

**Senate Committee on the
Economic Status of the Faculty
2012-2013 Annual Report**

Contents

I. Introduction..... 2

II. Resources for Faculty Salaries and Annual Increases 2

III. Penn Faculty Salaries: External Comparisons..... 2

 A. Comparisons with Growth in the Consumer Price Index (CPI) 3

 B. Comparisons with Peer Universities 3

IV. Penn Faculty Benefits 4

V. Penn Faculty Salaries: Internal Comparisons..... 4

VI. Salary Variability by Gender 4

VII. Conclusions 5

 A. Economic Status of the Faculty 5

 1. External Competitiveness 5

 2. Internal Variability 5

 B. Conditions of Concern 5

 1. External Competitiveness 5

 2. Internal Equity 5

VIII. SCESF Communication with Provost Office 5

 A. SCESF Requests in Preparation of the SCESF Report and Responses 5

 B. SCESF Recommendations and Questions for the Administration..... 5

 1. Salary competitiveness

 2. Faculty benefits

 3. Review of Compensation for Alternate Faculty Tracks

IX. Members of the 2013-2014 Senate Committee on the Economic Status of the Faculty 6

X. Tables..... 6

I. Introduction

The Senate Committee on the Economic Status of the Faculty (SCESF) is charged by the “Rules of the Faculty Senate” to:

- Gather and organize data on faculty salaries and benefits;
- Issue an annual report on the economic status of the faculty; and
- Represent the faculty in the determination of University policy on salary issues.

The focus of this report is the current economic status of the faculty as based on salary data provided to the committee by the Vice Provost’s office. Unless otherwise specifically stated, faculty salary information discussed in this report refers to the aggregated “academic year base salary” of faculty members whether salaries are paid from General Operating Funds and/or from Designated Funds.¹ Salary data from the Perelman School of Medicine include only basic scientists. Further, data on salaries of clinician educators from Medicine, Dental Medicine, Veterinary Medicine, Nursing, and Social Policy and Practice were not provided to the committee, and therefore were not reviewed. Limited data on benefits was provided, and thus discussion of these data is also limited.

The report focuses on three major topics:

- Faculty salary setting process at Penn: sources of funds for faculty salaries and how annual salary increase decisions are made.
- External comparisons: the competitiveness of faculty salaries at Penn in comparison with faculty salaries at other universities.
- Internal comparisons: variability of faculty salaries within Penn.

Each of these three topics is addressed in a separate section of the report (sections II, III, and V). Faculty benefits are addressed in relation to available data on mean salary and benefits for Full Professors (section IV). Section VII describes the SCESF’s overall conclusions about the economic status of the faculty. Section VIII details the SCESF’s provisional observations and recommendations.

In carrying out its charge, SCESF is cognizant of Penn’s salary policy for the period as stated by the President, Provost, and Executive Vice President and published in *Almanac* April 10, 2012, www.upenn.edu/almanac/volumes/v58/n29/salary.html. The University of Pennsylvania’s merit increase program is designed to recognize and reward faculty and staff by paying market competitive salaries in a fiscally responsible manner, with merit increases based on market trends and economic conditions. The salary guidelines are intended to reward valuable contributions of faculty and staff to the University’s mission and excellence.

Statistical data in this report were provided by the Office of Institutional Research and Analysis and the Office of the Vice Provost for Faculty. The data provided preserve anonymity and explicitly exclude any information that would make it possible to identify individual faculty salaries.

As in previous years, SCESF has examined the current data and also considered trends in faculty compensation over the past five to seven years. We note that the mean salary increase for faculty of 2.9% reflects, to some extent, the continued improvement of the economic climate and that Penn faculty continue to receive salaries generally commensurate with peer institutions. However, we also note that the mean salary increase for faculty at Penn for the current fiscal year significantly trails the mean percent increase in compensation for those senior administrators whose salaries are publically available, which averaged 10.4% for FY 2011-2012, according to the most recent available data from Form 990 reporting (information publically available online by searching Form 990 and Penn; or see www.citizenaudit.org/231352685/).

