



DIVISION OF
CORPORATION FINANCE

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

May 19, 2023

Scott Honour
Chairman of the Board
Perception Capital Corp. II
315 Lake Street East, Suite 301
Wayzata, MN 55391

Re: Perception Capital Corp. II
Amendment No 1. to Preliminary Proxy Statement on Schedule 14A
Filed May 9, 2023
File No. 001-40976

Dear Scott Honour:

We have reviewed your filing 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Amendment No. 1 to Preliminary Proxy on Schedule 14A filed May 9, 2023

Q. Do any of PCCT's directors or officers or the sponsor of its affiliates have interests in the business combination that may differ . . . , page xxii

1. We note your revisions in response to our prior comment 1 and reissue in part. It appears that the underwriting fees remain constant and are not adjusted based on redemptions. Please revise your disclosure to disclose the effective underwriting fee on a percentage basis for shares at each redemption level presented in your sensitivity analysis related to dilution.

Pro Forma Note P, page 80

2. If a \$6.4 million prepayment of the Bridge Loan is "mandatory", then please expand your disclosure to state whether you would be in default of the loan given your assumed failure to make the prepayment under the maximum redemption scenario. If you would be in default, then disclose the adverse consequences of the default, both here and on page 19. Also, if this would cause the interest rate on the debt to increase by 5% (page 74), then it appears that the pro forma note FF on page 81 should be revised to reflect the higher interest rate.

Pro Forma Note EE, page 82

3. Please clarify for us why you are accounting for the waiver of deferred underwriting fees as income instead of as an adjustment to equity.

Executive and Director Compensation, page 96

4. We note your response to our prior comment 14. With respect to smaller reporting companies and emerging growth companies, Item 402(n) requires compensation of the named executive officers for each of the last two completed fiscal years. Please revise to provide the executive compensation disclosure for the fiscal year ended December 31, 2021.

Security Ownership of Certain Beneficial Owners and Management of PCCT and NewCo, page 137

5. We note your revisions in response to our prior comment 10 and reissue. Please revise your beneficial ownership table to disclose the Sponsor and its affiliates' total potential ownership interest in the combined company, assuming the exercise and conversion of all securities, including the Private Placement Warrants, the Extension Warrants or the redeemable warrants issuable upon conversion of the Working Capital Note. Please refer to Item 6 of Schedule 14A and Item 403 of Regulation S-K.

Spectaire's Business Model, page 150

6. We note your response to comment 13. Please also expand your disclosures to help investors understand the inherent limitations of the projected amounts.

The Business Combination

Background to the Business Combination, page 177

7. We note your revisions in response to our prior comment 16. We note that after previously declining to participate in a capital raise with Spectaire in early August due to its "lack of commercially available product and customers," Mr. Honour expressed that those concerns were satisfied, and PCCT and Spectaire began discussions regarding a potential business combination on November 17, 2022. Please provide additional detail about how the circumstances related to commercially available product and customers changed between early August and November 2022.
8. We note your revisions in response to our prior comment 17 and reissue in part. It is still not clear how you arrived at the \$125 million valuation you proposed on November 30, 2022. Please disclose the methodology by which you arrived at the \$125 million valuation. We note the valuation you proposed on November 30, 2022 was based in part on "[your] understanding of Spectaire's business model and unit economics . . . which was itself based on Spectaire's view of the overall scale of the opportunity, addressable market and ability of Spectaire to utilize its proprietary technology to capture meaningful market share." Please disclose how Spectaire's view of its scale of opportunity, addressable market, and ability to capture market share shaped your understanding of Spectaire's business model and factored into your proposed valuation. Please also disclose any discussions you had or materials you received from Spectaire regarding these topics, including how these discussions or materials influenced your valuation assessment and any assumptions.
9. We note your revisions in response to our prior comment 18 and reissue in part. Please expand your background discussion to provide more detailed disclosure regarding key negotiation considerations and how they changed over time. We note, for example, that the amount and structure of the earn-out were determined through a process of negotiation over the pre-money equity valuation. We also note that multiple drafts of the LOI were exchanged between November 30, 2022 and December 1, 2022, and that several terms of the Merger Agreement were negotiated between the December 6, December 22 and final January 16 drafts. Please expand your disclosure to discuss how these terms evolved throughout the negotiations, including each material proposal, the proposing party, the reasons for the terms, each party's position on the issues, and how you reached agreement on the final terms.
10. We note your revisions in response to our prior comment 19. Please specify which members of PCCT had previously worked with Meteora.

11. We note your revisions in response to our prior comment 20 and reissue in part. Please revise your disclosure to elaborate how these topics and the related discussions influenced the terms of the transaction, including the relevant positions of each party and whether the Board considered these topics when approving the business combination.

Certain Unaudited Projected Financial Information, page 191

12. Given the limited historical operations of Spectaire including no revenues have been recorded, please provide comprehensive disclosures regarding the material assumptions used to determine the projected financial information presented. Your disclosures should enable investors to evaluate the projected financial information and its reasonableness. In this regard, we also note the following:
- In regards to the significant projected revenue compound annual growth rates, we note your disclosures on page 150 regarding revenue streams. Please consider whether disclosures regarding each of these streams would help investors better evaluate the reasonableness of your projected financial information; and
 - In regards to the projected gross margin percentages, please address in your disclosures how these projected amounts align with your disclosures on page 153 which indicate that your revenues will initially be weighted towards unit sales which will have approximately 30% margin.
13. Please disclose how management and the Board considered and relied upon this projected financial information particularly in light of the limited operations of Spectaire.

U.S. Federal Income Tax Considerations, page 218

14. We note your response to prior comment 24 that you do not plan on filing a tax opinion supporting a conclusion that the Business Combination should be tax-free to U.S. holders; however, you still represent that the Company "intends" for the Business Combination to be considered a tax-free "reorganization" under the provisions of Section 368(a) of the Code. Whenever there is significant doubt about the tax consequences of the transaction, it is permissible for the tax opinion to use "should" rather than "will," but counsel providing the opinion must explain why it cannot give a "will" opinion and describe the degree of uncertainty in the opinion. Please refer to Section III.C.4 of Staff Legal Bulletin 19.

Note 1. Organization and Business Operations, page F-32, page F-32

15. We note your response to prior comment 27. Please also address your consideration of the relative voting rights that each entity held in the combined entity in determining that MicroMS was the accounting acquirer.

Scott Honour
Perception Capital Corp. II
May 19, 2023
Page 5

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Nudrat Salik at 202-551-3692 or Al Pavot at 202-551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Jordan Nimitz at 202-551-5831 or Celeste Murphy at 202-551-3257 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Industrial Applications and
Services

cc: Michael Mies, Esq.