



Good but still net losses

- 96% top-line growth

SPAC → for back-door listing

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## Luminar and the Rise of SPACs

### Introduction

Heena B. Serrano, Founder of Serrano Investment Advisors, had a difficult decision to make. Known as a leading star of the "SPAC Mafia," Serrano's hedge fund had invested \$15 million in 2019 into the IPO of Gores Metropoulos, Inc. Gores Metropoulos was a special purpose acquisition company, or SPAC. SPACs were blank check companies formed for the purposes of finding and effectuating a merger with a target company within 2 years of its formation. SPACs had risen rapidly in popularity in the late 2010s as a back-door option for private, high-growth start-ups to go public. While in 2018, 34 SPACs raised \$6.4 billion, in 2020 219 raised \$72 billion, outpacing even traditional IPOs by more than \$6 billion.<sup>1</sup>

Earlier in the month, the sponsor of the SPAC, who was chiefly responsible for finding and bringing a deal over the finish line, proposed to shareholders what it believed was an appropriate acquisition target. Luminar Technologies, a new-age LiDAR manufacturer for self-driving cars, would merge with the SPAC and thereby go public. An IPO shareholder, Serrano had the option either to redeem all of her shares to get back her full investment with an attractive return or to participate in the merger and remain a shareholder. In previous SPACs, sponsors had called her and enticed her with discounts and deals to remain after the merger. In this SPAC, no such call had come. As Serrano read through the memos prepared by her team of analysts, she wondered what she should do.

### Traditional IPOs

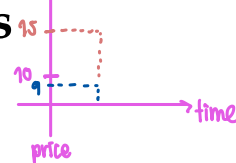
Historically, the most attractive exit path for a startup to take was an initial public offering (IPO), the process of selling shares to the public for the first time. By going public, companies were able to gain better access to capital, which they needed for expansion, and liquidity, which their investors

<sup>1</sup> Jonathan Shieber "What's behind this year's boom in climate tech SPACs?" *Extra Crunch*, Dec. 29, 2020, <https://techcrunch.com/2020/12/29/whats-behind-this-years-boom-in-climate-tech-spacs/?guccounter=1>, accessed May 2021.

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\* willing to pay more depends on who is target



reaction on announcement of potential deal  
price? if investors think pre-money valuation is underpricing  
value of Luminar pre-money  
pre-money \$400M  
all existing hds 400 M shares  
Combined company SPAC \$400M 40 M shares  
\$10/share  
SPAC always convert at \$10/share

Luminar 400 M  
SPAC 40 M  
PIPE less than 10%

if investors decide to redeem → cash ↓ to \$100  
f  
may need to raise more → PIPEs join as new investors

Decision to:

- redeem vs.
- stay with merge

needed to provide returns to their respective limited partners. Over time, founders also took advantage of liquidity of public equity markets by selling some of their ownership.

To be a credible candidate for a traditional IPO, startups needed predictable revenue and historically positive profits, a public company-ready management team, and robust financial and compliance controls. After a decision to go public had been made, the process began with selecting an investment bank to serve as a lead underwriter for the offering. The underwriter managed the deal. In addition to providing advice and helping with all the necessary filing requirements, they were responsible for setting the valuation of the company at issuance, making the market for the firm's shares after the offering, and ensuring that the company would sell the "float," or its listed shares, at the offer price. If it did not, it promised to cover the difference.

To do its job, the underwriters used a "book building" process. First, they worked with the company to determine a credible price range for the offering. In addition to discounted cash flow analyses, they relied on a comparables analysis of recent IPOs to determine the offer price. Next, underwriters took the company's senior officers on a roadshow, a private promotion of the company to institutional investors. At the end of the roadshow, the underwriter received indications of interest from investors and adjusted the offer price based on the demand expressed.

Underwriters purchased shares from the listing company and sold them to investors on the day of the stock's debut. To protect themselves against a loss and ensure market liquidity, underwriters at times exercised a "greenshoe provision," which allowed them to issue up to 15% additional shares at the offer price.<sup>2</sup> Underwriters usually sold more shares in the offering than the company had allotted in the offering, i.e., they were naked short. If the price of the IPO remained stable and went up after 30 days, the underwriter covered their short position by exercising the greenshoe option. The lead underwriter typically had 30 days in which to exercise the greenshoe option. If the IPO started to trade down in price, the underwriter covered their naked short position by purchasing shares in the open market. These open market purchases had the effect of stabilizing the IPO share price. In return for their work in bringing companies public, underwriters were paid a fee, called an "underwriters' spread," typically in the range of 5 to 7 percent of the offering size.

The IPO process was not without its inefficiencies. Pre-existing shareholders were subject to a 180 day "lock-up" imposed by the underwriter, meaning insiders were unable to sell their shares for the first six months of trading. Regulatory and compliance costs associated with traditional IPOs greatly increased as a result of the Sarbanes-Oxley Act of 2002.<sup>3</sup> Finally, insiders often objected to the large share price increase on the first day of trading. Studies with data back to 1980 showed that, on average, IPO shares increased by 20% on their first day of trading.<sup>4</sup> This led many tech commentators to suggest that underwriters underpriced listing shares intentionally and left value on the table for the companies they represented, i.e., firms felt as if they could have raised more capital by selling the same number of shares at a higher price. By 2020, the most famous dissenter in the tech industry was Benchmark

<sup>2</sup> Although unknown to most investors, the term "greenshoe" was a nod to the Green Shoe Company, which went public in 1919 and was the first IPO to utilize a greenshoe option.

<sup>3</sup> <https://www.lw.com/thoughtLeadership/the-impact-of-sarbanes-oxley-on-ipos-and-high-yield-debt-issuers>, accessed May 2021.

<sup>4</sup> <https://site.warrington.ufl.edu/ritter/files/IPOs-Underpricing.pdf>, accessed May 2021.

venture capitalist Bill Gurley, who complained that tech “had been on the bad end of a bad joke for about four decades now, in terms of how the traditional IPO process works.”<sup>5</sup>

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One proposed path of reform was direct listings, which Spotify and Slack undertook in 2018 and 2019, respectively. Direct listings differed from traditional IPOs in that no new stock was issued in an offering. By contrast, existing shareholder stock was auctioned on a public exchange. As a result, there was no 180-day lock-up period for existing investors and underwriters were not needed to engage in the book building process. Instead, companies hired capital advisors to communicate with institutional investors, offer forward looking guidance in advance of trading, and declare a reference price together with the hosting stock exchange. New regulations released by the SEC in August 2020 permitted companies opting for a direct listing to raise capital from the listing as well. Proponents for direct listings argued they were cheaper, faster, more transparent, and captured more value for the listing company.<sup>6</sup>

## SPACs as a Solution

Special purpose acquisition companies, or SPACs for short, carried similar promises for companies wishing to go public. SPACs were blank check companies formed for the purposes of finding and merging with a private business, thereby bringing it public. Between 2018 and 2020, SPACs exploded as a means of taking a private high-growth company public. While in 2018, there were 34 SPACs raising \$6.4 billion, in 2020 there were 219 raising \$72 billion, outpacing even traditional IPOs by more than \$6 billion.<sup>7</sup> SPACs had gained so much traction so quickly in the tech industry that commentators had begun labeling their growth a bubble. (See Exhibit 1 for SPAC funding over time.)

The mechanics of a SPAC were complex and had five core steps. In the first step, a SPAC was formed by issuing stock and raising capital at \$10 per share in an IPO. The median IPO proceeds for the 2019-2020 SPAC cohort was \$220 million.<sup>8</sup> The SPAC then spent up to 2 years searching for and negotiating with an acquisition target. In the third step, a merger target was found and IPO shareholders decided whether to exercise their redemption rights (i.e., forcing the SPAC to repurchase their shares at \$10) or not. Private investments in public equity (“PIPEs”) were raised to replace any shareholders who exercised their redemption rights. Finally, a SPAC merged with the target company, bringing it public. (See Exhibit 2 for the SPAC process and timeline.)

A SPAC was created by a sponsor. The majority of sponsors were private equity funds or senior officers of the world’s largest publicly-listed companies. Sponsors worked with underwriters to bring SPACs public. Prior to the IPO, sponsors purchased SPAC shares or warrants as part of a commit. This commit served primarily to cover the underwriting fees of the IPO and all operating costs incurred during its search for an acquisition target. In addition, sponsors were allocated a sponsors’ promote, or 20% of post-IPO equity. Sponsors, therefore, ended up with 20% of the SPAC for relatively little

<sup>5</sup> Annie Palmer, “Tech investor Bill Gurley says IPOs have put Silicon Valley on ‘bad end of a bad joke for about four decades,’” CNBC, Sept. 12, 2019, <https://www.cnbc.com/2019/09/12/bill-gurley-says-ipos-put-silicon-valley-on-bad-end-of-a-bad-joke.html>, accessed May 2021.

<sup>6</sup> Jamie McGurk, “All about Direct Listings,” Andreessen Horowitz, <https://a16z.com/2019/07/02/direct-listings/>, accessed May 2021.

<sup>7</sup> Shieber “What’s behind this year’s boom in climate tech SPACs?”

