



LOST IN AGGREGATION: The Asian Reflection in the Glass Ceiling

Buck Gee - *Executive Advisor, Ascend*
Janet Wong - *Executive Advisor, Ascend*

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EXECUTIVE SUMMARY

Generally lost in the national narrative about corporate diversity is a discussion of the issues facing Asian Americans. This report takes a closer analysis of EEOC workplace data sets disaggregated by race and gender and finds that professional Asian American men and women are the least likely to become executives in private industry.

Further inspection of the data reveals that relative to their numbers in the workforce, Asian American men lag men of all other races and Asian American women lag women of all other races in reaching executive levels. This report also finds that one of every 12 white men and one of every 28 white women in the professional workforce is an executive. Yet only one of every 30 Asian American men and one of every 64 Asian American women have reached that level.

The data also show that race has more significant impact than gender in affecting executive representation. Nationally, white men are 222% more likely to be an executive than Asian men; and white women are 164% more likely to be an executive than Asian women. In fact, relative representation of white women in the executive level is substantially higher than all minority women. Hence, it is clear that aggregating all women, regardless of race, into a single cohort paints an incomplete picture of the glass ceiling and may inappropriately affect policy decisions.

Because Asians are now the fastest growing immigrant group in the U.S., public policy research should be expanded to include examination of problems facing Asian American men and women in the workplace, including leadership diversity.

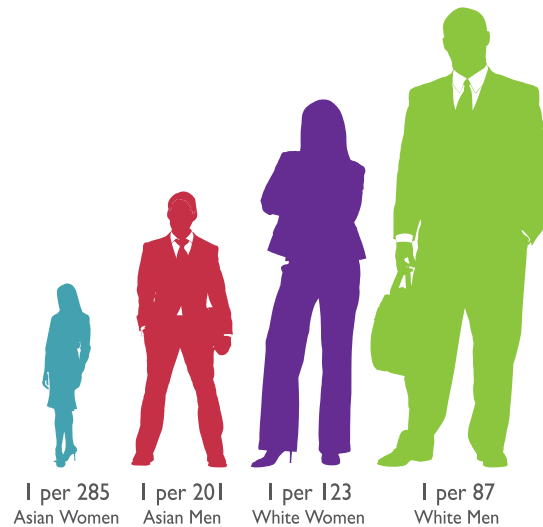
INTRODUCTION

Generally lost in the national narrative about corporate diversity is a discussion of the issues facing Asian Americans. In fact, Asian Americans are explicitly excluded with the recently coined term “underrepresented minorities” in many conversations about workplace or academic diversity.

This report takes a closer analysis of EEOC workplace data sets disaggregated by race and gender to reveal the unexpected truth that professional Asian American men and women are the least likely to become executives in private industry. Relative to their numbers in the workforce, Asian American men lag men of all other races and Asian American women lag women of all other races in reaching executive levels. In fact, the data show that the impact of race is larger, and in some cases significantly larger, than the impact of gender upon the glass ceiling.

This report finds that one of every twelve white men and one of every twenty-eight white women in the professional workforce is an executive. Yet only one of every thirty Asian American men and one of every sixty-four Asian American women have reached that level, as illustrated in Figure 1.

Figure 1. Asian American and White Executive Ratios



The racial dimension in executive representation explored in our analysis suggests that public policy research and current programs intended to improve executive diversity should be reviewed to understand whether they adequately address the failure of Asian Americans, especially Asian American women, to break the glass ceiling.

