

## Executive Summary of the 2017 SCESF Report on the Economic Status of the Faculty

### I. Introduction

This Executive Summary provides an overview of the 2017 Report of the Senate Committee on the Economic Status of the Faculty (SCESF). The Report is based on data provided to the Committee by the Office of the Vice Provost for Faculty and the Office of the Executive Vice President, in combination with information the Committee has assembled from other sources. The 2017 Report covers Fiscal Year (FY) 2016, from July 1, 2015 through June 30, 2016.

The full 2017 Report is published in *Almanac* at [www.upenn.edu/almanac/volumes/v63/n25/pdf/esf-long.pdf](http://www.upenn.edu/almanac/volumes/v63/n25/pdf/esf-long.pdf) and includes the full publicly available dataset provided to the Committee by the Vice Provost's office. The data tables included within this Executive Summary retain the numbering system used in the full Report for consistency and ease of comparison.

This Executive Summary focuses on key observations and issues of concern identified by the Committee upon review of these data as well as issues raised during direct discussions with the Vice Provost for Faculty, Anita Allen, and the Senior Vice President for the Clinical Practices of the University of Pennsylvania (CPUP), Peter Quinn. The Committee met 12 times to discuss the data and assemble the report. The report concludes with the Committee's recommendations to the University administration for maintaining and improving the economic status of the faculty at Penn.

### II. Merit Raises for Penn Faculty in Fiscal Year 2016

*a. Inclusion of All Standing Faculty.* SCESF was provided Fiscal Year 2016 (FY2016) data for 1,227 members of the tenure-line faculty (719 Professors, 247 Associate Professors, and 261 Assistant Professors). These data provide complete coverage of 11 schools at the University, but less than half of all 2,566 standing faculty.<sup>1</sup> For the Perelman School of Medicine (PSOM), SCESF was provided data for 151 tenure-line faculty in basic science departments. Data on salaries of nearly 1,000 clinician educators in the standing faculty from Medicine, Dental Medicine, Veterinary Medicine, Nursing and Social Policy and Practice were not provided to the Committee, nor were data provided for the 240 tenure-line PSOM faculty in clinical departments, 86 tenure-line PSOM faculty based at the Children's Hospital of Philadelphia or 35 PSOM tenure-line faculty based at the Veterans Administration. These 240 Penn-based tenure-line standing faculty in clinical departments and all of the nearly 1,000 clinician educator standing faculty members have historically been excluded from the confidential data provided to SCESF by the Provost's Office but represent nearly 50% of the standing faculty of the University. SCESF requested that the FY2016 adjusted academic base salary data include all tenure-line standing faculty members, including those in the 18 PSOM clinical departments (an additional 240 faculty). The data from the clinical departments was not provided, citing confidentiality concerns and wide discipline-related salary ranges which may confuse analysis. SCESF notes that it already receives data about the entire standing faculty from all other schools at Penn, including confidential tables that provide nuanced information about discipline-related differences within schools. SCESF will continue to request missing PSOM salary data in the future in order to achieve its mission to report on the economic status of all standing faculty at Penn.

*b. Process for Setting and Adjusting Faculty Salaries.* Each year a target salary increase percentage, the result of discussions of the Budget Steering Committee, a senior administrative body, is published in *Almanac*, and described as a merit increase based on market trends and economic conditions. The salary pool combines faculty and staff; faculty salaries comprise one-third of the total. The Budget Steering Committee aims to set competitive salary increases for faculty and staff, defined as targeting the 75th percentile in rankings of comparable institutions. For staff, these comparisons involve Greater Philadelphia area market data, with guidance from Human Resources. For faculty, these comparisons should include salaries of faculty at peer institutions. Since 2003, the salary parameters published in *Almanac* have been identical for faculty and staff, despite differences in their relevant comparison groups. Annually, SCESF is provided benchmarking data for Penn faculty relative to the Ivy Plus institutions and 62 public and private research universities in the United States and Canada. Last year, SCESF proposed that these data, provided annually by the Provost's Office (see *Tables 4 and 5, Figures 1 and 2 in the full Report*), be used to estimate market trends for faculty, and the Administration responded to the SCESF concern in *Almanac*, stating that "Faculty salaries are set based upon market-driven analyses"

(<http://www.upenn.edu/almanac/volumes/v62/n24/pdf/022316-supplement-execsummary.pdf>). However, this year we report yet again that Penn faculty salaries for professors lose ground with respect to our peers year after year. These historic trends underscore the need to re-examine the budgeting process for merit-based salary increases for faculty.

