

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Brian Cascio
Gary Todd
Andri Carpenter
Tim Buchmiller
Brian Soares

**Re: Ambarella, Inc.
Form 10-K for Fiscal Year Ended January 31, 2016
Filed March 25, 2016
File No. 001-35667**

Ladies and Gentlemen:

We submit this letter in response to comments from the staff (the “**Staff**”) of the Securities and Exchange Commission (the “**Commission**”) to Ambarella, Inc. (the “**Company**”) received by letter dated November 3, 2016 (the “**Comment Letter**”), relating to the above referenced filing. For your convenience, we have repeated the comments contained in the Comment Letter before the Company’s response. Page references herein correspond to the page of the Company’s Form 10-K for the annual period ended January 31, 2016 filed on March 25, 2016 (the “**Form 10-K**”). References to “we,” “our,” or “us” mean the Company.

Form 10-K for Fiscal Year Ended January 31, 2016

Item 7: Management’s Discussion and Analysis of Financial Condition and Results of Operations

Provision for Income Taxes, page 52

- 1. We note the significant impact of the foreign tax rate differential and the overall low foreign effective tax rate in Note 13 on page 84. In future filings, please disclose and explain your foreign effective tax rate, including the primary taxing jurisdictions where your foreign earnings are derived, the relevant statutory rates and the impact of tax holidays.***

In response to the Staff’s comment, we respectfully note that on page 84 of the Form 10-K, we have disclosed the amount of total foreign income before income taxes and the amount of current and deferred foreign income taxes in the footnote tables under Note 13 – Income Taxes. We also respectfully note that on pages 49 and 85, we disclose that the Company has experienced lower effective tax rates as a substantial percentage of our operations are conducted in lower-tax jurisdictions. However, we acknowledge the Staff’s comment and in future annual filings we will disclose the primary taxing jurisdictions where our foreign earnings are derived and the relevant statutory rates.

We respectfully note that the primary jurisdiction where our foreign earnings are derived is the Cayman Islands, our country of domicile. As the statutory tax rate of the Cayman Islands is zero, this drives the low foreign effective tax rate and the significant impact of the foreign tax rate differential. The Company respectfully advises the Staff that income earned in other foreign jurisdictions was immaterial for the fiscal year ended January 31, 2016, and that the Company currently does not operate under any tax holidays in any jurisdiction.

Liquidity and Capital Resources, page 52

- In future filings, to assist investors to better understand your liquidity position, please revise this section to disclose total cash and cash equivalents held at non-U.S. subsidiaries at each reported period. Clarify whether these funds are available for use in your operations in the United States without repatriation, and if so, discuss the strategies through which this is accomplished.***

We acknowledge the Staff's comment regarding our liquidity position and the request regarding future disclosures and respectfully note that the Company is a Cayman Islands corporation, with subsidiaries in the U.S. and other foreign jurisdictions. As of January 31, 2016, approximately 96% of our \$307.9 million in total cash, cash equivalents and marketable securities was held in the Cayman Islands, and 4% was held collectively by our U.S. and non-U.S. subsidiaries. As cash and cash equivalents held by our U.S. and non-U.S. subsidiaries are not significant, they therefore do not pose material liquidity or capital resource issues. Consequently, we respectfully submit that disclosing the amount of cash and cash equivalents held at non-U.S. subsidiaries would not be meaningful to investors. However, we will continue to evaluate this disclosure on an annual basis.

We respectfully also note that our non-U.S. subsidiaries are owned by the parent company in the Cayman Islands, and the cash and cash equivalents held by our non-U.S. subsidiaries as of January 31, 2016, were considered undistributed earnings of entities that have ongoing business operations related to which the undistributed earnings are, or will be used. Uses include local working capital requirements, capital expenditures for expansion, or other financing activities. If such funds were needed by the parent company in the Cayman Islands, or if the amounts were otherwise no longer considered indefinitely reinvested, we would incur a tax expense of \$3.9 million, as disclosed on page 84 in Note 13 – Income Taxes of the Form 10-K. Should the Company require more cash in the U.S. than is generated by our U.S. subsidiary, such funds could be provided by the Cayman Islands parent company without repatriation as our U.S. subsidiary does not own any other subsidiaries.

Item 8: Financial Statements

Note 13. Income Taxes, page 84

- We refer to the reconciliation of the provision for income taxes to the theoretical provision at the U.S. statutory rate. Please describe to us the components of the item "non-U.S. foreign tax differential." For instance, clarify whether you benefit from any tax holidays or abatements in any foreign jurisdiction.***

We acknowledge the Staff's comment regarding the non-U.S. foreign tax differential. The components of this item are as follows:

- The tax accrued by our non-U.S. subsidiaries based on local statutory income tax rates.
- The benefit for the tax that would have been accrued by our non-U.S. parent company and non-U.S. subsidiaries on their earnings had they been subject to the U.S. federal statutory income tax rate.

The Company currently does not benefit from any tax holidays or abatements in any foreign jurisdiction.

The U.S. statutory tax rate is higher than the statutory tax rate in any of the non-U.S. countries in which we generate significant earnings, and, therefore to varying degrees, each country's statutory tax rate reduces our effective tax rate. As summarized on page 84 in Note 13 – Income Taxes, \$82.0 million of the Company's \$85.2 million of income before income taxes in fiscal year 2016 was earned in non-U.S. jurisdictions. Our country of domicile is the Cayman Islands, and it is the primary jurisdiction where our earnings are derived. As the statutory tax rate of the Cayman Islands is zero, this is the largest component of the benefit for tax that would have been accrued on non-U.S. earnings if subject to the U.S. federal statutory income tax rate. Although we are a Cayman Islands company, the majority of our investors are US-based. As a result, we believe that reconciling our effective tax rate from the U.S. federal statutory rate is meaningful for investors. We do not believe that a reconciliation of the effective tax rate from zero would be meaningful to investors.

4. We note that your operations are primarily conducted outside of the U.S. In future filings, please expand to describe the tax years that remain open for each major taxing jurisdiction. Refer to ASC 740-10-50-15e.

We acknowledge the Staff's comment regarding open tax years. In future annual filings we will include expanded disclosure to include the tax years that remain open for each major taxing jurisdiction. We respectfully note that for the fiscal year ended January 31, 2016, the primary jurisdiction where our foreign earnings are derived is the Cayman Islands, our country of domicile and a non-taxing jurisdiction, and that income earned in other foreign jurisdictions was immaterial.

Please direct your questions or comments regarding the Company's responses to me at (408) 400-1492. Thank you for your assistance.

Sincerely,

/s/ Michael Morehead

Michael Morehead
General Counsel
Ambarella, Inc

cc: George Laplante, Chief Financial Officer, Ambarella, Inc.
Herbert Fockler, Wilson Sonsini Goodrich & Rosati, P.C.
Jennifer Knapp, Wilson Sonsini Goodrich & Rosati, P.C.