EEOC WORKPLACE DIVERSITY DATA

All private employers with 100 or more employees are subject to Title VII of the Civil Rights Act of 1964 and are required to file a confidential EEO-1 report with the U.S. Equal Employment Opportunity Commission on an annual basis. The EEO-1 report provides a racial and gender breakdown of all employees by job categories:

- Executives and Officials and Managers
- First/Mid-Officials and Managers
- Professionals
- Technicians
- Sales Workers
- Administrative Support
- Craft Workers
- Operatives
- Laborers and Helpers
- Service Workers

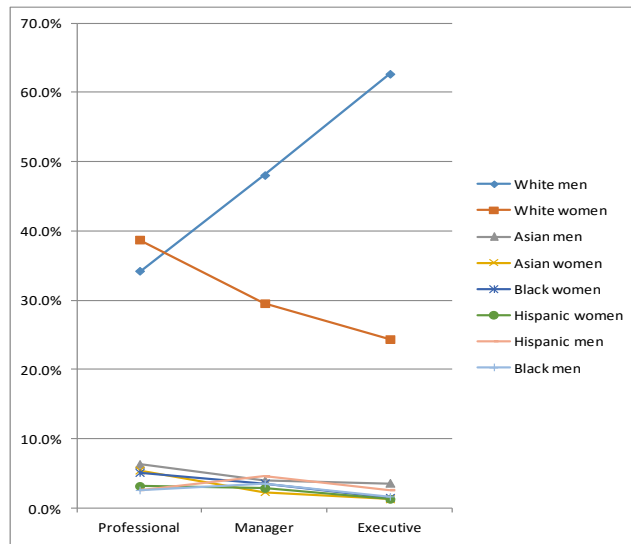
Although the individual EEO-1 reports are confidential, EEOC publishes aggregated EEO-1 data at the national, state, and regional levels [1]. With the aggregated data, we can break out, for each race and gender, the progress through the leadership pipeline from the professional entry-level (“Professionals”) to the executive level (“Executives and Officials and Managers”).

For the remainder of this report, we use the terms “Executives”, “Managers”, and “Professionals” to refer to the three highest EEO-1 job categories. In addition, we use the term “Asians” to refer to Asians and Asian Americans, both foreign-born and U.S.-born, and include any person having origins in the Far East, Southeast Asia, or the Indian Subcontinent.

The national 2014 EEO-1 data show that there is one white male executive for every twelve white men in these three job classifications. The executive ratio for white women is 1:28. For Asian men, it is 1:30. For Asian women, it is 1:64. The EEO-1 data table and executive ratios by race/gender can be found in Exhibit 1, in the Appendix to this report.

Figure 2 uses the EEO-1 data to chart the executive pipeline illustrating the relative representation in each job category for each racial/gender cohort from “Professional” to “Manager” to “Executive”. For example, Figure 2 shows that 62% of all executives are white men.

Figure 2. Executive Pipeline
Aggregated National EEO-I data



Although Figure 2 is a snapshot of the executive pipeline, it is useful only in illustrating one of the two issues affecting representation at executive levels.

The first issue is whether a cohort has comparable representation in the professional workforce relative to their numbers in its available population. For example, Figure 2 points out that white women are 38% of professionals, a number higher than the percentage of white women (32%) in the U.S. population counted in the 2010 census [2].

The second issue is whether the cohort has comparable representation in the executive workforce relative to their numbers in the professional workforce. For example, we would want to compare the representation of white women as professionals (38%) to their executive representation (24%). As shown below, comparing (or normalizing) the ratio of executives to professionals finds that executive representation for white women is only 63% of their representation as professionals.

$$\text{white women: } \% \text{ Executives} / \% \text{ Professionals} = 24\% / 38\% = 0.63$$

The same comparison for white men as professionals (32.4%) and executives (62.6%) shows that executive representation for white men is 183% of their representation as professionals.

$$\text{white men: } \% \text{ Executives} / \% \text{ Professionals} = 62\% / 32\% = 1.83$$

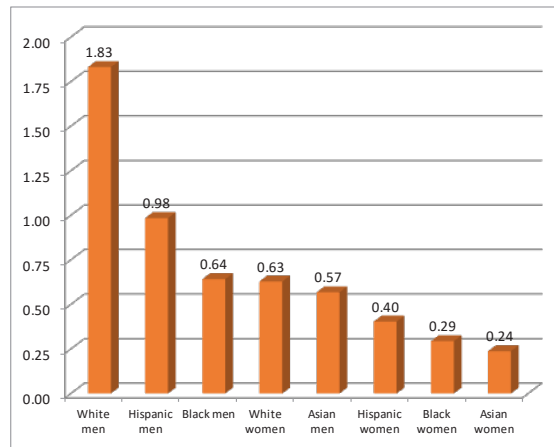
EXECUTIVE PARITY INDEX (EPI) ANALYSIS: NATIONAL EEO-I DATA