<sup>8</sup> Michael Klausner and Michael Ohlrogge, “A Sober Look at SPACs,” Law and Economics Research Paper Series Working Paper No. 20-48, Stanford Law School, Oct. 2020, <https://www-cdn.law.stanford.edu/wp-content/uploads/2021/01/SSRN-id3720919.pdf>, accessed May 2021.

money. Over the next two years, sponsors had the chief responsibility of finding an appropriate acquisition target, convincing existing shareholders to stay on through the merger, bringing in required new PIPE investors, and closing the merger successfully. The promote served as compensation for their efforts throughout this process. After a successful merger, agreements usually locked up a sponsors' holdings for one year. A recent study examined the performance of SPACs and the return to various stakeholders.<sup>9</sup> Sponsors experienced a mean return on their investment in the SPAC of 393% and a median return of 202% when performance was measured after three months post-merger.

Investors in SPACs gravitated toward high quality sponsors.<sup>10</sup> Due to their extensive know-how and elaborate networks, high-quality sponsors were thought to be able to access the best targets and add additional value to those deals post-merger. Confidence in their prowess meant fewer SPAC investors would redeem at the time of a merger, reducing dilution. Their robust networks and high reputation made raising PIPEs easier and allowed them to raise more capital during the IPO process. While high quality sponsors had considerably higher returns than other sponsors, they still bore a large potential conflict of interest with IPO investors: they could generate a remarkable return for themselves even if the stock price declined and the merger target was relatively unattractive. On the other hand, they stood to make no money and to lose their investment in the SPAC if they did not find any target with which to merge within two years.

One apparent benefit of a SPAC for the private company target was that companies seeking to go public viewed the SPAC process as being less costly than a traditional IPO. To bring a SPAC public, underwriters were paid 2% of proceeds on average from the sponsor's commit. Only upon a successful merger were underwriters paid an additional 3.5%. For underwriters, SPACs had a unique advantage over IPOs that seemed to justify the reduced fee structure. Underwriters were common targets for shareholder lawsuits in traditional IPOs. But because there was little to disclose at the IPO of a SPAC, they were generally protected from Section 11 liability. In fact, there had not been a single lawsuit filed against SPAC underwriters in the past decade.<sup>11</sup> However, while underwriting fees seemed more amenable, most SPAC IPO investors exercised their redemption rights when the sponsor proposed a merger candidate. Academics pointed to this unique SPAC mechanism to suggest that the actual median underwriting fee was 16.3% for SPACs based upon the amount of capital that actually remained with the company post-merger.<sup>12</sup> Underwriters could also be paid additional fees to help secure PIPE investors needed to move ahead with a successful merger.

SPACs earned a reputation in the media as "poor man's private equity," in which average investors could participate actively in wealth creation. However, by 2020, 70% of SPAC IPO funding came from a group of hedge funds known as the SPAC Mafia. The SPAC Mafia were typically filed 13F forms (required for all 5% shareholders in public companies and funds with over \$100 million in assets under management) and held at least 100,000 shares in 10 different SPACs that went public between 2010 and

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<sup>9</sup> Klausner and Ohlrogge, "A Sober Look at SPACs."

<sup>10</sup> "High quality sponsors" here are defined as meeting at least one of two criteria: (1) they're affiliated with a fund with at least \$1 billion in assets under management or (2) they're a SPAC manager or a former CEO or senior officer for a Fortune 500 company.

<sup>11</sup> More recently, the legal community observed that reduced liability was not so straightforward, highlighting the risk to sponsors. See "Rising Threat of Securities Liability for SPAC Sponsors" (<https://corpgov.law.harvard.edu/2020/11/09/rising-threat-of-securities-liability-for-spac-sponsors/>).

<sup>12</sup> This calculation is the underwriting fee as a percent of non-redeemed share proceeds and takes dilution from investors redeeming at the merger into account. So if the underwriting fee for a SPAC is 5% and 50% of investors redeem their shares at the merger, the fee will in practice be 10% for the investors who remain.

2020.<sup>13</sup> SPAC IPO proceeds were placed in a trust and invested in Treasury notes for 2 years. As compensation for the illiquidity and as an incentive to make the IPO investment, SPAC shareholders were given redemption rights. These redemption rights allowed SPAC shareholders to redeem their shares at the IPO price (\$10 per share) plus accumulated interest when a merger was proposed. While sponsors would offer private deals and discounts to keep existing SPAC IPO shareholders in through the merger, the majority took advantage of their redemption rights. The median redemption rate, or rate at which SPAC IPO investors opted to exercise their redemption rights, was 73% for the 2019-2020 merger cohort. Of those who redeemed, the divestment rate, or the percentage of a position an entity divested, was 98%.<sup>14</sup> As an added incentive to put their money into a SPAC, SPAC IPO shareholders were given warrants and rights. Warrants were call options created by a SPAC company for new stock. The warrants and rights did not expire even after SPAC IPO shareholders exercised their redemption rights, i.e., even if they redeemed their IPO shares for \$10 plus accrued interest, they held onto their warrants.<sup>15</sup> As a result, the mean annualized return for redeeming SPAC IPO shareholders was 11.6% for what was essentially a risk-free investment.<sup>16</sup>

Commentators pointed to PIPEs, or private investments in public equity, as another material way in which SPACs were superior to the traditional IPO. To replenish the cash lost when shareholders redeemed prior to the merger, SPACs often raised PIPEs to ensure sufficient cash at the time of merger. Sponsors brought on new capital by way of PIPEs and new public shareholders. (In some instances, they also invested more of their own money.) Following rigorous nondisclosure agreements, prospective investors in PIPEs were brought over the wall and were provided confidential information that allowed them to do more thorough due diligence resulting in more accurate price discovery than was possible in a traditional IPO roadshow. Because of the strong signaling effect commitments from high quality PIPE investors would have on prospective public investors, about one-third of PIPE investors received discounts of 10 percent or more relative to the IPO share price. PIPE investors provided a median of 24.6% of total cash delivered to a target at the time of merger. (See **Exhibit 3** for SPAC Characteristics.)

Private companies merged with SPACs to go public for a variety of reasons. Underwriters typically had criteria in terms of revenues, market capitalization, profitability, etc. for which companies they would take public. As a result, many companies that did not meet those criteria had no other way to become public. By negotiating with a SPAC, many target companies received financing they otherwise would not have obtained. In addition, going public via a SPAC only required negotiations with a single entity, unlike in a traditional IPO where road shows and pricing meetings typically involved a large number of new institutional investors. While fair value documents were included in prospectuses, they contained few if any forward-looking statements - they were not required. Commentators noted that mergers with SPACs had the potential to enable companies to go public faster than by more traditional methods. Finally, a point of friction for companies during a book-building process of a typical IPO was that valuation and share prices were often locked in. What was not locked on was the amount that would be raised. Although merger agreements often included minimum cash requirements, due to high redemption rates, SPACs were not always able to replenish cash available to meet the set minimum cash requirements. Nevertheless, the median post-merger market cap of a target was \$500 million, with a median of \$151.6 million. In contrast, a traditional IPO

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<sup>13</sup> Klausner and Ohlrogge, "A Sober Look at SPACs," page 13 definition.

<sup>14</sup> Klausner and Ohlrogge, "A Sober Look at SPACs," page 13.

<sup>15</sup> Klausner and Ohlrogge, "A Sober Look at SPACs," page 18.

<sup>16</sup> The annualized return is calculated by counting the redemption price, any accumulated interest plus the market value of investors' warrants and rights at the time of the SPAC merger.



raised a median of \$91 million in proceeds for companies.<sup>17</sup> If successful, the blank check company would de-SPAC and the target merged, bringing it public and marking the end of the SPAC.

SPACs were not without substantial challenges and costs to some of their stakeholders. While it was suggested that their personal commitments aligned sponsors to the performance of a company more closely than underwriters had been in a traditional IPO, sponsors risked losing everything if no merger went through. Their chief incentive was therefore a commitment to finding any deal, even if mediocre. Because of the promote, even a losing deal could generate substantial upside for a sponsor. The dilution experienced by most SPACs - 50.4% of its IPO proceeds - was staggering and was borne almost entirely by non-redeeming IPO shareholders and PIPE investors.<sup>18</sup> The post-merger public market performance of SPACs was also disappointing in the time periods that followed. In the 3 months after a merger, the median SPAC return was -14.5%, or a performance of -32.5% against returns anticipated for a company 3 months after an IPO. Twelve months after SPAC mergers had gone through successfully, their median return to shareholders joining at the merger was -65.3%. (See **Exhibit 4** for SPAC returns.)

## Luminar Technologies

### *Company History*

Austin Russell founded Luminar Technologies, an autonomous vehicle sensor and software company, at the age of 17. Russell spent his teenage years researching optics and photonics at Beckman Laser Institute at the University of California Irvine, where he became fascinated with building laser LiDAR systems used in self-driving cars that could “actually work and be safe.”<sup>19</sup> In 2012, he incorporated the company, graduated high school, and later matriculated at Stanford University to study physics. However, he dropped out after six months to work on his business full-time after he was awarded the prestigious Thiel Fellowship, a \$100,000 grant from Peter Thiel given to students to drop out of college.<sup>20</sup>

Luminar Technologies spent its first five years researching and building out its intellectual property. Like CEOs of many young enterprises, Russell had to find scrappy, creative solutions early on in his company’s history. He moved back home to Southern California. He even brought on his uncle, an electrical engineer who his parents recommended as gifted in rapid prototyping, to support his operation.<sup>21</sup>

A key event in Luminar’s development came when Jason Eichenholz, an experienced serial entrepreneur of various photonics technologies, joined the team as co-founder in May 2013. Eichenholz had been mentoring Russell while he had been in high school and later had acted in a consulting capacity for the business.<sup>22</sup> Upon joining, Eichenholz moved the company’s headquarters to the Space

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<sup>17</sup> Anna Pinedo “Capital Formation Market Trends: IPOs And Follow-On Offerings” *Mondaq*, Mar. 3, 2020, <https://www.mondaq.com/unitedstates/securities/897822/capital-formation-market-trends-ipos-and-follow-on-offerings>, accessed May 2021.