This year, the analysis suggests that in general, the economic status of the faculty has continued to slowly improve following the fallout from the economic downturn of 2008-2009. While Penn’s position in regard to the most relevant peer institutions (Ivies, Ivies Plus, and AAUDE) remains relatively stable, some peer institutions are pulling significantly ahead. There remain some focal and persistent issues that can clearly limit Penn’s ability to compete with peers for the best talent. Internally, there remains considerable heterogeneity in salary increases across schools and within rank. In some fields, the salary gap appears to be growing over time, dif-

¹ Academic base year salary is salary that is paid for the normal academic duties of a standing faculty member (teaching, committee service, research). At Penn, the “academic base year salary” is a faculty member’s compensation for the nine-month academic year, although it is typically paid out in twelve equal amounts in a monthly paycheck. The only exception occurs in the health care schools, which have some or all standing faculty on a 12-month, or “annualized” base. All salaries reported on a 12-month basis have been adjusted to be comparable with the salaries reported on a 9-month basis. We note that “summer money” is paid routinely, albeit at varying levels, in some parts of the University. Such “summer money” is not included in these base year salaries.

² www.upenn.edu/almanac

ferentially affecting faculty in specific schools, particularly at the rank of Assistant Professor. We also raise concern about the persistent gender inequity in faculty salaries at Penn. While some of this inequity may stem from the relative concentration of women in more poorly compensated fields and the dearth of women in more generously compensated areas, the persistence of this wage gap between male and female faculty over time and at all faculty levels should be an issue of concern to the university community.

We encourage the President, Provost, Deans, and the faculty at large to continue to closely monitor faculty compensation across the university in order to maintain Penn’s competitive position. Penn’s continued ranking as an outstanding university requires academic excellence across all schools and disciplines, and this excellence is based directly on the quality of the faculty both recruited to and retained by our university.

II. Resources for Faculty Salaries and Annual Increases

Faculty salaries at Penn are the product of a two-step process:

1. *Setting Salary Levels:* Faculty salary levels are set at the time of initial appointment by the dean of the faculty making the appointment.

2. *Annual Salary Increases:* Faculty salary levels are normally increased annually through a process described below. Such salary increases are ordinarily based on academic merit. Some annual increases are also the result of promotion in rank and of equity adjustments. Others may be direct responses countering outside offers or addressing other retention issues.

Funding for faculty salaries comes primarily from each school’s operating budget. No central fund exists for faculty salaries in general. Resources in each school are raised in accordance with the principles of Penn’s Responsibility Center Management (RCM)². Additionally, subventions are distributed to schools by central administration. Such subventions are made for a variety of reasons. For example, subvention may be made in recognition of external effects of costly actions undertaken by individual schools to the benefit of broader university-wide interests.

Using available resources, the dean of each school makes a certain amount available for faculty salaries. Particular aspects of faculty salaries for which these funds are used include sustaining existing faculty appointments, providing annual salary increases for continuing faculty members, and creating salary funding for new faculty positions. In addition, all schools must provide funds to cover employee benefits. The employee benefits rate is currently at about 30% of salary.

Annual salary increase recommendations for continuing faculty members are made by Department Chairs (in schools with departments) and by Deans. These recommendations are based on merit and are subject to general review and oversight by the Provost (see the statement of the “Salary Guidelines For 2012-2013” as published in *Almanac*, April 10, 2012). In consultation with the Council of Deans, the President, Provost, and Executive Vice President establish parameters for the “pool percentage” used in determining salary increases.

In this past academic year, deans within the twelve schools were authorized to award as salary increases a pool of up to 2.9% of the academic year 2011-2012 salaries of continuing faculty members. The salary increase range for individual salaries was 0% to 5.0%. As is now usual practice, the deans were asked to consult with the Provost about any individual increase below 1% for specifically non-meritorious performance. The deans were asked to address equity through a request that they “give careful consideration to salary adjustments for faculty members who have a strong performance record but whose salary may have lagged behind the market.” Salary increases in excess of 5.0% likewise required discussion with the Provost.