In general, most people would consider it equitable if a company’s diversity of executives is comparable to the diversity in its workforce. Therefore, we use the normalized executive comparison as a simple and intuitive approach for quantitative analysis of the glass ceiling across different cohorts. We define an “Executive Parity Index” or EPI as the normalized ratio of executives vs professionals previously described ($\% \text{ Executives} / \% \text{ Professionals}$).

An EPI number greater than 1.0 is interpreted to mean that executive representation is above parity. An EPI number less than 1.0 means executive representation is below parity.

Figure 3 provides a chart of the EPIs for each cohort of race and gender.

Figure 3: Executive Parity Index
Aggregated National EEO-I data



Four important insights can be drawn from the EPI analysis summarized in Figure 3:

- White men are the only cohort above parity
- EPI for Asian men lag all other men
- EPI for Asian women lag all cohorts, including all other women
- EPI for white women are higher than Asian men and Asian women

ASIANS IN THE SAN FRANCISCO BAY AREA

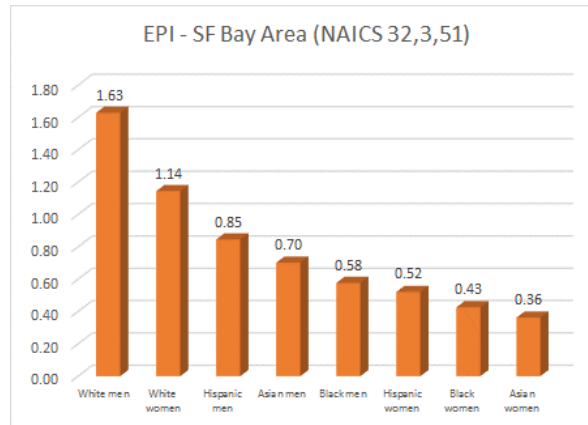
This report uses a subset of 2014 EEOC data to analyze the San Francisco Bay Area technology sector. The subset includes the San Francisco and San Jose CBSA (core-based statistical areas) metropolitan areas and only NAICS (North American Industry Classification System) industry segments 32, 33, and 51. As two examples of NAICS classifications, Cisco is in NAICS 33 and Google is in NAICS 51. The complete data table is included in Exhibit 2 in the Appendix to this report.

The subset confirms that the Bay Area is an especially unique region, with Asians representing the largest racial cohort in the professional workforce (46.9%). A surprising finding is that Asian women outnumber white women as Bay Area technology professionals, 14.7% vs 11.3%.

The data show that the EPI for Bay Area women is below parity at 0.68, with women comprising 28.4% of professionals and only 19.4% of executives. These numbers are consistent with the findings of a May, 2016 EEOC report analyzing EEO-I data that found women in Santa Clara County (much of the San Jose CBSA) were 27.4% of professionals and 17.9% of executives [3]. As one conclusion, the EEOC finds that “Women lagged behind men in leadership positions ... in the high tech sector”.

However, the EEOC report stops there. Our detailed EPI analysis finds that the EEOC conclusion is true but imperfect. Aggregating all women into a single cohort unfortunately masks the fact that the EPI for white women is actually above parity and substantially leads all minority men and minority women. Asian women have the lowest EPI despite being the largest cohort of women in the subset. The EPI numbers for each race/gender cohort is summarized in Figure 4.