<sup>18</sup> Dilution costs are calculated as a percent of the cash delivered in a merger. If a SPAC delivered \$1000 to a target, it would have borne \$504 in dilution from a combination of the net promote, underwriting fee, and warrant plus rights costs.

<sup>19</sup> “CEO at age twenty-two,” *UCI Beckman Laser Institute*, Aug. 23, 2018, <http://www.bli.uci.edu/ceo-at-age-twenty-two/>, accessed May 2021.

<sup>20</sup> Nilay Patel, “The 25-Year-Old Billionaire Building the Future of Self-Driving Cars,” *The Verge*, Mar. 2, 2021, <https://www.theverge.com/22298001/luminar-austin-russel-ceo-interview-self-driving-cars>, accessed May 2021.

<sup>21</sup> Patel, “The 25-Year-Old Billionaire Building the Future of Self-Driving Cars.”

<sup>22</sup> Patel, “The 25-Year-Old Billionaire Building the Future of Self-Driving Cars.”

Coast (Orlando, Florida), whose ecosystem of long-standing defense programs and pillar organizations like Lockheed Martin, Raytheon, L3 Systems, and NASA had created the highest concentration of LiDAR engineers in the world.<sup>23</sup> Luminar began to leverage Eichenholz's existing roots in the area to bring on top talent for research and development. At the time of the SPAC merger in 2020, Luminar Technologies had over 350 employees, 88 issued patents, and 80 pending patents in the US or abroad.<sup>24</sup>

Developing a LiDAR system meant significant research and development costs, opening up a manufacturing plant, and production of hardware that cost tens of thousands of dollars per unit. At first, Russell and his team put cash into the business themselves. To finance their ambitious operation, however, Russell soon turned to professional capital.<sup>25</sup> He first raised funds from the 1517 Fund, a venture capital firm backed by Peter Thiel. Over time, hedge funds, automotive corporate venture capital funds, and other venture funds joined in, with the most recent round of \$184 million having been led by Alec Gores in September 2020.<sup>26</sup> By the time of the SPAC merger, Luminar Technologies had raised over \$434 million in capital. (See **Exhibit 5** for a financing history of Luminar Technologies.)

### Technology

Introduced in the 1960s to track satellites, light detection and ranging, or LiDAR, first gained consideration in the world of autonomous driving during the 2005 DARPA Grand Challenge. Eighteen months after no robot car could finish the track in the previous competition, Stanley, a Stanford vehicle that ran on a 2D LiDAR system, completed the 132 mile course and took home \$2 million as prize money.<sup>27</sup> The majority of teams in future competitions would use LiDAR.<sup>28</sup>

LiDAR systems measured distances to objects by emitting light beams via lasers and calculating the time-of-flight until a reflection was returned. The combination of different sensors enabled LiDAR systems to map and respond to a dynamic, unpredictable environment in real-time. The core promise of LiDAR systems was that they could make Level 5, or full, autonomous driving possible.<sup>29</sup>

Nevertheless, they were constrained by cost, reflexivity, and range. Waymo famously paid \$70,000 per vehicle for its early LiDAR system.<sup>30</sup> While startups projected to deliver a system as low as \$250, at the time of the merger none were able to meet their ambitious customer promises. The system Waymo first used could process 1.3 million data points per second but could no longer be useful past a range of approximately 120 meters. LiDAR systems' poor reflection off of many materials encountered in an unpredictable environment led to lower resolution outputs and tracking ranges insufficient for a safe, autonomous automobile.

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<sup>23</sup> Alejandro Cremades, "Austin Russell On Starting His Business At 16 And Raising \$250M To Make Self-Driving Cars A Reality," *alejandrocremades.com*, <https://alejandrocremades.com/austin-russell/>, accessed May 2021.

<sup>24</sup> S-4 Filing, p. 265, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

<sup>25</sup> Cremades, "Austin Russell On Starting His Business At 16 And Raising \$250M To Make Self-Driving Cars A Reality."

<sup>26</sup> Kia Kokalitcheva, "This 22-year-old CEO has raised \$36M to improve self-driving cars," *Axios*, Apr. 13, 2017, <https://bit.ly/3D1HUPH>, accessed May 2021.

<sup>27</sup> Steve Russell, "DARPA Grand Challenge Winner: Stanley the Robot!," *Popular Mechanics*, Jan. 9, 2006, <https://www.popularmechanics.com/technology/robots/a393/2169012/>, accessed May 2021.

<sup>28</sup> Oliver Cameron, "An Introduction to LIDAR: The Key Self-Driving Car Sensor," *Voyage*, May 9, 2017, <https://news.voyage.auto/an-introduction-to-lidar-the-key-self-driving-car-sensor-a7e405590cff>, accessed May 2021.

<sup>29</sup> James M. Anderson, et al. "Brief History and Current State of Autonomous Vehicles," *Autonomous Vehicle Technology: A Guide for Policymakers*, RAND Corporation, 2014, pp. 55-74. JSTOR, [www.jstor.org/stable/10.7249/j.ctt5hhwgz.11](http://www.jstor.org/stable/10.7249/j.ctt5hhwgz.11). Accessed 12 May 2021

<sup>30</sup> Ibid.

Luminar Technologies tackled these problems by building its hardware and perception software solutions from the ground up, i.e., chip level, for the automobile industry. Its full stack approach resulted in a three-dimensional, 1550 nanometer wavelength technology whose resolution approached that of a camera. Its first product, called Hydra, was a series of dynamically configurable dual-axis scan sensors that offered 200 points per square degree resolution, detected objects up to 500 meters away, and ran on under 40 Watts. The next version of their product, called Iris, promised improvements in weight, power, reliability, size, and cost. Its resolution was expected to increase by 50 percent, to 300 points per square degree, ensuring higher precision and promised to come at two price points: \$1000 and \$500.<sup>31</sup> (See **Exhibit 6** for photos of Luminar's products.)

Luminar Technologies primarily sold its design, manufacturing, and supporting software solutions to automobile OEMs. It entered into Strategic Partner Programs ("SSP"), promising to deliver products at a fixed price often in collaboration on an autonomous vehicle development program. In September 2017, Luminar Technologies signed a partnership with Toyota Research Institute. Audi AID selected to partner with Luminar in December 2019, citing its then industry-leading 250 meter effective range as the selling point. In May 2020, Volvo awarded Luminar the industry's first series production contract. It would build Luminar's technology into its global automobile platform starting in 2023. At the time of the merger, Luminar Technologies served 50 OEMs, including 7 of the top 10, who operated in the consumer, robotaxi, and trucking sectors of the automobile industry.<sup>32</sup>

Luminar Technologies net sales were \$6.8 million in 2019 and approached \$12 million in 2020. However, the company suffered significant operating losses of approximately \$56 million in 2020. (See **Exhibit 7** for Luminar's historical financials.) At the same time, Luminar's forward-looking statements illustrated the company's high growth expectations. The company believed that by 2025 it would achieve \$837 million in revenue. Most of this revenue was expected to come from the existing partner base. (See **Exhibit 8** for revenue projections from the merger presentation.) The company also expected to reach \$531 million in gross profit and \$365 million in EBITDA by 2025. (See **Exhibit 9** for gross profit and EBITDA projections from the merger presentation.) According to the S-4 document, Luminar Technologies expected that the total addressable market would grow from approximately \$5 billion in 2020 to \$150 billion by 2030. Adjacent markets such as aerospace, defense and smart cities would become increasingly relevant after that time.<sup>33</sup>

Going SPAC reverse merger → backdoor listing → pulling other

Gores Metropoulos, Inc went public via an IPO in February 2019, raising \$400 million in proceeds. The SPAC's sponsors were teams led by Alec Gores and Dean Metropoulos. Gores was a private equity investor who built his career making prominent leveraged buyouts of non-core businesses from Fortune 500 companies. Metropoulos, too, was a private equity investor who focused on buy-build transactions in the consumer brands sector. The two had collaborated before in 2016 when Gores had led the merger of his SPAC with Hostess Brands which had been privately owned by Metropoulos. Media reports attributed the subsequent explosion of interest in and growth of SPACs to the success that came from that merger.<sup>34</sup>

<sup>31</sup> Kyle Wiggers, "Lidar startup Luminar raises \$100 million, unveils Iris sensors," *VentureBeat*, Jul. 11, 2019, <https://venturebeat.com/2019/07/11/lidar-startup-luminar-raises-100-million-unveils-iris-sensors/>, accessed May 2021.