*c. Process for Setting and Adjusting Faculty Salaries at PSOM.* The Perelman School of Medicine (PSOM) uses a distinct process for setting salaries. The PSOM salary compensation structure consists of three components, designated X, Y, and Z, and exclude administrative stipends. The minimum base salary for academic rank, X, is published annually for assistant professors by the University in *Almanac*, and is insensitive to time in rank, productivity and area of scholarship or clinical expertise. The base salary supplement, Y, is based on: time in rank; market demand for specialties and disciplines; and incentives that reflect recent research and clinical productivity. Component Z is available for eligible faculty and is a delayed additional compensation provided if approved department productivity incentives are reached. SCESF was informed that PSOM performs internal salary analyses, striving for internal departmental equity, gender equity, and external competitiveness, given market data provided by the American Association of Medical Colleges (AAMC). As in many schools at Penn (e.g., School of Arts and Sciences, Wharton), total base salary (X+Y) for PSOM tenure line faculty varies greatly by department and specialty. Unlike the rest of the University, total base salary for PSOM faculty is also highly volatile, and may be decreased up to 20% in a year in successive years (down to X), and can increase without limit.

*d. Actual Annual Salary Increases.* Once the university-wide target has been set, annual salary increases for individual faculty members are determined by department chairs and deans. Any increases below 1.0% or above 5.0% require review by the Provost's office.

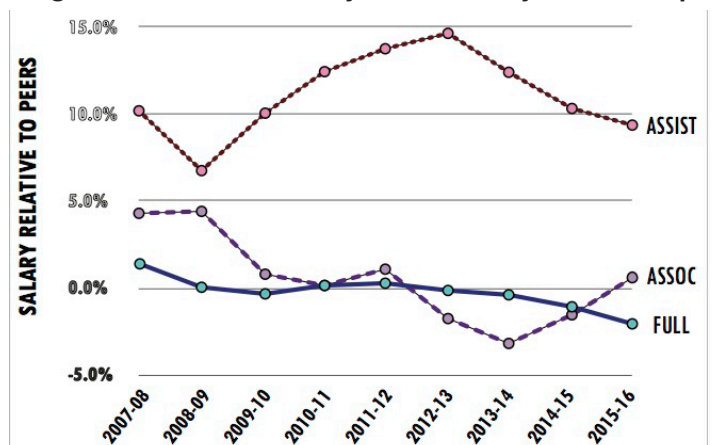
Actual annual salary increases for FY 2016 are summarized in Table 1. The median salary increase was 3.0% at all ranks. *Table 9 (see full Report)* reveals salary compression at the associate professor level. For five years in a row, the median salary for associate professors has been less than the mean salary for assistant professors. Compared to median salaries for assistant professors, associate professors earn only 14% more. When these data are weighted by school, associate professors earn 26% more, implying that many associate professors are concentrated in lower-paying schools. Confidential supplemental data used (but not published) in *Table 10 (see full Report)* also shows variability in salaries across disciplines.

### III. Salary Comparisons: Penn's Competitive Standing

To evaluate Penn faculty salaries relative to peers in the higher education market, SCESF compared academic salaries at Penn to those at 60 public and private research universities in the United States and two in Canada (*Table 4 in the full Report*), and to those at a set of highly competitive private research universities, including Ivy League schools and other premier private universities (Stanford, Chicago, etc.). Data are reported as peer salaries relative to mean salaries at Penn (*Table 5 in the full Report*). Penn faculty average salaries are presented relative to the average salary of faculty in this peer group in *Figure 1*. See *Figure 2* in full Report for institutional data.