III. Penn Faculty Salaries: External Comparisons

Mean Penn faculty salaries (i.e., academic year base salaries) are compared annually with three external indicators: (a) growth in the Consumer Price Index (CPI), (b) average faculty salaries by rank at other universities as reported by annual surveys conducted at the school/area level, and (c) average salaries of Full Professors in a more limited set of research universities identified as most comparable to Penn within the larger group of universities submitting data to the “Annual Report on the Economic Status of the Profession” compendium issued by the American Association of University Professors (AAUP). These indicators and the resulting comparisons are discussed within this section.

Tables 1 and 2 refer broadly to Penn faculty, whether they continued in

² For a more detailed explanation of Penn’s Responsibility Center Management model, see <http://www.budget.upenn.edu/rcm/index.shtml>

the same rank or were promoted to a higher rank. Individuals who were, for example, promoted from Assistant to Associate Professor, effective July 1, 2012, are included among the Associate Professors for the 2012-13 year in Table 1. Thus, salary increases received due to promotion are included in the percentage changes in salaries reported for Associate Professors in 2012-13. The same is true for those promoted at that time from Associate to Full Professor. In contrast, in Tables 3 and 6 through 12 the information refers only to faculty members who continued in the same rank during 2012-13. Including salaries of faculty who changed ranks as in Tables 1 and 2 distorts the overall picture to some extent by inflating the mean increases reported in these tables. However, median values will be less affected by the presence of outliers created by salary increases awarded on promotion. Importantly, only percentage salary change is reported in Tables 1 to 3 and 6 to 8; Tables 9, 10, 11, and 12 report actual salary levels.

Tables 4 and 5 provide information about relative external rank in comparisons of Penn faculty salaries with those at the other universities surveyed in the designated rank on the date of the snapshot used to compile the data reported to the American Association of Universities Data Exchange (AAUDE) or the AAUP.

A. Comparisons with Growth in the Consumer Price Index (CPI)³

Mean and median salary increases for continuing faculty for Fiscal Year 2012-13 averaged over all schools, are shown in percentage change, overall and by rank, in Table 1. Table 1 also gives data for two measures of inflation (the US City Average CPI and the Philadelphia CPI) for the same time period as well as the Penn "pool" salary increase of 2.9%.⁴

Table 1 shows that the all-ranks median salary increase was 2.9% and the all-ranks mean increase was 4.3%. Median increases were consistently 2.9% at all academic levels, while means were more variable, reflecting in part the effects of including promotion-associated raises in this data set. The median increase of 2.9% exceeded the increase in the CPI calculated either for Philadelphia specifically, or as an average for US cities.

Table 2 compares the percentage of continuing faculty whose annual salary increases on a percentage basis exceed the growth in the Philadelphia-specific CPI, broken out by school and discipline. The SAS numbers are disaggregated into three disciplinary groupings—Humanities, Social and Natural Sciences. Three schools—Annenberg, Design and Social Policy and Practice—achieved increases in excess of the growth in Philadelphia CPI for 100% of faculty. Of interest, this continues a trend from last year. In contrast, a substantial fraction of faculty in both Dental Medicine and Veterinary Medicine received raises that did not keep pace with inflation in the region—30.8% of faculty in Dental Medicine and 37.1% of faculty in Veterinary Medicine. Again, this continues a trend seen in last year's data.

Table 3 provides parallel information limited to Full Professors continuing in rank, in order to avoid distortions caused by higher raises associated with promotions. Again, the two schools falling behind in faculty compensation are Dental Medicine and Veterinary Medicine; in the later school less than 40% of Full Professors received raises exceeding inflationary growth in the Philadelphia area.

The SCESF recognizes that there are legitimate reasons for individual faculty members to be awarded increments less than the growth in the CPI. In a small department or school, a few promotions or competitive market adjustments needed to retain valued faculty members may require a disproportionate share of the annual pool, leaving less available to address salary increases of other faculty members. Finally, some faculty members may not display sufficient merit to justify an increment exceeding the CPI growth. Nonetheless, to the extent possible, individual faculty members should receive cumulative salary increases equal to, or exceeding, growth in the CPI when considered over any extended period unless their performance has been unsatisfactory over a substantial portion

³ The consumer price index (CPI) refers to prices for a basket of goods and services purchased by "average workers". There are questions about how well this index captures quality changes in goods and services (i.e., if it understates quality improvements as suggested by some observers then it overstates price increases for goods and services of a given quality) and how well this index captures goods and services consumed by faculty (i.e., if faculty consume goods and services that have had greater quality improvements for which corrections have not been made in the CPI than do average workers then faculty salaries in purchasing power terms have increased more than would be indicated by a comparison in the reported CPI). Nevertheless, use of the CPI is widespread and helps give some perspective.