<sup>32</sup> S-4, page 269, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

<sup>33</sup> Ibid, page 238.

<sup>34</sup> John Kell, "Hostess Brands Returns to Wall Street," *Fortune*, Nov. 7, 2016, <https://fortune.com/2016/11/07/twinkies-hostess-brands-ipo/>, accessed May 2021.



In late 2020, Gores Metropoulos, Inc announced that they had found an appropriate target. They planned to include \$400 million in cash in a reverse merger with Luminar Technologies at a market capitalization of \$3.4 billion. This valuation also included an immediate financing round of \$170 million which would be led by Gores and existing Luminar Technologies investors (referred to as series X).<sup>35</sup> Of course, these proceeds assumed that none of the Gores Metropoulos' stockholders exercised their redemption rights to receive cash from the trust account. The amount of cash remaining in the merged company would be reduced by the amount of cash used to satisfy any redemptions.

After the merger, the Series X investors would own 5% of the combined entity, the IPO stockholders would own another 11.8%, and Gores Metropoulos would own 3%. Together, they would own roughly 20% of the combined entity and pre-merger investors would own the remaining 80%, excluding the impact of warrants. (See **Exhibit 10** for pro forma post-merger share information and Exhibit 11 for post-merger projected ownership structure.)

By the time of Gores Metropoulos' announcement, the SPAC market had become particularly hot. SPACs appeared the preferred method of going public for companies involved in the future of mobility. Twenty two such companies went public via reversed mergers, and public valuations of electric vehicle businesses had risen by \$800 billion. At the same time, while deal sizes in the private capital markets continued to rise, the number of venture capital transactions started to decline.<sup>36</sup>

Three direct competitors to Luminar Technologies - Velodyne, Aeva, and Ouster - had successfully completed their initial business combinations (i.e., SPAC merger) in the summer and fall of 2020, each achieving market capitalizations of over \$1 billion and raising significant capital. (See **Exhibit 12** for SPACs in the EV market 2015-2020, **Exhibit 13** for a listing of various comparables, and **Exhibit 14** for venture capital investments in the LiDAR sector.)

### Conclusion

Pouring over her analyst notes, Serrano knew that the mobility market's recent success could be a bubble. Were the growth expectations for Luminar Technologies reasonable? Would the promise of LiDAR justify the expected market size? Was this explosion of EV SPACs just a fad - the 2020 version of tulip mania?

Serrano was also wondering whether other SPAC IPO stockholders would choose to redeem their shares, and if so, how it would affect her position. In such a case, would the sponsor succeed in raising alternative capital through a PIPE? Would the sponsor have to offer significant discounts to the PIPE investors that would dilute her ownership?

Serrano glanced at the slides that Gores Metropoulos had presented to the SPAC IPO investors making the case that this was one ride that was not worth missing. While Serrano Investment Advisors had typically redeemed at the announcement of a SPAC merger and had been rewarded handsomely for that choice, she worried that this may represent a very different opportunity. The decision to hold or redeem was certainly not going to be easy.

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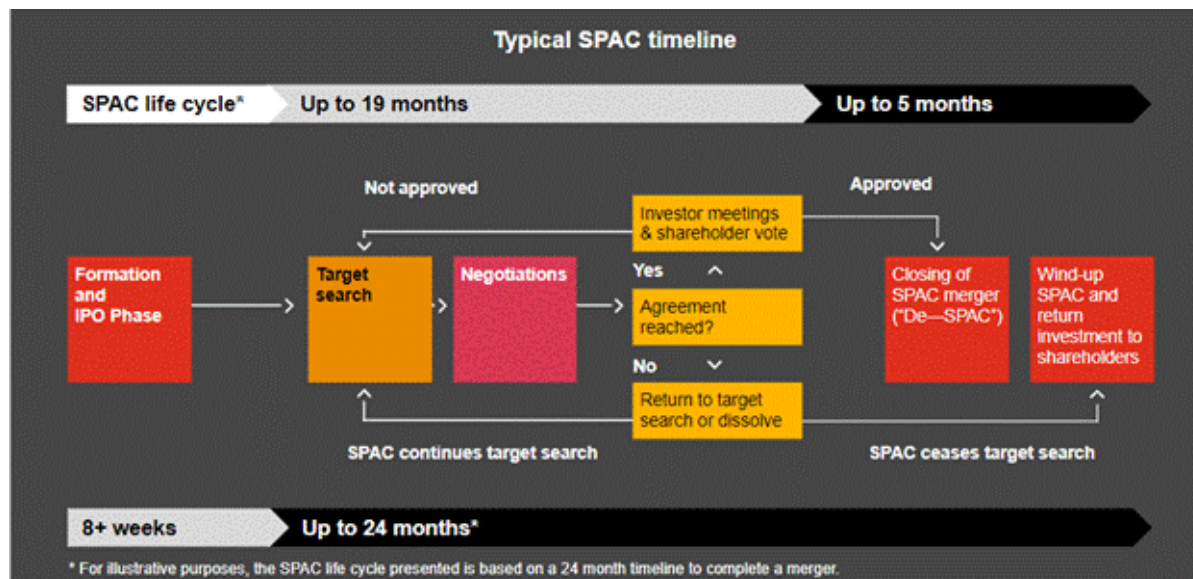
<sup>35</sup> "Luminar, the Global Leader in Lidar Autonomous Driving Technology, to Be Listed on Nasdaq Through Merger With Gores Metropoulos," *Bloomberg*, August 24, 2020, <https://www.bloomberg.com/press-releases/2020-08-24/luminar-the-global-leader-in-lidar-autonomous-driving-technology-to-be-listed-on-nasdaq-through-merger-with-gores-metropoulos>, accessed May 2021.

<sup>36</sup> Jeremy C. Owens and Tomi Kilgore "In One Chart: The explosion in electric-vehicle funding, valuation and trading," *MarketWatch*, Mar 15, 2021, <https://www.marketwatch.com/story/in-one-chart-the-explosion-in-electric-vehicle-funding-valuation-and-trading-11615834956>, accessed May 2021.

**Exhibit 1** Number of SPAC and Operating Company IPOs

Year	Number of IPOs		Total Proceeds (\$m)		Average Proceeds (\$m)	
	SPAC	Operating	SPAC	Operating	SPAC	Operating
2010	2	91	104	29,822	52	328
2011	6	81	451	26,967	75	333
2012	9	93	475	31,112	53	335
2013	10	158	1,325	41,565	132	263
2014	11	206	1,555	42,200	141	205
2015	20	118	3,620	22,000	181	186
2016	13	75	3,224	12,518	248	167
2017	34	106	8,996	22,979	265	217
2018	46	134	9,935	33,467	216	250
2019	59	112	12,115	39,182	205	350
2020	248	165	75,300	61,900	304	375
<b>Total</b>	<b>458</b>	<b>1,339</b>	<b>117,099</b>	<b>363,711</b>	<b>256</b>	<b>272</b>

Source: Minmo Gahng, Jay Ritter, and Donghang Zhang, 2021, "SPACs," University of Florida Working Paper, <https://ssrn.com/abstract=3775847>, accessed May 2021.

**Exhibit 2** Typical SPAC Timeline

Source: "Typical SPAC Timeline." <https://www.pwc.com/us/en/services/audit-assurance/accounting-advisory/spac-merger.html>, accessed March 2021. © PwC. Not for further distribution without the prior written permission of PwC. PwC refers to the US member firm or one of its subsidiaries or affiliates, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see [www.pwc.com/structure](http://www.pwc.com/structure) for further details.

**Exhibit 3** Overview of SPAC Characteristics

	Median	25th Percentile	75th Percentile
IPO Proceeds (\$M USD)	\$220	\$141	\$328
Redemptions (% IPO Proceeds)	73%	18%	95%
Total Cash Delivered to Target in Merger (\$M USD)	\$151.6	\$26	\$353
Cash to Target as % IPO Proceeds	71.5%	16%	121%
Public SPAC Investors: % Total Cash Delivered	64.2%	28%	99%
3rd Party PIPE: % Total Cash Delivered	24.6%	0%	43%
Sponsor PIPE: % Total Cash Delivered	0%	0%	11%
Target Post-Merger Market Cap (\$M USD)	\$501.6	\$321	\$955
Post-Merger Shares (%) Held by All SPAC Shareholders (including sponsor)	34.5%	24%	50%
Post-Merger Shares (%) Held by Sponsor	11.7%	6%	15%

Source: Klausner, Michael D. and Ohlrogge, Michael and Ruan, Emily, "A Sober Look at SPACs" (October 28, 2020). Yale Journal on Regulation, Forthcoming, Stanford Law and Economics Olin Working Paper No. 559, NYU Law and Economics Research Paper No. 20-48, European Corporate Governance Institute – Finance Working Paper No. 746/2021, <https://ssrn.com/abstract=3720919>, accessed May 2021.