The budgeting process for salary increases strives to achieve a

**Figure 1: Mean Penn Salary Relative to Ivy+ Peer Group**



<sup>1</sup> Retrieved December 13, 2016, from <http://www.upenn.edu/about/facts>

competitive market position for the average Penn faculty member in the top half (75th percentile) among peer institutions (see details in last year's SCESF report<sup>2</sup>). Among this group of comparable private research universities, Penn assistant professors are generally ranked at or near the top of the group since 2007 (Figure 2C). On average, assistant professors at Penn now earn over 9% more than the average in the Ivy Plus group. These competitive faculty salaries are not achieved at other ranks, however. The relative ranking for mean salaries for associate professors fell from 2/12 in 2007 to 7/12 in 2014, climbing up to barely above average, 5/12 in 2015. Full professors have remained near the middle of the group, above only four others. Of concern, average salaries of full professors have fallen further to 2% below the mean of our peer group (Figure 2A). From another perspective, over the last four consecutive years, our peers in the Ivy-Plus have enjoyed a 3% increase in median salary at all ranks, while Penn's average annual increase in median salaries was 2.8%, 1.7%, and 3.9% for full, associate and assistant professors, respectively. In short, Penn is persistently losing ground in the higher education market for senior faculty.

SCESF supports the principle that both faculty and staff should be compensated for remarkable accomplishments. In the 2011 and 2015 Faculty Climate Surveys, only 55% and 59% (respectively) of faculty were satisfied or very satisfied with their salary, and the majority of the standing faculty (64% and 61%, respectively) responded that an increase in salary was a factor in their considering leaving Penn, making it the number one reason.<sup>3</sup> Higher shares of associate professors than assistant and full professors ranked salary as a reason for considering leaving Penn to some or a great extent (70% in 2011 and 69% in 2015). Some Penn faculty members seek outside offers to establish their competitive market value. While centralized budgeting delineates the wage pools for annual salary increases, alternative funding sources for faculty retention offer deans and department chairs flexibility for these ad hoc salary adjustments. The practice of faculty soliciting offers to leave Penn in order to establish their credible value would likely be markedly curtailed if annual faculty salary increases were linked to market trends in faculty salaries at peer institutions, just as salaries of senior administrators are linked to national market trends and those of staff are linked to regional job markets.

#### IV. Salaries for Female Faculty Continue to Lag Behind their Male Counterparts

a. *Mean Salary Increases for Men and Women.* Annual percent increases in salary are generally similar for men and women faculty continuing in rank at Penn (Table 11 in the full Report).

b. *Persistent Gender Gap in Faculty Salaries at Penn.* Despite the general parity in annual salary increases (Table 11), striking differences in base salaries for men and women have persisted over the years (Table 12). At the full professor level, comprised of 23% of women (and 47% of women faculty who continued in rank), the mean academic year base salary for women is \$11,283 less than the mean salary for men at the same rank. At the associate professor rank, composed of 39% of women (and 26% of women faculty continuing in rank), the mean salary for women is \$22,541 less than the mean salary for men. This wage gap between male and female associate professors has grown steadily over recent years, almost doubling since 2011-12. A substantial gap is also present at the entry level: the mean salary for assistant professors (41% of whom are women) is \$14,465 less for women than for men. As at other ranks, these salary differences for assistant professors have persisted over time. A wage gap at the assistant professor level (27% of women faculty who continued in rank) sets the stage for continuing disparities as faculty move through ranks. Any comprehensive program to reduce the gender gap must include close attention to starting assistant professor salaries.

Not surprisingly, these persistent historic salary wage gaps are accompanied by dissatisfaction of women faculty with their salary. In both the 2011 and 2015 Faculty Climate Surveys, only half of the women faculty were satisfied or very satisfied with their salary, significantly less than the two-thirds of the male faculty with a similar level of satisfaction.

c. *Factors Contributing to the Ongoing Disparity.* A substantial portion of the wage disparity evident in Table 12 results from differences in gender ratios in faculty across the different schools. Traditionally male-dominated fields benefit from higher salaries than those found in traditionally female-dominated fields. To examine the extent of this effect, the Vice Provost provided a weighted set of comparisons (See Table 12 [Compressed], see full report for weighted comparisons). This adjustment

computes the weighted average salary for women, for example, using weights based on the proportions of male faculty within different schools. Although this weighting reduces the wage gap, a gender gap remains between the weighted values for men and women. This gender gap is apparent at all ranks within the weighted summary statistics, ranging up to 9.4% of adjusted mean salaries among associate professors. Some of this remaining gender gap may be attributed to the incomplete nature of this adjustment. Salary levels differ considerably across departments within schools at Penn, and the adjustments in Table 12 (Compressed) do not capture these distinctions.