⁴ The fiscal year refers to the year starting on 1 July and continuing through June 30 of the next calendar year. This report refers to the second of the two calendar years covered in a fiscal year. For example, the FY 2013 refers to the fiscal year (or academic year) starting on July 1, 2012 and continuing through June 30, 2013.

of that period. If they do not, as is often the case, the salary increase is then apparently inequitably low. A persistent pattern of increases that do not exceed relatively moderate growth in the CPI or of markedly inequitable increases as shown in larger differences between mean and median increases merits attention given likely impacts on faculty morale and the risk to the uniform standard of excellence expected across all fields and schools at Penn.

B. Comparisons with Peer Universities

The Association of American Universities Data Exchange (AAUDE) is a source of information about faculty salaries at peer universities. The Association of American Universities (AAU) is comprised of 60 public and private research universities in the United States and two in Canada. The AAU includes several Ivy League institutions (e.g., Penn, Brown, Harvard, Princeton, Cornell and Yale), other private universities (e.g., Brandeis, Rice, Emory, Vanderbilt), public flagship universities (e.g., Penn State and the University of Michigan), and other public universities (e.g., Michigan State, University of California-Davis and University of California-Irvine).⁵ Penn uses AAUDE data for annual salary comparisons.

Mean faculty salaries at Penn, disaggregated by rank and by school and disciplinary area are compared annually with AAUDE data. Table 4 provides these comparisons by rank for each of the following schools and areas within specific schools: Annenberg, Dental Medicine, Design, Engineering & Applied Science, Graduate Education, Humanities (SAS), Law, Medicine-Basic Science, Natural Science (SAS), Nursing, Social Policy and Practice, Social Science (SAS), Veterinary Medicine, Wharton-Business & Management (i.e. all of Wharton except for Public Policy and Statistics), Wharton-Public Policy and Wharton-Statistics. Table 4 shows comparisons from Fall 2007 through Fall 2012 and situates each school or area relative to a comparison set. Penn faculty compensation ranks at or near the top of this broad set of universities in only a very few areas, most notably in Annenberg, Nursing and Wharton at the Full Professor levels. Penn ranks within the top 25% in most areas at all levels, although it must be noted that this peer group includes both public and private universities.

There are only a few fields where Penn lags significantly behind our competitors in regard to competitive compensation for faculty. Some of these fields are only slightly outside the top 25% cutoff used here, including Engineering & Applied Science and Social Policy & Practice at the Full Professor level. Here, a relatively minor upward adjustment in faculty salaries would be sufficient to move Penn to the top tier.

However, strong areas of concern are also identified by this comparison. Across the board, at the Full, Associate and Assistant Professor levels, faculty in Veterinary Medicine are under-compensated compared to their peers. The trend over time is not favorable, as faculty in this field continue to fall behind relative to their peers. Also remarkable is the relatively low levels of compensation provided to Assistant Professors in Graduate Education, Humanities and Natural Science, the later ranking at the 40th percentile. It is unclear how Penn can compete effectively for the best young faculty in these disciplines without a more aggressive compensation structure. Overall, the lack of movement in ranking and continued declines in some relative rankings over the past two years deserve attention.