**Exhibit 4** Post-Merger SPAC Returns (2019-2020 Merger Cohort)

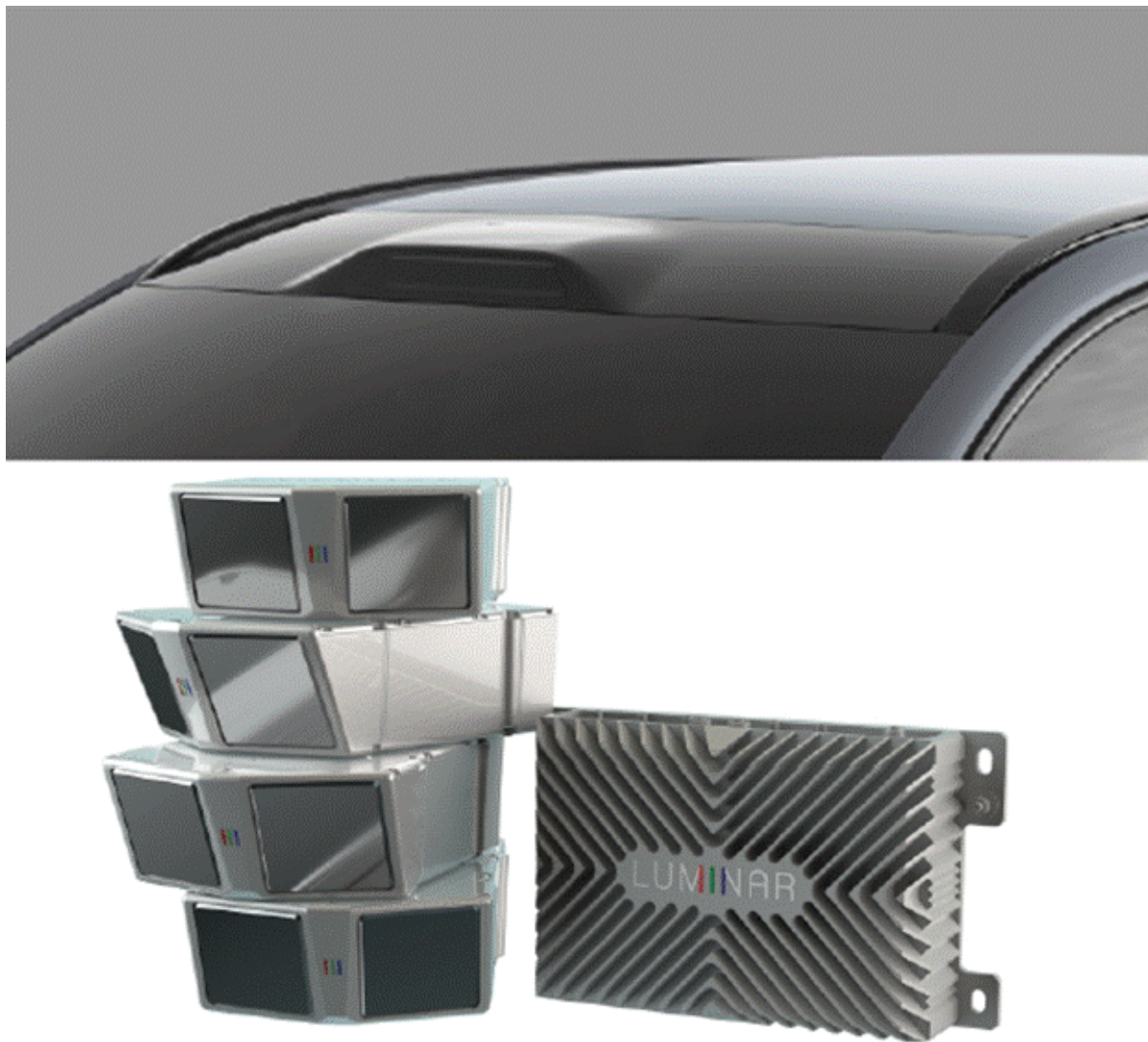
	Three-Month			Six-Month			Twelve-Month		
	All	HQ	Non-HQ	All	HQ	Non-HQ	All	HQ	Non-HQ
Mean Return	-2.9%	31.5%	-38.8%	-12.3%	15.8%	-37.6%	-34.9%	-6.0%	-57.3%
Median Return	-14.5%	-4.6%	-46.9%	-23.8%	-15.9%	-43.0%	-65.3%	-34.6%	-66.3%
Mean Return (Excess over IPO Index)	-13.1%	25.1%	-53.0%	-33.0%	0.4%	-63.1%	-47.1%	-11.8%	-74.6%
Median Return (Excess over IPO Index)	-32.8%	7.1%	-52.1%	-43.2%	-31.0%	-56.3%	-56.5%	-54.8%	-89.9%
Mean Return (Excess over Russell 2000)	-1.3%	37.5%	-41.9%	-10.9%	22.5%	-41.0%	-21.5%	9.7%	-45.7%
Median Return (Excess over Russell 2000)	-16.1%	16.9%	-47.2%	-17.5%	-2.4%	-57.0%	-44.9%	-36.3%	-55.0%
N SPACs	47	24	23	38	18	20	16	7	9

Source: Klausner, Michael D. and Ohlrogge, Michael and Ruan, Emily, "A Sober Look at SPACs" (October 28, 2020). Yale Journal on Regulation, Forthcoming, Stanford Law and Economics Olin Working Paper No. 559, NYU Law and Economics Research Paper No. 20-48, European Corporate Governance Institute – Finance Working Paper No. 746/2021, <https://ssrn.com/abstract=3720919>, accessed May 2021.

**Exhibit 5** Financing History of Luminar Technologies

Deal Type	Date	Amount	Raised to Date	Notable Investors
Corporate	30-Oct-2020	Undisclosed	\$434.00 M	Daimler Trucks
Later Stage VC	8-Sep-2020	\$184.00 M	\$434.00 M	Volvo Car, Van Tuyl Companies, VectoIQ, Alec Gores
Later Stage VC	24-Jun-2019	\$100.00 M	\$250.00 M	Corning, Corneis Technologies and Corning Painted Post Agency
Early Stage VC	14-Jun-2018	\$114.00 M	\$150.00 M	Volvo Car and DVI Equity Partners
Debt - General	1-Sep-2017	Undisclosed	\$36.00 M	SQL Venture Partners and Crescent Cove Capital Management
Seed Stage	1-Sep-2016	\$36.00 M	\$36.00 M	Canvas Ventures Fund, GVA Capital, 1517 Fund; Peter Thiel, Proioxis Ventures

Source: Created by casewriters using data from Pitchbook.

**Exhibit 6** Luminar's Products

Source: Gores Metropoulos Inc. (2020). 2020 S-4 form, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

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## Exhibit 7 Luminar Technologies Financial Data

## Income Statement

	For the six months ended June 30,		Change	Change
	2020	2019	\$	%
Net Sales	7,296	3,719	3,577	96%
Cost of sales	11,285	6,805	4,480	66%
Gross loss	(3,989)	(3,086)	(903)	29%
Selling and marketing expenses	3,075	2,121	954	45%
General and administrative expenses	9,505	8,059	1,446	18%
Research and development expenses	18,116	18,450	(334)	-2%
Operating loss	(34,685)	(31,716)	(2,969)	9%
Interest income	121	37	84	nm
Interest expense	(1,021)	(1,235)	214	-17%
Change in fair value of SAFE notes		(24,215)	24,215	nm
Change in fair value of warrant liabilities	(4,574)	(72)	(4,502)	nm
Loss of extinguishment of debt	(866)	(6124)	5,258	-86%
Other income	10	233	(223)	nm
Other expense	(1)	(3)	2	nm
Loss before income taxes	(41,016)	(63,095)	22,079	-35%
Income taxes	—	—	—	nm
Net loss	(41,016)	(63,095)	22,079	-35%
Net loss attributable to common stockholders, basic and diluted	(4.34)	(8.43)		
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	9,447,670	8,111,670		



## Exhibit 7 (continued)

## Balance Sheet

	As of June 30, 2020		Assuming No Redemption / Assuming Maximum Redemptions As of June 30, 2020	
	Luminar (Historical)	Gores (Historical)	Pro Forma Combined	Pro Forma Combined
<b>ASSETS</b>				
Current Assets				
Cash and cash equivalents	20,643	1,011	508,066	138,707
Restricted cash and cash equivalents	225	—	225	225
Marketable Securities	6,374	—	6,374	6,374
Accounts receivable, net	5,618	—	5,618	5,618
Inventories, net	4,961	—	4,961	4,961
Prepays and other current assets	2,873	108	2,981	2,981
Total current assets	40,694	1,119	528,225	158,866
Non-current assets:				
Investments and cash held in Trust Account	—	406,398	—	—
Property and equipment, net	7,630	—	7,630	7,630
Goodwill	701	—	701	701
Deferred income tax	—	15	15	15
Other long-term assets	1,191	—	1,191	1,191
Total non-current assets	9,522	406,413	9,537	9,537
<b>TOTAL ASSETS</b>	<b>50,216</b>	<b>407,532</b>	<b>537,762</b>	<b>168,403</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>				
Accounts payable	3,553	—	3,553	3,553
Accrued expenses and other current liabilities	5,544	86	5,544	5,544
State franchise tax accrual	—	20	—	—
Current portion of long-term debt	3,948	—	—	492
Other current liabilities	593	195	788	788
Total current liabilities	13,638	301	9885	10,377
Non-current liabilities				
Deferred underwriting compensation	—	14,000	—	—
Long-term debt	32,602	—	—	28,217
Warrant liabilities	7,425	—	—	—
Other long-term liabilities	1,113	—	1,113	1,113
Total non-current liabilities	41,140	14,000	1,113	29,330
Total Liabilities	54,778	14,301	10,998	39,707
Common stock subject to possible redemption	—	387,135	—	—
Series A Preferred Stock	244,743	—	—	—
Series X Preferred Stock	—	—	—	—
Stakeholder's equity (deficit)	—	—	—	—
Preferred stock	—	—	—	—
Founders' preferred stock	—	—	—	—
Common stock	—	—	—	—
Class A Stock	—	—	22	18
Class B Stock	—	—	10	10
Class F Stock	—	1	—	—
Additional paid-in capital	13,906	24	798,873	397,479
Treasury stock	—	—	—	—
Accumulated other comprehensive income	8	—	8	8
Retained earnings (accumulated deficit)	(263,219)	6,071	(272,149)	(268,819)
Total stakeholders' equity (deficit)	(249,305)	6,096	526,764	128,696
<b>TOTAL LIABILITIES AND STOCKHOLDERS'S EQUITY (DEFICIT)</b>	<b>50,216</b>	<b>407,532</b>	<b>537,762</b>	<b>168,403</b>