To further explicate sources of the gender salary disparity, the Vice Provost provided SCESF with a regression analysis conducted by the Office of Institutional Research and Analysis (IR&A). This analysis regresses the log of base salary on gender, race/ethnicity, experience (measured by academic rank and time in rank), status as a department or endowed chair, and academic field. Academic field is roughly grouped at a school level, retaining some of the heterogeneity present in the weighted analysis of Table 12. The regression analysis finds that, without adjustment for field, rank, or time in rank, women have a base salary that is about 20% lower than that of male faculty. Adjustment for rank and ethnicity cuts this gap in half to about 10%, consistent with the fact that there are proportionally fewer women in higher paid ranks (women make up 23% of full professors, compared to 41% of assistant professors). Time in rank and having an administrative role or endowed chair are predictive of overall salary but have little influence on the gender gap. Adjustment for academic field, however, has a substantial impact and

**Table 12 (Compressed)**

Mean academic base salary levels of Penn standing faculty members who continued in rank by rank and sex. Faculty on paid leave or unpaid leave are reported at their full salary.

Rank/Academic Year/Metric		Mean Academic Base Salary			
		Women	Men	\$ Difference	% Difference
<b>Professor</b>					
2011-2012	Unweighted	\$172,035	\$186,174	\$14,139	8.2%
	Weighted	\$179,594	\$186,174	\$6,580	3.7%
2012-2013	Unweighted	\$178,939	\$191,240	\$12,301	6.9%
	Weighted	\$187,240	\$191,240	\$4,000	2.1%
2013-2014	Unweighted	\$183,418	\$197,811	\$14,393	7.8%
	Weighted	\$192,926	\$197,811	\$4,885	2.5%
2014-2015	Unweighted	\$188,619	\$204,309	\$15,690	8.3%
	Weighted	\$199,277	\$204,309	\$5,032	2.5%
2015-2016	Unweighted	\$198,783	\$210,066	\$11,283	5.7%
	Weighted	\$208,639	\$210,066	\$1,427	0.7%
<b>Associate Professor</b>					
2011-2012	Unweighted	\$107,783	\$119,589	\$11,806	11.0%
	Weighted	\$118,744	\$199,589	\$80,845	68.1%
2012-2013	Unweighted	\$107,877	\$123,145	\$15,268	14.2%
	Weighted	\$119,492	\$123,145	\$3,653	3.1%
2013-2014	Unweighted	\$108,925	\$125,067	\$16,142	14.8%
	Weighted	\$119,010	\$125,067	\$6,057	5.1%
2014-2015	Unweighted	\$111,971	\$132,825	\$20,854	18.6%
	Weighted	\$121,576	\$132,825	\$11,249	9.3%
2015-2016	Unweighted	\$117,024	\$139,565	\$22,541	19.3%
	Weighted	\$127,591	\$139,565	\$11,974	9.4%
<b>Assistant Professor</b>					
2011-2012	Unweighted	\$104,768	\$113,590	\$8,822	8.4%
	Weighted	\$109,870	\$113,590	\$3,720	3.4%
2012-2013	Unweighted	\$104,802	\$121,832	\$17,030	16.2%
	Weighted	\$118,812	\$121,832	\$3,020	2.5%
2013-2014	Unweighted	\$109,758	\$122,033	\$12,275	11.2%
	Weighted	\$117,788	\$122,033	\$4,245	3.6%
2014-2015	Unweighted	\$112,695	\$124,649	\$11,954	10.6%
	Weighted	\$121,025	\$124,649	\$3,624	3.0%
2015-2016	Unweighted	\$113,120	\$127,585	\$14,465	12.8%
	Weighted	\$123,750	\$127,585	\$3,835	3.1%

NOTES: All salaries are converted to a nine-month base. Academic base salary increases pertain to all Penn standing faculty members with an appointment at the time of the fall census for both years. Faculty members on paid leave or unpaid leave are reported at their full salaries.