Table 5 compares the mean salaries of all Full Professors at Penn with those at a small and select group of research universities based on data obtained by the Penn Office of Institutional Research and Analysis from annual salary surveys conducted by the American Association of University Professors (AAUP) published in *The Chronicle of Higher Education*. To make meaningful and fair comparisons of Penn salaries with those at other universities, the following five criteria were used to select comparison universities: (a) be included in the Research I category of the Carnegie Classification System, (b) offer a broad array of PhD programs in arts and sciences disciplines, (c) include at least two of three major professional schools (law, business, engineering), (d) not include a school of agriculture and (e) have a composite academic reputation rating greater than 4.0 (on a five point scale) in a rating system reported by *US News and World Report*.⁶ The 17 research universities meeting all five of these criteria are identified in the first column of Table 5. In addition, as Princeton and NYU are considered by the SCESF as main competitors of Penn for fac-

⁵ For a complete list of the member institutions, see the AAU website <http://www.aaup.edu/about/article.aspx?id=5476>

⁶ A composite rating was constructed by computing the mean of three separate academic reputation ratings: a general rating, a mean rating of key PhD programs, and a mean rating of key professional schools.

ulty, these two institutions are also included in the comparison shown in Table 5 in the full report.

Importantly, however, the committee reasoned that the more relevant peer group for Penn is the subset of highly competitive private research universities, including Ivy League schools as well as premier private universities of similar caliber (Stanford, Duke, NYU, Chicago, etc.). While public universities such as Berkeley and the University of Michigan are clearly of outstanding academic caliber, these schools currently face issues and constraints related to public funding not fully shared by private universities. Thus we provide comparisons of mean academic base salaries for full professors to a more limited peer group in the revised Table 5 found in the Executive Summary, while the complete data set is included in Table 5 of this report.

The relative standings of mean salaries of Penn Full Professors over the past seven years are presented in Table 5. In this table, universities are listed in rank order (high to low) by mean salary for full Professors for the most recent academic year (2012-13). The mean salary at Penn is listed, along with the percentage difference between each comparator university and Penn. Columbia continues to lead in this metric, followed by Stanford. Of note, the gap between mean faculty salaries for these two universities and Penn continues to widen, a trend that has continued since 2008.

Penn ranks 7/19 in this table. However, it should be noted that 7/8 of the lowest ranked schools in this table are the “public Ivies”, the flagship state universities that include Berkeley, Michigan, and Virginia. These publically funded schools have been particularly hard hit by pressures on government funding in the economic downturn of 2008 and the subsequent recovery. For this reason, the committee considers the subset of private research universities to be a more apt comparison, as shown in the modified Table 5 included in the Executive Summary. Among this peer group, Penn ranks 7/12, consistently at the middle of the pack rather than leading.

IV. Penn Faculty Benefits

The role of faculty benefits as a part of compensation is an issue raised in last year’s report, and remains an issue of interest to most faculty at the university. However, insufficient data were provided to the committee to allow productive analysis. Further, it is difficult to collect parallel data sets from other universities, as there seems to be variability in what is explicitly included in these calculations. Thus, it was not possible for the committee to objectively compare the benefits received by faculty at Penn to those granted by other peer institutions.

However, SCESF would like to emphasize that benefits, including medical and dental insurance, retirement, tuition assistance and sabbatical support, remain an essential and highly valued component of the compensation package for faculty at all levels. A competitive benefits package is a key aspect in maintaining an outstanding faculty, and thus maintaining Penn as a top-ranked university. Last year the Provost’s Office agreed that a periodic, systematic review of faculty benefits was warranted, and proposed a review by the Division of Human Resources every 5 years. The committee feels this review should be initiated promptly.

V. Penn Faculty Salaries: Internal Comparisons

Salary equity within the university was examined by considering a series of data tables showing salary increases on a percentage basis for the ranks of Full, Associate and Assistant Professor (Tables 6, 7 and 8), as well as comparisons of mean and median salaries at these ranks (Table 9) broken out by field and school.

In regard to annual raises, while the median for the university as a whole was 2.8%, the range across schools for the Full Professor rank spanned from a low of 1.5% (Veterinary Medicine) and 2.0% (Basic Sciences in the Medical School) to a high of 4.0% for Graduate Education (Table 6). At the rank of Associate Professor, again Veterinary Medicine and Medicine-Basic Sciences were on the low end, with 1.5% and 2.0%, respectively, while most schools were clustered between 2.8 and 3.0% (Table 7). Table 8 shows that for Assistant Professors, annual increases ranged from 2.0% (Veterinary Medicine) to 3.5% (Design).

