to be acquired, for instance, it may make sense to aim for a "land grab" – increasing sales to gain access to distribution channels. A firm with many distribution channels may be an attractive acquisition target because the acquiring firm can use the acquired firm's distribution channels to sell more profitable products or services.

- VC funds often have defined life cycles during which profits must be returned to investors. It is important to know at what point a fund is in its life cycle. The point at which a fund is in its life cycle affects how quickly portfolio firms must achieve valuation multiples. It behooves founders of space firms, therefore, to understand the details of VC funds' lifecycles before they decide to accept any financial support from those funds.

Venture capitalists spread investments among a portfolio of firms, which means they care less about a firm failing than does its founders. This is a basic but important point. A VC fund manager does not care if any particular firm succeeds or fails. Fund managers need to provide returns on the portfolio level, not the firm level. This means there can be a competitive dynamic amongst portfolio firms. Firms that seem likelier to yield higher returns will receive more support from fund managers. This "asymmetry of care" usually means the VC fund will push portfolio companies towards a high-risk, high-reward approach to growth. To anticipate fund managers' decision-making, it is worth knowing about other investments in their portfolio.

It is possible that VC investment in space will slow; if this happens, it will lead to difficulties for firms whose plans depend on VC. There is currently significant VC interest in space. It remains to be seen if hype is creating unrealistic expectations about growth in the industry. It is possible that the space industry is currently experiencing a "bubble" in terms of VC interest in space; portfolio firms may ultimately have less success than expected, yield lower returns, and thus dampen VC interest. This has implications for firms whose business plans depend on VC; if VC interest in space shrinks, this will make it more difficult for space firms to access VC.

- Different people have different opinions, often very strong ones, about the extent to which there is hype in the space industry. Generally, the less space-focused that investors are, the more skeptical they are about space. Conversely, investors who are focused on space tend to be more bullish about the industry. There is in fact no way to know if the industry is experiencing a bubble; bubbles can only be seen in retrospect.

- One factor exciting VC interest in space is initial public offerings (IPOs) via special-purpose acquisition companies (SPACs). SPACs are shell companies that raise money through IPOs and then merge with actual firms. Several space firms have recently gone public in this way, highlighting a "liquidity pathway" for VC in space firms. SPAC IPOs arguably reduce transparency and lead to overvaluations. Appetite for SPAC IPOs may diminish as firms listed in this way prove to be less successful than expected. Fewer SPAC IPOs might close a liquidity pathway for VC and thus dampen VC interest in space.

Firms should consider having in-house finance expertise. Many funds, especially early-stage ones, will sell themselves to space firms not only as providing financing but also giving finance expertise. It is expected, in other words, that portfolio firms may be inexperienced when it comes to finance. Firms thus do not need in-house finance professionals in order to access VC funding. But it is worth considering having internal finance expertise for more fundamental reasons. In-house finance professionals can help answer questions such as: Does the firm even need VC, given its objectives? Which VC fund most align with the firm's priorities? What are fair terms for financing regarding valuations, the amount of capital, and stakes? Clearly, fund managers may not be incentivized to provide firms with honest answers to these questions.

- There are two common ways for firms to have in-house finance expertise. One way is to have experts deeply integrated in the firm from the very beginning – as founders of the company, for instance. A second way is to retain or contract finance experts as advisors.