Excluded are all members of the Faculty of Perelman except basic scientists, all Clinician Educators from four schools (Dental Medicine, Veterinary Medicine, Nursing, and Social Policy & Practice), faculty members on phased retirement, and Deans of all Schools.

Female faculty members are weighted using male weights. Male weights are calculated as a ratio of male faculty in each school/area to the total number of male faculty at Penn. Percent difference is calculated as the difference between male and female salaries divided by the female salary. Negative percent differences occur when the female salary exceeds the male salary.

<sup>2</sup> <http://www.upenn.edu/almanac/volumes/v62/n24/contents.html>  
<sup>3</sup> Data on the 2011 Faculty Climate Survey may be accessed with PennKey authentication via <https://secure.www.upenn.edu/ir/results/Faculty%20Survey%202011.pdf> Faculty Climate Survey data from 2015 were not posted as of December 2016.

reduces the gender gap to around 2%, confirming that there are fewer women in highly paid disciplines. This 2% gender gap has persisted for the last 5 years, without demonstrable change in the significance of rank, ethnicity, time in rank, administrative role, endowed chair or discipline. The importance of discipline is consistent with the weighted analysis in *Table 12*, which shows a reduction in the wage gap to 2%-3% with the exception of associate professors, where the gap is much larger, 5%-9%. Some of the granular differences between *Table 12* and the regression analysis may be attributed to the use of slightly different data. *Table 12* limits the comparison to faculty who continued in rank, whereas the regression analysis includes promotions and appointments, and those in administrative positions (e.g., department chairs).

At the direction of SCESF, the Vice Provost asked IR&A to repeat the same regression analysis but estimating separately for each faculty rank. By separating the data into assistant, associate and full professors, these models allow the impact of gender and academic field on salary to vary by rank. When specified in this manner, regression analysis finds a very small gender gap which is less than 1% among full and assistant professors; these estimates are not statistically significant. For associate professors, however, this regression analysis estimates an alarming gap of 5.5% that separates the salaries of male and female associate professors, consistent with the impression conveyed by the heuristic weighting in *Table 12*. A gender gap of 5.5% is statistically significant. Though the notion of statistical significance is problematic for these data (which constitute the population of faculty outside PSOM), it provides a familiar measure of the effect size relative to unexplained variation in the data. Importantly, this gap at the associate professor level was independent of time in rank. SCESF notes that in the 2015 climate survey, associate professors as a group are collectively less satisfied with their experience at Penn than other faculty. About 40% of associate professors are women. SCESF recommends prompt attention to the gender gap at the associate professor level.

Given the importance of discipline on faculty salaries in the regression analyses, SCESF requested data from *Table 12*, within discipline, for combined ranks. Only Nursing was excluded because the number of male faculty was too low to be reported confidentially. When weighted by the number of men in the department, in several disciplines: SEAS, Natural Sciences (SAS), Wharton, PSOM-Basic Sciences, Vet, female faculty salaries were (<3% greater than male salaries. In most disciplines, male salaries were larger than female faculty salaries, with Dental and Humanities (SAS) at 5%-10% of median weighted salaries, and Annenberg, GSE and Social Sciences (SAS) median salary gaps exceeding 10%. SCESF recommends urgent attention to these discipline-specific gender gaps in salary.

## VI. SCESF 2016-2017 Issues of Concern and Recommendations

In accordance with Faculty Senate policy, we present the following issues of concern and our recommendations to address these issues.