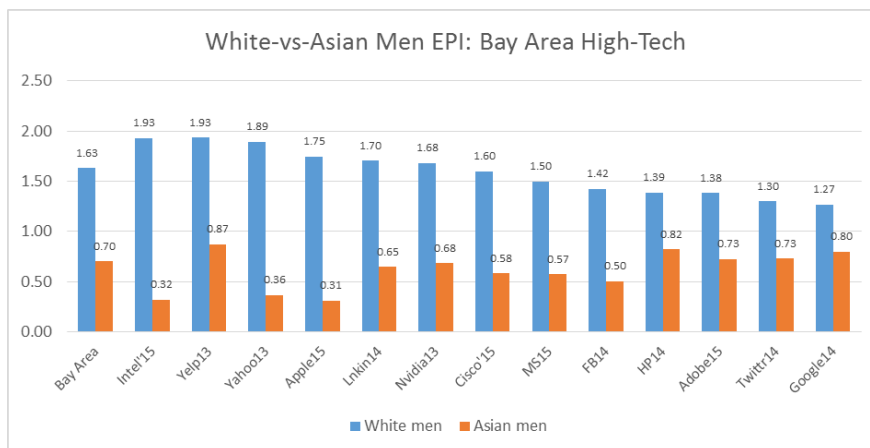
Figure 4: Executive Parity Index
SF Bay Area (NAICS 32, 33, 51)



In the past few years, a number of technology companies have included EEO-I reports on their web sites in an effort to provide more transparency to their diversity issues. Unlike the Bay Area aggregate data available from the EEOC, the available EEO-I reports list only each company’s total U.S. workforce, including employees outside the Bay Area. This report includes the most recent EEO-I report (2013, 2014, or 2015) available on each company’s web site. Exhibit 3 in the Appendix is a summary table of an EPI analysis for thirteen companies who have published EEO-I reports. (Adobe, Apple, Cisco, Facebook, Google, HP, Intel, LinkedIn, Microsoft, Nvidia, Twitter, Yahoo, and Yelp).

Figure 5 is an EPI comparison chart for white-vs-Asian men for the Bay area and each of the thirteen companies. It shows that, in the Bay Area, white men have an EPI above parity (1.63) and Asian men have an EPI below parity (0.70). The chart shows that the comparison of white-vs-Asian men in the Bay Area aggregate is consistent with the white-vs-Asian comparisons in the U.S. workforce for each company in our sample. The largest EPI gaps between white and Asian men exist at Apple, Facebook, Intel, and Yahoo. The largest is at Intel, where the white men are 500% more likely to be an executive than Asian men.

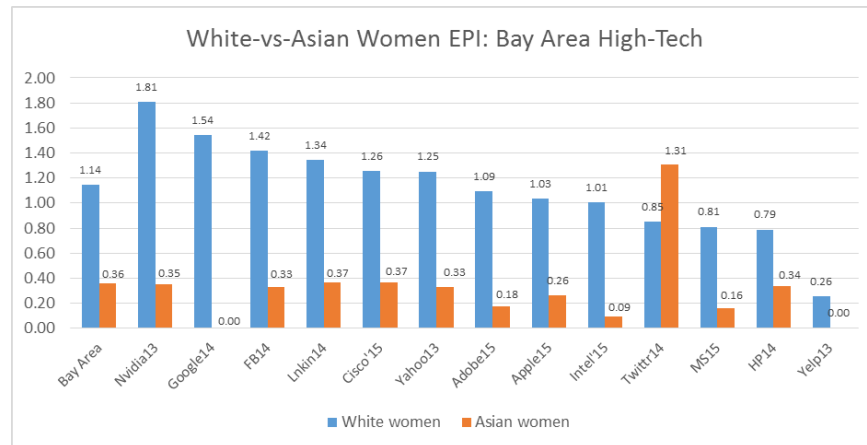
Figure 5: SF Bay Area EPI: White-vs-Asian Men



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Figure 6 is the same EPI comparison chart for white-vs-Asian women. It shows that, in the Bay Area, white women have an EPI above parity (1.14) and Asian women have an EPI far below parity (0.36). The chart shows that the EPI for white women is much higher than that for Asian women in all companies except Twitter. Twitter is a statistical outlier with only 2,011 professionals and four Asian women executives. In all other companies, Asian women have an EPI substantially below parity. Google and Yelp have no Asian women executives. The largest EPI gaps for Asian women exist at Adobe, Intel, Microsoft, and Nvidia. At Intel, white women are 988% more likely to be an executive than Asian women.