## Exhibit 7 (continued)

## Cash Flow Summary

	<b>Year ended December 31</b>		<b>Six months ended June 30,</b>	
	<b>2019</b>	<b>2018</b>	<b>2020</b>	<b>2019</b>
<b>Net cash provided by (used in)</b>				
<b>Operating activities</b>	(60,201.00)	(67,089.00)	(33,978.00)	(26,693.00)
<b>Investing activities</b>	(7,778.00)	(4,388.00)	(423.00)	(774.00)
<b>Financing activities</b>	85,457.00	67,919.00	27,964.00	80,366.00

## Cash Flow Statement

	<b>Six months ended June 30,</b>	
	<b>2020</b>	<b>2019</b>
<b>Cash flows from operating activities:</b>		
Net loss	\$(41,016)	\$(63,095)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,241	1,136
Change in fair value of warrants and SAFE liabilities	4,574	24,287
Impairment of inventories	2,481	—
Loss on extinguishment of debt	866	6,124
Share-based compensation	3,413	1,170
Changes in operating assets and liabilities:		
Accounts receivable	(3,940)	2,143
Inventories	(3,440)	(2,524)
Other current assets	(1,049)	331
Other long-term assets	638	2
Accounts payable	92	3,135
Accrued liabilities	2,302	527
Other current liabilities	229	126
Other long-term liabilities	(369)	(55)
Net cash used in operating activities	(33,978)	(26,693)
<b>Cash flows from investing activities:</b>		
Proceeds from sale of marketable securities	285	—
Purchase of property and equipment	(708)	(774)
Net cash used in investing activities	(423)	(774)
<b>Cash flows from financing activities:</b>		
Settlement of SAFE notes	—	(5,609)
Principal payments on financing obligations	(3,843)	(4,719)
Proceeds from the issuance of debt	31,910	—
Proceeds from issuance of SAFE notes	—	37,379
Principal payments on capital leases	(108)	(26)
Proceeds from issuance of Series A Convertible Preferred stock	—	58,064
Proceeds from issuance of restricted common stock	9	61
Financing costs paid	—	(4,776)
Repurchase of Common Stock	(4)	(8)
Net cash provided by financing activities	27,964	80,366
Net increase (decrease) in cash and cash equivalents and restricted cash and cash equivalents	(6,437)	52,899
Beginning cash and cash equivalents and restricted cash and cash equivalents	27,305	9,827
Ending cash and cash equivalents and restricted cash and cash equivalents	\$ 20,868	\$ 62,726
<b>Supplemental disclosures of cash flow information:</b>		
Cash paid for interest	\$ 1,328	\$ 803
<b>Supplemental disclosures of noncash investing and financing activities</b>		
Conversion of Bridge Note to Series A Convertible Preferred stock	—	7,719
Conversion of SAFE notes into common stock	—	4,925
Conversion of SAFE notes into Series A Convertible Preferred stock	—	173,726
Assets acquired on capital leases	123	80
Purchases of property and equipment recorded in accounts payable and accrued liabilities	65	144

## Exhibit 7 (continued)

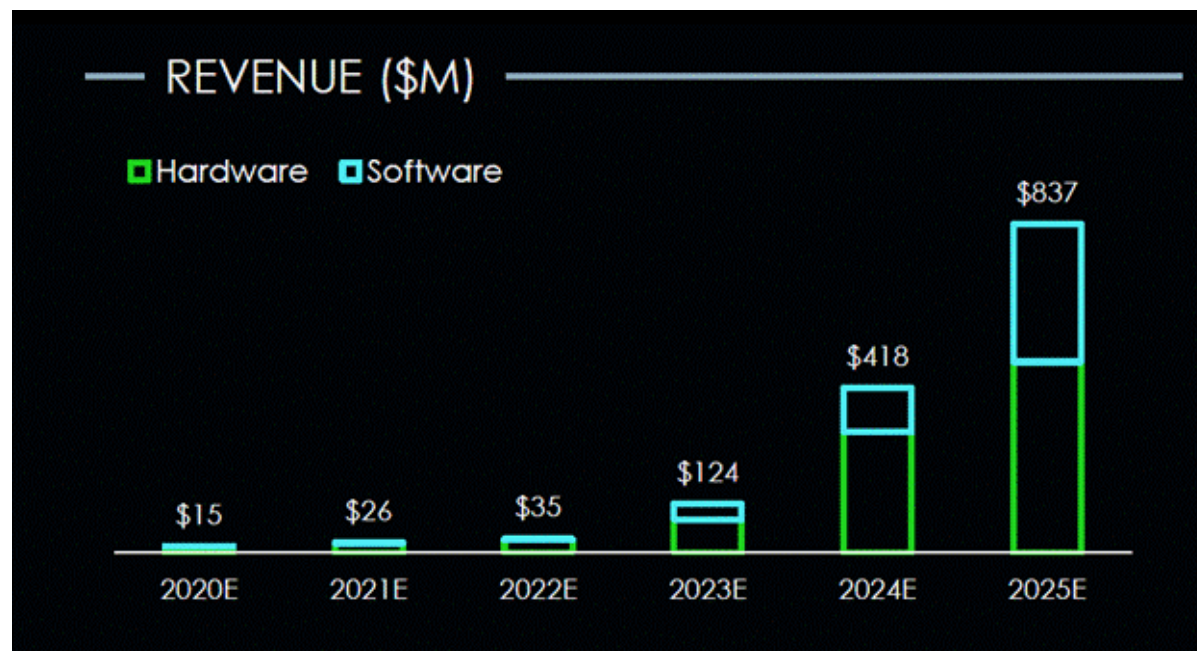
## Financial Projections

(\$ in millions)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Total Revenue	\$15	\$26	\$35	\$124	\$418	\$836	\$1,399	\$2,077	\$2,894	\$3,879	\$5,056
Total Cost of Goods Sold	\$22	\$20	\$23	\$60	\$164	\$305	\$488	\$684	\$945	\$1,246	\$1,587
Gross Profit	(\$7)	\$6	\$12	\$63	\$254	\$531	\$911	\$1,394	\$1,948	\$2,633	\$3,469
Operating Income	(\$72)	(\$95)	(\$100)	(\$71)	\$102	\$337	\$678	\$1,061	\$1,490	\$2,019	\$2,673
Adjusted EBITDA	(\$61)	(\$90)	(\$88)	(\$51)	\$126	\$365	\$707	\$1,091	\$1,520	\$2,056	\$2,717
Total Capital Expenditures	(\$4)	(\$26)	(\$33)	(\$39)	(\$18)	(\$21)	(\$31)	(\$32)	(\$38)	(\$46)	(\$58)
EBITDA less Capital Expenditures	(\$66)	(\$116)	(\$121)	(\$90)	\$108	\$344	\$676	\$1,059	\$1,483	\$2,010	\$2,658
Change in Net Working Capital	(\$9)	(\$26)	(\$6)	\$7	(\$24)	(\$55)	(\$76)	(\$92)	(\$109)	(\$136)	(\$165)