### A. Assessing the Economic Status of the Entire Faculty

*Issue of Concern:* The Committee on the Economic Status of the Faculty is charged to gather and organize data on academic base salaries and benefits for the faculty and to represent the faculty in the determination of University policy on salary issues. This year, SCESF was provided academic base salary data on 1,227 tenure line faculty, of whom 1,128 were continuing in rank. Penn is composed of 2,566 standing faculty in the tenure and clinician-educator tracks and 2,079 associated faculty in the research faculty, academic clinician (health schools), clinical faculty (health schools), adjunct faculty, visiting faculty, Wistar appointments, and Artists in Residence.<sup>1</sup> Historically, this Committee falls short of its charge because the Provost's Office provides academic base salary data for only approximately 48% of the standing faculty and less than 30% of the entire faculty.

*SCESF Recommendation:* To provide a more complete analysis of faculty salary and benefits, SCESF requests that data from the Provost's Office be expanded next year to include the academic base salary for all standing faculty, subject to the standard exclusion of Deans and faculty members in phased retirement. This year SCESF reports on the distinguishing features of PSOM salary adjustment procedures. With this foundational knowledge, next year SCESF will again request the PSOM standing faculty data and analyze it along with data from every other school at Penn. Future requests may extend to the associated faculty, currently 2,079 in number.

<sup>1</sup> Retrieved December 15, 2016, from <http://www.upenn.edu/about/facts>

### V. Faculty Benefits at Penn

Benefits are an important aspect of total compensation received by faculty at Penn. For the second time, this report includes faculty benefits data. A competitive benefits package is a key aspect of maintaining an outstanding faculty and thus maintaining Penn's standing as a top-ranked university. This year, SCESF compared data for Penn and 14 peer institutions for institutional contributions to retirement accounts and dependent tuition benefits.

Penn offers two types of retirement plans. In the Basic Plan, the University automatically makes contributions to 403(b) tax-deferred retirement accounts on an increasing scale with faculty member age. Contributions begin after 1 year of service, and there is a 3-year vesting period, after which the funds remain available to the faculty member, even after leaving Penn. In the optional Matching Plan, which has no waiting period, Penn matches the faculty member's contributions dollar-for-dollar in a 401(a) tax-deferred retirement account. The contribution limit increases with age, to reach a maximum of 5% of salary below \$265,000 (at age 40 and over). Details are provided at <https://www.hr.upenn.edu/myhr/benefits/retirement> Penn's maximum contribution of 9%—4% to 403(b) plus 5% to 401(a)—is below the Ivy Plus group median of 10% (*Table 13, full Report*).

Penn offers tuition benefits for faculty members, their partners and their dependents. Currently Penn covers 75% of the tuition and technology fees (\$34,761 in FY2017) for dependents enrolled at Penn ("home") and up to 40% of Penn's tuition fee (\$18,222 in FY2017) for dependents enrolled at an approved school ("away"). Penn's tuition benefits are more generous than the median tuition benefit offered by the Ivy Plus institutions (\$24,572 for "home" tuition and \$15,560 for "away").

While individual benefits are more or less generous at Penn, Penn strives to create a suite of benefits that, overall, rank in the top half (approximately 75th percentile) of the Ivy Plus institutions. SCESF recommends that increasing the maximum contribution of retirement benefits to 10%, the typical limit among Ivy Plus institutions, would be a constructive step toward this objective.

Penn's continued prominence as an eminent university requires academic excellence in the faculty across all schools and disciplines, and this excellence is based directly on the quality of the faculty recruited to, and retained by, our university. We encourage the President, Provost, Deans, and the faculty-at-large to continue to monitor closely faculty compensation across the entire university in order to maintain Penn's competitive position with peer institutions and eliminate salary disparities based on gender, as well as other characteristics that were unexamined in this report.