Figure 6: SF Bay Area EPI: White-vs-Asian Women



Several insights can be drawn from the Bay Area EPI comparisons:

- Asian women are the largest cohort of women yet lag all other men and women
- Asian men and women are below parity and consistently low across companies, except Twitter
- Both white men and white women are, in the aggregate, above parity in the Bay Area
- White women are above parity in nine of thirteen companies in our sample

Although some EEO-1 reports date from 2013, we would not expect more recent data to be much different. In our past work, we had examined earlier EEO-1 reports from some of these companies and, although the specific EPI numbers may be different, the conclusions are substantially the same.

THE EFFECT OF RACE VS GENDER

Using EPI numbers, we can quantify the differential effect of gender in the pipeline.

The national gender effect for white women can be computed using the national EPIs for white men (1.83) and white women (0.63). The absolute gender effect is the gap between the two EPI figures, or $(1.83 - 0.63) = 1.20$. Normalizing the EPI gap with the white women EPI ($1.20 / 0.63 = 191\%$) gives us a relative gap, so we conclude that white men are 191% more likely than white women to be an executive.¹

The relative gender gap for Asian women is $(0.57 - 0.24) / 0.24 = 139\%$, so that Asian men are 139% more likely than Asian women to be an executive.

Similar EPI-based calculations are used to quantify the differential effect of race, comparing white-vs-Asian men and white-vs-Asian women.

The separate Asian and gender effects are summarized in Figure 7. The figure illustrates that white men are 191% more likely than white women to be an executive. It also reflects that white men are 222% more likely than Asian men to be an executive. Hence, the Gender Gap for white women (191%) is smaller than the Asian Gap for Asian men (222%). For Asian women, the Gender Gap (139%) is smaller than the Asian Gap (164%).

¹ Any differences in calculated gaps reflect EPI rounding errors vs our working spreadsheets.

Figure 7: Asian and Gender Gaps
Aggregated National EEO-I data

	Women	Men	Gender Gap
White	0.63	1.83	191%
Asian	0.24	0.57	139%
Asian Gap	164%	222%	

Figure 8 illustrates the EPI, racial gaps, and gender gaps in the San Francisco Bay Area. The comparison of the relative gaps shows that, in the Bay Area, the Asian Gaps are substantially larger than the Gender Gaps.

Figure 8: Asian and Gender Gaps
SF Bay Area EEO-I Data

	Women	Men	Gender Gap
White	1.14	1.63	43%
Asian	0.36	0.70	94%
Asian Gap	215%	132%	

For an extensive discussion of the Asian gaps, please reference the report we co-authored and published in May, 2015, titled “Hidden in Plain Sight: Asian Leaders in Silicon Valley” [4].

ADDITIONAL INTRARACIAL ASIAN ANALYSIS

In prior 2014 research, we reviewed the web sites of the largest Bay Area public companies to examine Asian representation on corporate boards and leadership teams [5]. Based on an analysis of these web sites, we determined the representation by East Asians and South Asians separately, uncovering different trends for each cohort.

We found that Asian representation on leadership teams grew from 9% to 12% between 2009 and 2014. But while South Asian representation grew from 3% to 7%, East Asian leadership representation declined from 6% to 5%. Because EEOC does not require separate reporting of the East and South Asian workforce by private employer, we cannot perform a disaggregated EPI analysis to better understand an apparent leadership issue within the East Asian community.

CONCLUSIONS

By analyzing disaggregated racial and gender data available from the EEOC, we have uncovered key questions about the corporate glass ceiling affecting Asian men and women that have been heretofore ignored.

The data show that race has more significant impact than gender in affecting executive representation. Nationally, white men are 222% more likely to be an executive than Asian men; and white women are 164% more likely to be an executive than Asian women. In one Bay Area company, the gap between white and Asian women was over 900%.