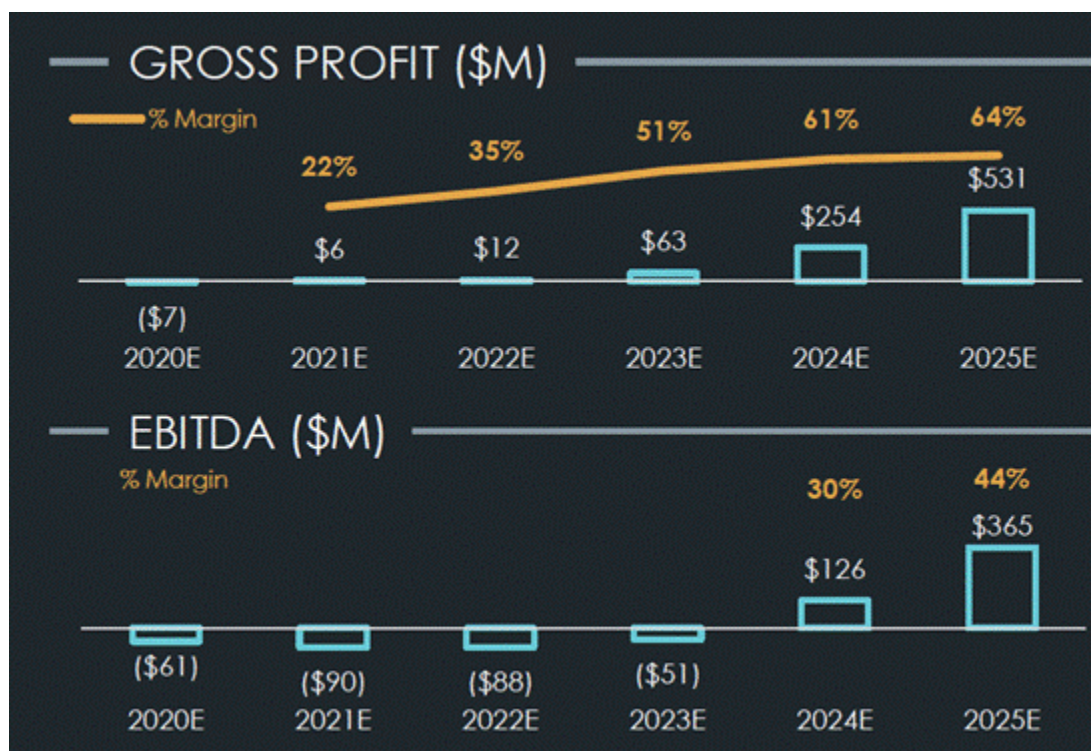
	Fiscal Year Ending December 31,											
(\$ in millions)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Terminal Year
Revenue	\$8	\$26	\$35	\$124	\$418	\$836	\$1,399	\$2,077	\$2,894	\$3,879	\$5,056	\$5,056
% Growth	-12%	68%	38%	250%	238%	100%	67%	48%	39%	34%	30%	
Adjusted EBITDA	(\$31)	(\$90)	(\$88)	(\$51)	\$126	\$365	\$707	\$1,091	\$1,520	\$2,056	\$2,717	\$2,717
Less: Depreciation and Amortization	(2.00)	(6.00)	(12.00)	(20.00)	(24.00)	(28.00)	(29.00)	(30.00)	(30.00)	(37.00)	(44.00)	(58.00)
Adjusted EBIT	(\$32)	(\$95)	(\$100)	(\$71)	\$102	\$337	\$678	\$1,061	\$1,490	\$2,019	\$2,673	\$2,658
Less: Taxes @25%	—	—	—	—	(25.00)	(84.00)	(170.00)	(265.00)	(373.00)	(505.00)	(668.00)	(665.00)
Plus: Depreciation and Amortization	2	6	12	20	24	28	29	30	30	37	44	58
Less: Change in Net Working Capital	(13.00)	(26.00)	(6.00)	7.00	(24.00)	(55.00)	(76.00)	(92.00)	(109.00)	(136.00)	(165.00)	(165.00)
Less: Capital Expenditures	(3.00)	(26.00)	(33.00)	(39.00)	(18.00)	(21.00)	(31.00)	(32.00)	(38.00)	(46.00)	(58.00)	(58.00)
Unlevered Free Cash Flow	(\$46)	(\$142)	(\$127)	(\$83)	\$58	\$206	\$431	\$702	\$1,002	\$1,370	\$1,826	\$1,829

Source: Gores Metropoulos Inc. (2020). 2020 S-4 form, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

## Exhibit 8 Revenue Projections



Source: Luminar Technologies Investor Presentation, November 2020, <https://investors.luminartech.com/static-files/d5fe72a1-a244-4a39-bbe8-afe5c30a98ed>, accessed May 2021.

**Exhibit 9** Profit and EBITDA Projections

Source: Luminar Technologies Investor Presentation, November 2020, <https://investors.luminartech.com/static-files/d5fe72a1-a244-4a39-bbe8-afe5c30a98ed>, accessed May 2021.

**Exhibit 10** Comparative Share Information

a. As of and for the sixth months ended June 30, 2020

As of and for the six months ended June 30, 2020 <sup>(1)</sup>	Luminar (Historical)	Gores (Historical)	Combined Pro Forma		Luminar Equivalent Per Share Pro Forma <sup>(2)</sup>	
			Assuming No Redemptions	Assuming Maximum Redemptions	Assuming No Redemptions	Assuming Maximum Redemptions
Book Value per share <sup>(1)</sup>	\$ (26.39)	\$ 0.12	\$ 1.64	\$ 0.46	\$ 22.27	\$ 6.25
Weighted average shares outstanding - basic and diluted	9,447,670					
Net loss per share - basic and diluted	\$ (4.34)					
Weighted average shares outstanding of Class A Stock - basic and diluted		40,000,000	216,948,840	177,440,969	166,948,840	166,948,840
Net income (loss) per share of Class A Stock - basic and diluted		\$ 0.02	\$ (0.11)	\$ (0.13)	\$ (1.49)	\$ (1.77)
Weighted average shares outstanding of Class F Stock - basic and diluted		10,000,000				
Net loss per share of Class F Stock - basic and diluted		\$ (0.01)				
Weighted average shares outstanding of Class B Stock - basic and diluted			104,715,233	104,715,233	104,715,233	104,715,233
Net loss per share of Class B Stock - basic and diluted			\$ (0.11)	\$ (0.13)	\$ (1.49)	\$ (1.77)



## Exhibit 10 (continued)

b. For the year ended December 31, 2019

			Combined Pro Forma		Luminar Equivalent Per Share Pro Forma <sup>(2)</sup>	
	Luminar (Historical)	Gores (Historical)	Assuming No Redemptions	Assuming Maximum Redemptions	Assuming No Redemptions	Assuming Maximum Redemptions
<b>For the Year ended December 31, 2019 <sup>(1)</sup></b>						
Weighted averages shares						
outstanding - basic and diluted	8,718,104					
Net loss per share - basic and diluted	\$ (11.47)					
Weighted average shares outstanding of Class A						
Stock - basic and diluted		36,164,000	216,948,840	177,440,969	166,948,840	166,948,840
Net income (loss) per share of Class A Stock - basic and diluted		\$ 0.16	\$ (0.30)	\$ (0.34)	\$ (4.07)	\$ (4.62)
Weighted average shares outstanding of Class F						
Stock - basic and diluted		10,162,656				
Net loss per share of Class F Stock - basic and diluted		\$ (0.05)				
Weighted average shares outstanding of Class B						
Stock - basic and diluted			104,715,233	104,715,233	104,715,233	104,715,233
Net loss per share of Class B Stock - basic and diluted			\$ (0.30)	\$ (0.34)	\$ (4.07)	\$ (4.62)

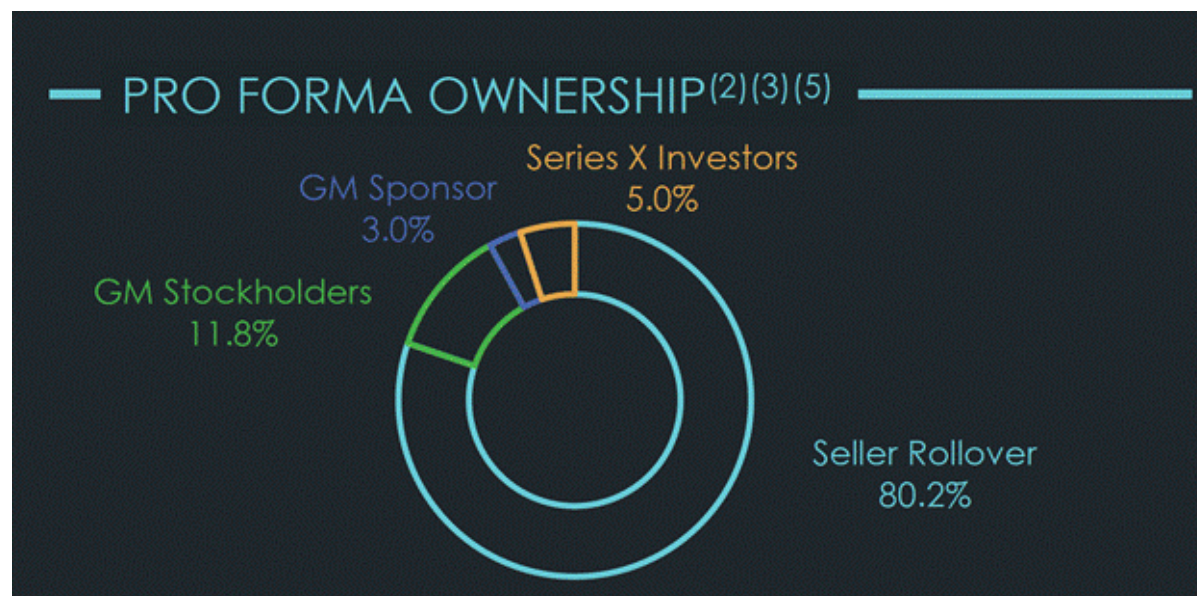
(1) Book value per share = Total equity excluding preferred shares/shares outstanding

(2) The equivalent pro forma basic and diluted per share data for Luminar is calculated by multiplying the combined pro forma per share data by 13.5787, an estimate of the Per Share Company Stock Consideration.