#### *Response:*

*The Provost's Office provided the Senate with salary data organized into twelve tables, along with information about Penn's retirement and dependent tuition benefits. SCESF created Table 13, incorporating information obtained through the Vice Provost for Faculty from the Office of Human Resources. In addition to providing the Senate with specific data reflected in this report, the Provost's Office fielded requests from SCESF for information relating to sabbatical, faculty families, and clinical department salaries.*

*In this report, SCESF characterizes its charge under the Rules of the Faculty Senate as assessing the economic status of the entire faculty. This expansive characterization of SCESF's charge is inconsistent with understandings of the scope of SCESF's data gathering and reporting that date back more than twenty years. Salary data on tenure-track faculty in the eighteen clinical departments, CE-track faculty, and Associated Faculty have never been included.*

*The Senate, PSOM and the Office of the Provost have met to discuss the feasibility of providing SCESF with the adjusted base salaries of the approximately 240 tenure-track faculty members housed in PSOM's clinical departments. A final determination of whether PSOM assents to new disclosures and their logistics, perhaps only on a confidential basis for internal use by SCESF, has not yet been reached.*

*SCESF states that future faculty salary data requests may extend to salary data for the Associated Faculty. The Associated Faculty currently number 1,886, including 1062 faculty members who are full-time and 824*

who are part-time, and falling into more than a half dozen distinct faculty categories across the university. Of the full-time Associated Faculty, 1,408 are housed in PSOM's clinical departments, as are 491 of the part-time Associated Faculty. The variability and incommensurability of roles and compensation metrics raise significant practical issues to organizing compensation data. In addition, Associated Faculty compensation is not subject to the Provost's merit pool increase review process; oversight by the Provost occurs as part of the Schools' overall budget reviews.

## B. Maintaining Penn's Competitive Standing

*Issue of Concern:* To attract and retain an eminent faculty, the University must provide faculty salaries that are competitive with peer institutions in the top tier of US research universities. Penn's stated goal is to provide compensation, on average, in the middle of the upper half of our most relevant peer group, the Ivy Plus institutions (see details in last year's SCESF report <http://www.upenn.edu/almanac/volumes/v62/n24/pdf/022316-supplement-execssummary.pdf>).

Comparisons of mean salaries at Penn to this peer group show that Penn assistant professors have consistently ranked at or near the top of the group since 2006. However, the relative ranking for mean salaries for associate professors has fallen to just above average over the same time period, and full professors have remained at or below the middle of the group. Average salaries of full professors have been below the mean of our peer group for 4 consecutive years. Over the same 4 years, our peers in the Ivy-Plus have enjoyed a 3% increase in median salary at all ranks, while Penn's average annual increase in median salaries was 2.8%, 1.7%, and 3.9% for full, associate and assistant professors. Together, these data reveal that Penn's salaries and the annual increases for tenured professors are below those of Penn's market cohort in highly competitive institutions of higher learning, eroding Penn's ability to compete with peers to retain the best talent. Associate and full professors have adopted the ad hoc practice of re-aligning their salary by obtaining outside offers to establish their market value. However, in the context of annual increases that are below those of Penn's peers for tenured faculty, these base salary adjustments provide only a temporary correction and disadvantage faculty who are not geographically mobile.

*SCESF Recommendation:* SCESF recommends that faculty salary data for our peer institutions (provided in Table 5) be used in the rolling 5-year University budget process to determine an appropriate parameter for annual salary increases for Penn faculty and that peers-within-disciplines (e.g., Association of American Universities Data Exchange (AAUDE) information in Table 4) be used by Deans to correct faculty salaries, and provide Penn's faculty with competitive compensation.

*Response:*

*The University is strongly committed to competitive compensation. As illustrated in Table 5, the mean salaries of Penn Assistant, Associate and Full Professors are favorably ranked among 12 Ivy Plus research universities, some located in major cities with higher costs of living. Penn's package of base salaries and health, tuition, and retirement benefits is extremely competitive.*

*SCESF is concerned that a 3% merit increase pool is becoming ossified, harming competitiveness and faculty satisfaction, and is recommending that faculty salary data for our peer institutions be used in the rolling 5-year University budget process to determine an appropriate parameter for annual salary increases for Penn faculty. The 3% merit pool serves as guidance for the Schools and has not functioned as a fixed ceiling constraining actual faculty salary increases. The limited availability of current-academic-year faculty salaries for peer institutions and the absence of relevant market survey data to inform reliable projections render five-year planning parameters mere estimates. The University affords the Schools flexibility to use AAUDE data found in Table 4 and other relevant peer and professional data to ensure appropriate responses to market conditions affecting each field and discipline. Regular review by the Provost's Office further helps to promote the fairness and equity of School salaries.*