Hence, it is clear that aggregating all women, regardless of race, into a single cohort paints an incomplete picture of the glass ceiling and may inappropriately affect policy decisions. Our analysis should bring new questions on possible policy alternatives to raise women's representation at executive levels. As one example, could we more quickly increase the number of women executives in the Bay Area if policies were prioritized to mentor Asian women in the workforce, already the largest cohort of women professionals, ahead of programs that encourage more middle school girls to stay in STEM?

In addition, a troubling question raised in our research is a possible difference in pipeline dynamics between South and East Asians in the workforce. Unfortunately, unless the EEOC revises its reporting requirements to disaggregate the collection of data into intraracial Asian components, it is difficult to conduct further examination of the issue. Would an analysis with data disaggregated into South and East Asian subcomponents uncover additional insights?

Finally, this report raises a question why the dimension of race has been ignored in the glass ceiling debate, although the relevant EEOC data has existed for many years. One answer appears to be a lack of analytical research to examine the intersection of race and gender. Even the most recent EEOC analysis of executive diversity does not address this topic. Because Asians are now the fastest growing immigrant group in the U.S., we recommend that broad public policy research should be expanded to include examination of problems facing Asian American men and women, including leadership diversity.

ACKNOWLEDGEMENTS

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ABOUT THE AUTHORS

BUCK GEE retired in 2008 from Cisco Systems, where he was vice president and general manager of the Data Center Business Unit. He served as executive sponsor for Cisco's Asian employee resource network and on Cisco's Inclusion and Diversity Council. He joined Cisco with its 2004 acquisition of Andiamo Systems where he was president and CEO. Previously, he held management positions in engineering, marketing, and business development at Hewlett Packard, National Semiconductor, 3Com, Crescendo Communications, Com21, and Iospan Wireless. He has also taught computer and electrical engineering courses at Stanford University and Howard University. He is a member of the Committee of 100. He holds BS/EE and MS/EE degrees from Stanford University and an MBA from the Harvard Business School.

JANET WONG serves as an independent Board member of Enviva Partners, a NYSE publicly traded company, and is a business consultant. She is a CPA with thirty years of experience in public accounting. She is a retired partner with KPMG where she spent twenty years of her career based in both the Silicon Valley and San Francisco offices. While at KPMG, Janet co-chaired the Silicon Valley office's Network of Women, helping women with their leadership development. Janet held several leadership positions while at KPMG. She holds a master's of professional accountancy from Louisiana Tech University and a master's of taxation from Golden Gate University.

Both Buck and Janet serve as volunteer Executive Advisors to Ascend, the largest non-profit Pan-Asian organization for business professionals in North America.

ABOUT ASCEND FOUNDATION AND ASCEND

Ascend Foundation is a 501(c)(3) organization with a mission to educate, advocate and enable Pan-Asian business leaders to reach their full potential. Through its research and thought leadership activities, the Foundation's goal is to help Pan-Asian leaders make greater impacts in business. Ascend is the largest, non-profit Pan-Asian membership organization for business professionals in North America. Established in 2005, Ascend's network includes 60,000+ senior executives, professionals, and MBA/undergraduate students involved in its 50+ chapters. As a career lifecycle organization, it offers robust leadership and professional development programs designed to cultivate Pan-Asian talent by supporting its members in reaching their career potentials and by supporting its corporate partners to develop a strong, diverse, and inclusive workforce to achieve business growth.

Visit www.ascendleadership.org for more information.

