

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

December 21, 2021

R. Steven Hicks Chief Executive Officer Capstar Special Purpose Acquisition Corp. 405 West 14th Street Austin, TX 78701

Re: Capstar Special Purpose Acquisition Corp.

Amendment No. 5 to Registration Statement on Form S-4
Filed December 14, 2021
File No. 333-258693

Dear Mr. Hicks:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our December 3, 2021 letter.

Amendment No. 5 to Form S-4 filed December 14, 2021

Cover Page

1. Please revise the cover page and add a Summary Q&A to highlight that PIMCO Private Funds is a member of the Sponsor, and that PIMCO's Board designee, Mr. Weinstein, and its Board observer, Mr. Degtyar, both resigned from Capstar's Board on December 12, 2021. Disclose the reasons these individuals provided (written or oral) to the Board or its members for their resignations as well as why Mr. Weinstein could no longer support and recommend the business combination to shareholders. Also highlight PIMCO's contractual obligations pursuant to the definitive agreements entered into in connection with the Business Combination, including, as applicable, voting beneficially owned shares in favor of the Business Combination, not redeeming beneficially owned shares, and

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purchasing an additional \$35 million of Class A shares in a private offering conducted in connection with the Business Combination transaction. To the extent that PIMCO Private Funds retains a majority of the ownership interests in the Sponsor, this status should be highlighted.

Background to the Business Combination, page 98

- 2. Please expand your disclosure concerning the first virtual meeting conducted on December 12, 2021 to discuss the views expressed by the Board members, and if applicable, Mr. Degtyar, with regard to the potential impact of high level or redemptions and, whether the Board should continue to support the transactions. Also, expand the Background section, as applicable, to describe any concerns regarding the Business Combination, the current trends in the SPAC market, and/or Gelesis that Mr. Weinstein or Degtyar registered to the Board or any of its members from the October 21 Board meeting through to the present.
- 3. Please revise the second paragraph on page 108 to identify PIMCO's contractual obligations pursuant to the definitive agreements.
- 4. Please expand your disclosure concerning the second virtual meeting conducted on December 12, 2021 to discuss the views expressed by the Board members concerning the environment relating to redemptions. To the extent the Board discussed and considered Messrs. Weinstein's and Degtyar's resignations and its impact on the business combination transactions, please discuss.

Our Business Plan, page 169

5. Please revise to quantify the amount of cash that the combined company will need to raise in order to conduct the full commercial launch of Plenity. Also add a Q&A near the front of that section to highlight the impact that redemptions potentially could have on the combined company's ability to conduct operations beyond 6 months from Closing and, if applicable, to conduct a full commercial launch of Plenity. Also, reference this potential liquidity concern on the coverpage and include cross references to the new Q&A as well as your risk factor disclosure on page 56 and the "Our Business Plan" disclosure on pages 169-170.

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You may contact Franklin Wyman at 202-551-3660 or Kevin Vaughn at 202-551-3494 if you have questions regarding comments on the financial statements and related matters. Please contact Jordan Nimitz at 202-551-5831 or Joe McCann at 202-551-6262 with any other questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Christopher S. Auguste, Esq.