## C. Achieving Gender Equity at Penn

*Issue of Concern:* In the context of federal mandates to eliminate race and gender bias in compensation in all institutions receiving federal contracts, SCESF remains concerned about the persistent gender inequity in faculty salaries observed at all ranks at Penn. SCESF notes that this continued inequity is inconsistent with the aims of the Action Plan for Faculty Diversity (<http://www.upenn.edu/almanac/volumes/v58/n02/diversityplan.html>). A regression analysis reveals that much of

the salary gap is explained by the influences of rank, time in rank and discipline. However, in the context of 3% annual salary increases for the faculty overall, SCESF finds a persistent, 5-year 2% salary gap after correcting for rank and discipline distressing. These gender inequities are pronounced, persistent and significant in the associate professor rank, and in several schools (without accounting for rank). The impact of gender bias in salary extends beyond a faculty member's career at Penn, because the institutional contribution to faculty retirement benefits is linked to salary.

*SCESF Recommendation:* We urge the President, Provost, and the Deans to focus on eliminating gender inequities in faculty salaries within ranks and disciplines across the university. SCESF applauds the introduction of a separate systematic salary review process by the Provost's Office for FY2016 to highlight individual salary disparities associated with race, ethnicity and gender, however our regression analyses of FY2017 reveal little influence of this review process in reducing gender inequities, after correcting for rank and discipline. Given the significant impact of rank and time in rank on salaries, SCESF recommends attention, oversight and mentoring to ensure that women associate professors are being promoted to full professor in a timely manner. To examine and monitor progress in discipline-specific disparities in the weighted and unweighted data, SCESF requests that data regarding gender disparity within rank and across disciplines be provided on a continuing basis. SCESF will work with the Provost's office to develop research productivity and teaching quality metrics that will add value to future regression analyses.

*Response:*

*Because fair salaries help to recruit and retain faculty, salary equity is a paramount concern of the President, Provost, and Deans, as it is for SCESF. Between fall 2011 and fall 2016, 41.7% of new hires were women. In the past five years, Penn has successfully recruited 304 new women faculty to the standing faculty, increasing the number of women faculty by 9% compared to only a 2% increase in the number of total standing faculty.*

*In determining salaries, the Schools use discipline-specific evidence of scholarship, teaching, mentoring, training, administrative roles, clinical skill, grants, and service excellence, as well as relevant metrics for external and internal markets. At present, there is no perceptible gender gap in the allocation of annual merit increases. Some of the gap discerned in new Assistant Professor salaries relates to differences in employment markets and disciplines within and across the Schools. The Office of Institutional Research and Analysis (IRA) performs regular regression analyses on salary data to help the University monitor gender equity. After correcting for rank, time in rank, and discipline, the gap between male and female salaries in fall 2016 was a 1.9% difference.*

*With the approval of the Provost's Office, equity adjustments to base salaries are now possible both in annual salary-setting and in reviews initiated by the Deans in the contexts of new hires, promotions, and retentions. Moreover, since the spring of 2015, the Vice Provost for Faculty has begun to conduct equity reviews in selected Schools and departments in advance of the annual June salary-setting season. The Provost will continue to work with the Schools toward closing the gender gap in those disciplines, departments, ranks and Schools where significant differences remain.*

## VII. 2016-2017 Members of the Senate Committee on the Economic Status of the Faculty

Kenneth Burdett, SAS/Economics  
 Robert Ghrist, SAS/Mathematics; SEAS/Electrical & Systems Engineering  
 Robert Hollebeek, SAS/Physics & Astronomy  
 Susan Margulies, SEAS/Bioengineering, Co-Chair  
 Iouri Manovskii, SAS/Economics  
 Andrew Postlewaite, SAS/Economics  
 Bob Stine, Wharton, Co-Chair  
 Ex Officio: Laura Perna, GSE, Faculty Senate Chair  
 Reed Pyeritz, PSOM/Medicine and Genetics, Faculty Senate Past Chair  
 Santosh Venkatesh, SEAS/ESE, Faculty Senate Chair-Elect

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