While some of this variability may be attributed to budgeting restrictions in schools under strong financial pressure, it is unclear why other schools, especially Medicine, provided such limited annual raises to their faculty this year. Specifically, the 2.0% median increase in salaries for faculty at all levels within the basic science departments in the Medi-

cal School can be compared to the 13.5% increase in annual compensation for 2011-12 (the most recently available information) awarded to senior administrators within the school whose salaries are publically available online through Form 990 reporting (for example, see <http://www.citizen-audit.org/231352685/>). Data on salaries within the clinical departments were not provided to the committee, and thus could not be analyzed for this report.

Data on trends in academic base salaries as well as variability in these salaries, are provided in Tables 9 and 10. A measure of variability of median salaries across schools and areas of continuing faculty members is the interquartile range (IQR) (i.e., the 75th percentile salary in the distribution less the 25th percentile salary). However, the IQR can be expected to be larger when the general salary level is relatively high (such as for Full Professors) than when the general salary level is lower (such as for Assistant Professors). To compensate for such differences in the general level of salaries, the IQR is divided by the median of the distribution (i.e., the 50th percentile salary: Q2), thereby computing a ratio of the IQR to the median (as reported in the next to last column of Table 10 labeled “IQR to Median”).⁷ This ratio provides an index of the amount of variability in relation to the general level of the salary distributions, and has utility when comparing variability across ranks and trends over time. This analysis suggests that the variability in salaries at the Full and Associate Professor ranks has been relatively stable with time.

In stark contrast, there has been a quite striking increase in the variability in academic base salary at the level of Assistant Professor, with the IQR-to-Median Ratio increasing from 0.38 in 2008-09 to 0.83 in 2012-13. Even more strikingly, the median salary for the upper quartile of assistant professors is almost double (1.9-fold) the median salary of the lower quartile of assistant professors at the university.

There are many reasons why faculty salaries vary within Penn, including differences in individual merit, rank, time in rank, external labor market forces, the relative wealth of schools and perhaps differences among schools in principles and practices for allocating salary increments. While the complex influence of these multiple factors preclude a definitive analysis, SCESF remains concerned that existing salary variability may include some inequities that mandate redress. In particular, the increasingly broad range of variability in salaries paid to those in the starting ranks of the faculty is quite surprising, given that this rank might be expected to be the most homogenous in terms of qualifications, time in rank, etc. While this growing difference may be a product of outside forces such as differences in compensation between fields, this inequity has consequences, both intended and unintended (see the discussion of gender inequity below). Thus, SCESF is committed to a continuing process of review of issues leading to variability in salaries across the university that are not directly related to differences in individual merit and experience. Continued review and analysis is required to encourage Department Chairs, Deans and the Provost to correct any inequities identified.

VI. Salary Variability by Gender

Two tables in this report address the question of possible gender inequity in faculty compensation at Penn. In Table 11, the annual salary increase for faculty at all levels is broken out by gender. The median values show a relatively tight range (2.8% - 3%). Comparisons of the first and third quartiles also do not show marked variation by gender.

The data in Table 12 raise more concern. At all academic levels: Full, Associate, and Assistant Professor, both the mean and the median base salaries are lower for women than for men. For example, at the Assistant Professor level, the mean base salary for men is 16.2% higher than the mean salary for women. The median salary for men at this level is 13.1% higher, indicating that this inequity is not the statistical result of a few disproportionately high salaries awarded only to men, but instead is relatively consistent. Striking differences are also seen between the academic base salaries of women and men at the higher ranks. While historic explanations of gender inequity argue differences in time in rank as a contributing factor, the fact that these striking inequities are seen at the entry level Assistant Professor rank as well as the more senior ranks is a matter of some concern.