(3) No cash dividends were declared during the periods presented.

Source: Gores Metropoulos Inc. (2020). 2020 S-4 form, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

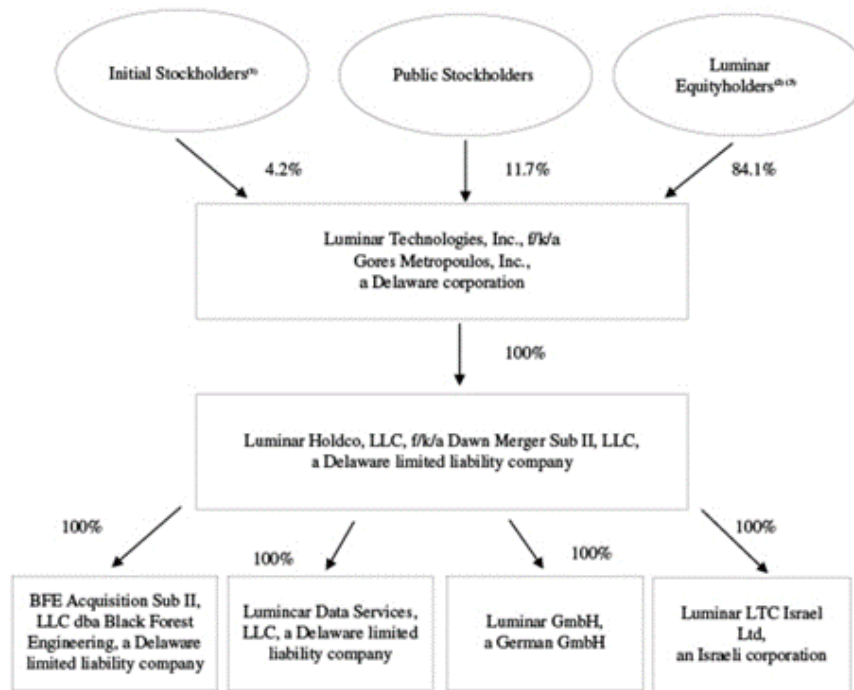
## Exhibit 11 Ownership Structure

Source: Luminar Technologies Investor Presentation, November 2020, <https://investors.luminartech.com/static-files/d5fe72a1-a244-4a39-bbe8-afe5c30a98ed>, accessed May 2021.

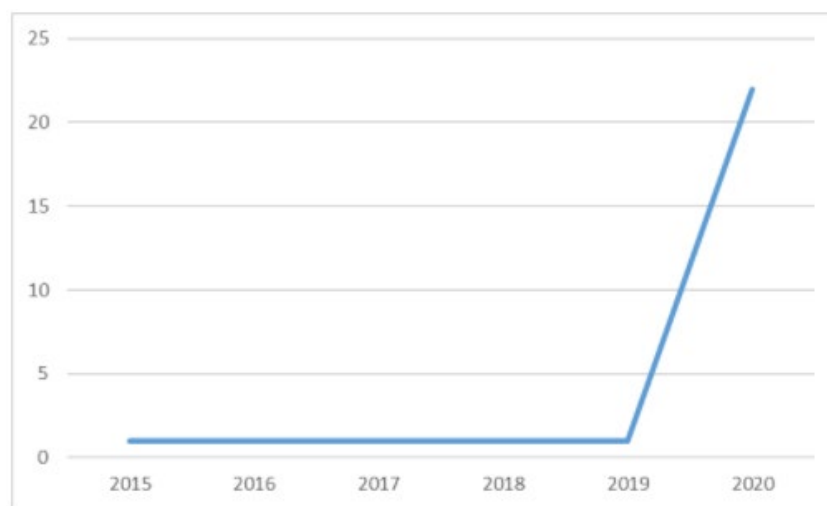


**Exhibit 11 (continued)**

The following diagram illustrates the ownership percentages and structure of the Post-Combination Company:



Source: Gores Metropoulos Inc. (2020). 2020 S-4 form, <https://www.sec.gov/Archives/edgar/data/1758057/000119312520245303/d48607ds4.htm>, accessed May 2021.

**Exhibit 12** SPACs in EV Market

Source: Adapted by casewriter from Owens, Jeremy C., and Tomi Kilgore. "In One Chart: The Explosion in Electric-vehicle Funding, Valuation and Trading." MarketWatch. March 15, 2021. <https://www.marketwatch.com/story/in-one-chart-the-explosion-in-electric-vehicle-funding-valuation-and-trading-11615834956>, accessed April, 2021.

## Exhibit 13 Luminar Comparables

### a. Key privately backed lidar companies

Company	Total Capital Raised (\$M)	Last Known Valuation (\$M)
Innoviz Technologies	\$264	\$575
Luminar	\$250	\$900
Hesai	\$231	\$650
Velodyne Lidar	\$225	\$1,800
Surestar	\$153	N/A
LeddarTech	\$121	N/A
Aeva	\$108	\$460
Outser	\$100	\$212
Trilumina	\$74	\$103
AEye	\$62	\$220

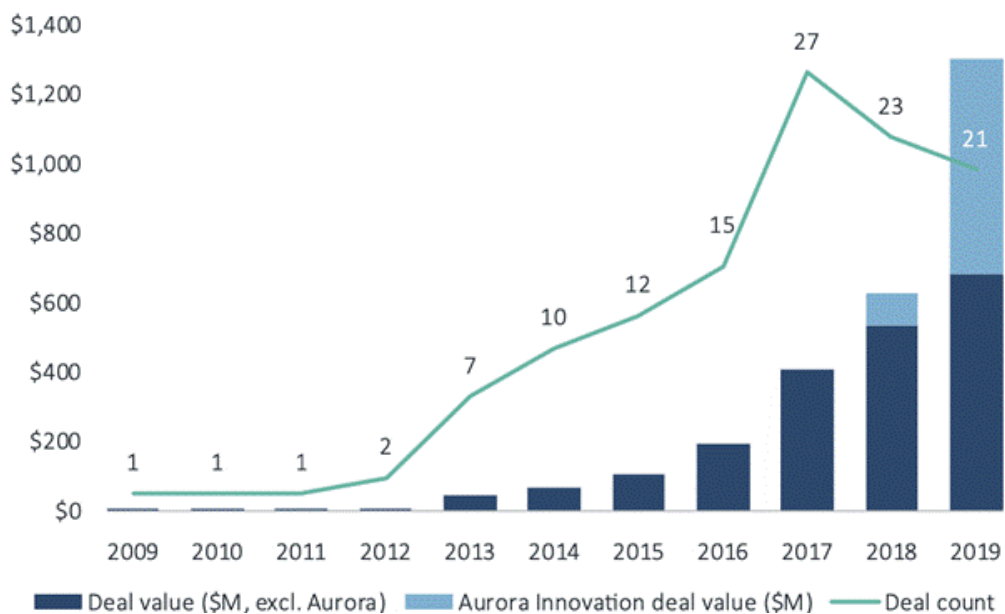
\*As of February 15, 2020

Source: Created by casewriters using data from Pitchbook.

### b. Multiples

Company Name	Similarity Score	Enterprise Value	Net Income after MG	EBITDA (TTM)	Total Revenue (TTM)	EV(Daily)/Revenue	EV/Revenue (FY)	EV/Revenue (TQM)	Date: Price Close	Stock Price	Market Cap
Luminar (NAS: LAZR)		6,884,628							13-Apr-2021	20.04	6,614,778
Veoneer (NYSE: VNE)	99.69%	2,328,371	(\$45,000)	(\$98,000)	1,373,000	1.70	1.40	1.40	13-Apr-2021	25.40	2,668,371
Innoviz Technologies (NAS: INVZ)	98.16%	40,591,743	1,804,000	2,874,000	13,066,000	3.11	3.03	3.03	13-Apr-2021	11.00	38,716,743
Apptiv (NYSE: APTV)	97.24%	2,004,091	(\$149,864)	(\$145,422)	95,362	21.02	36.92	36.92	13-Apr-2021	141.20	2,344,375
Velodyne Lidar (NAS: VLDR)	96.02%	3,245,349	(\$9,786)	(\$5,336)	222,990	14.55	13.32	13.32	13-Apr-2021	102.21	3,675,621
Amberella (NAS: AMBA)	95.71%	14,545,637	176,186	213,414	811,020	17.93	18.03	18.03	13-Apr-2021	84.14	14,891,720
Cognex (NAS: CGNX)	95.41%	8,261,931	347,564	516,553	1,688,189	4.89	4.92	4.92	13-Apr-2021	35.51	8,712,467
Arlo Technologies (NYSE: ARLQ)	95.10%	309,548	(\$101,251)	(\$91,272)	357,154	0.87	1.24	1.24	13-Apr-2021	6.04	486,243
Wuhan Guide Infrared Company (SHE: 002414)	94.80%	7,869,577	111,536	117,406	358,894	21.93	26.18	26.18	13-Apr-2021	5.01	7,866,969
Keyence (TSE: 6861)	94.49%	103,471,546	1,710,728	4,843,973	4,843,973	21.36	26.56	26.56	13-Apr-2021	465.98	113,013,045

Source: Created by casewriters using data from Pitchbook.

**Exhibit 14** Lidar VC Deal Activity

Source: Created by casewriters using data from Pitchbook.