EXHIBIT A
National EEO-I Totals

National 2014	Professional	Manager	Executive	exec ratio
Total	10,534,689	4,766,041	833,367	19
White men	3,602,095	2,288,444	521,941	12
White women	4,076,736	1,406,699	202,815	28
Black men	268,874	168,887	13,647	33
Black women	535,716	170,431	12,442	58
Hispanic men	278,533	218,945	21,692	24
Hispanic women	331,356	135,342	10,583	45
Asian men	664,702	189,688	29,871	30
Asian women	572,547	110,903	10,769	64
Other	204,130	76,702	9,607	30
National (% Total)	Professional	Manager	Executive	EPI
White men	34.2%	48.0%	62.6%	1.83
White women	38.7%	29.5%	24.3%	0.63
Black men	2.6%	3.5%	1.6%	0.64
Black women	5.1%	3.6%	1.5%	0.29
Hispanic men	2.6%	4.6%	2.6%	0.98
Hispanic women	3.1%	2.8%	1.3%	0.40
Asian men	6.3%	4.0%	3.6%	0.57
Asian women	5.4%	2.3%	1.3%	0.24
Other	1.9%	1.6%	1.2%	0.59

Notes:

- Executive Ratio = number of people in the executive pipeline / all executives, where the number of people in the executive pipeline = # professionals + # managers + # executives;

As an example, Executive Ratio for white men means that there is 1 white male executive per 12 white men in the three levels of the management pipeline.

- EPI = % executives / % professionals

Source: <https://www.eeoc.gov/eeoc/statistics/employment/jobpat-eeo1/2014/datasets.cfm>.

EXHIBIT B
SF Bay Area Regional EPI

SF Bay Area (32,33,51)	Professional	Manager	Executive	exec ratio
Total	171,970	56,956	14,423	17
White men	56,654	23,934	7,741	11
White women	19,489	9,316	1,862	16
Black men	2,068	712	100	29
Black women	1,205	500	43	41
Hispanic men	5,206	2,161	369	21
Hispanic women	2,840	988	124	32
Asian men	55,328	12,560	3,257	22
Asian women	25,289	5,576	768	41
Other	3,891	1,209	159	33
SF Bay Area (%)				EPI
White men	32.9%	42.0%	53.7%	1.63
White women	11.3%	16.4%	12.9%	1.14
Black men	1.2%	1.3%	0.7%	0.58
Black women	0.7%	0.9%	0.3%	0.43
Hispanic men	3.0%	3.8%	2.6%	0.85
Hispanic women	1.7%	1.7%	0.9%	0.52
Asian men	32.2%	22.1%	22.6%	0.70
Asian women	14.7%	9.8%	5.3%	0.36
Other	2.3%	2.1%	1.1%	0.49

EXHIBIT C
EPI BY COMPANY EEO-I REPORTS

	Bay Area	Adobe'15	Apple'15	Cisco'15	Facebook'14	Google'14	HP'14	Intel'15	LinkedIn'14	Microsoft'15	Nvidia'13	Twitter'14	Yahoo'13	Yelp'13
Total Professionals	171,970	2,832	19,827	25,633	3,848	22,130	50,802	35,096	2,675	45,742	3,138	2,011	4,073	475
White men	1.63	1.38	1.75	1.60	1.42	1.27	1.39	1.93	1.70	1.50	1.68	1.30	1.89	1.93
White women	1.14	1.09	1.03	1.26	1.42	1.54	0.79	1.01	1.34	0.81	1.81	0.85	1.25	0.26
Hispanic men	0.85	1.35	0.31	0.67	1.19	0.00	0.88	0.24	1.25	0.98	0.90	0.00	1.07	3.08
Asian men	0.70	0.73	0.31	0.58	0.50	0.80	0.82	0.32	0.65	0.57	0.68	0.73	0.36	0.87
Black men	0.58	0.00	1.71	0.28	1.24	3.69	0.27	1.07	0.81	1.21	0.00	0.00	0.00	0.00
Hispanic women	0.52	0.00	0.00	0.72	1.28	0.00	0.20	0.00	0.65	0.00	0.00	0.00	0.00	0.00
Black women	0.43	0.00	3.44	0.25	1.08	0.00	0.13	1.26	0.00	0.72	2.74	0.00	2.67	0.00
Asian women	0.36	0.18	0.26	0.37	0.33	0.00	0.34	0.09	0.37	0.16	0.35	1.31	0.33	0.00
Other	0.50	0.72	0.00	0.78	0.48	0.00	0.70	0.78	1.19	0.30	0.54	0.00	0.00	0.77

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