The second major explanation often offered for the gender inequity in compensation currently operating at Penn is that this difference reflects

⁷ The statistically inclined reader will recognize this ratio as similar to the coefficient of variation (i.e., the ratio of the standard deviation to the mean of a distribution).

a gender imbalance among the faculty of different schools, with women predominantly populating lower paying fields and men disproportionately represented in higher paying fields and/or schools. One measure of this is the calculation of “weighted” numbers, where male weights are calculated as a ratio of male faculty in each school or area to the total number of male faculty at Penn, and female faculty are weighted similarly. Using this metric, the apparent gender imbalance is reduced – see the “weighted” values in Table 12. A recent analysis from the Provost’s Gender Equity Report also examined this question, using a multivariate regression to account for the influences of differences in rank, time in rank, discipline, and position as department chair or endowed chair. After accounting for these factors, 20% of the gender imbalance in salary remained, indicating a persistent, concerning gender-associated inequity in faculty salaries.

Based on these analyses, SCESF concludes that the pronounced gender inequity in faculty salary at Penn is the result of: (1) some continuing inequity in salaries within schools; (2) pronounced gender imbalance in the composition of the faculties of individual schools and/or fields at Penn; and (3) pronounced salary differences across schools and/or fields at Penn, as noted above in the analysis of Table 10. SCESF is confident that the President, Deans and Department Chairs at Penn share their concern about this ongoing issue, and will take aggressive action to level the playing field, eliminating both gender imbalance and salary inequity based on gender, race, or other factors.

VII. Conclusions

A. Economic Status of the Faculty

1. External Competitiveness

Comparisons of Penn faculty salary percentage increases with percentage increases in the CPI: All ranks showed a median increase above the increases determined for both the Philadelphia and the US City Average CPI this year.

Comparisons with other universities: Salary comparisons for Full Professors at Penn with data from peer institutions indicates that while Penn is holding a steady position toward the middle of the pack (7/12), the University is falling behind some top-ranked peer institutions over time. For example, the gap between academic base salaries at Columbia and Stanford and those at Penn has been widening over the past few years.

Further, SCESF is concerned that faculty at Penn are not benefiting from the economic recovery to a similar extent as either faculty at peer institutions or senior administrators at our own institution. We encourage the President, the Provost, Deans and Department Chairs to continue the push to keep faculty salaries at Penn competitive with peer institutions as a major factor in maintaining the overall excellence of the institution.

2. Internal Variability

Both annual salary increases and median salaries at all ranks vary considerably among schools. Much of this variability may be attributed to either differences in the relative wealth of the schools, or differences required to maintain Penn’s competitive standings within different academic fields. Nonetheless, the SCESF believes that this variability should continue to be monitored to be sure that these differences, and especially the growing differences at the rank of Assistant Professor, do not lead to unintended consequences, including growing discord among the faculty or declining standards of academic excellence. Specifically, SCESF notes striking gender inequity in faculty compensation for the university as a whole, much of which might be explained by the increasing variability in faculty salaries across schools.

B. Conditions of Concern

1. External Competitiveness

Penn faculty salaries and compensation remain generally competitive with those in a comparison set of universities. However, in order to recruit and retain a superior faculty, Penn’s salaries must continue to be competitive with those of our closest competitor peer institutions, and here we are falling relative to those in the top tier of private research universities, including Columbia, Stanford, and Princeton.

2. Internal Equity

The SCESF is concerned by issues of internal inequity, and specifically warns of the unintended consequences of the increasing variability in compensation across schools, as this very likely contributes to the substantial and growing gender inequity in compensation at Penn. We encourage aggressive action by the Vice Provost for Faculty to investigate variability and eliminate inequity.

VIII. SCESF Communication with Provost’s Office

A. SCESF Requests in Preparation of the SCESF Report and Responses

SCESF thanks the Office of Institutional Research and Analysis and the Office of the Vice Provost for Faculty for providing the data upon which most of this report is based. All data provided to the committee were included in Tables 1 through 12 of this report, with the exception of those data that would undermine confidentiality due to small sample size.

B. SCESF Recommendations

1. Salary Competitiveness

a. Mean salaries at Penn have generally showed stability over time in comparison with AAUDE data in a number of schools and areas (see Table 4). However, gains are not consistent across all schools and disciplines. While all faculty shared in the belt-tightening required by the recent recession, it is not clear that all faculty are benefiting from the economic recovery. The continued muted nature of faculty salary increases despite improved economic conditions contrasts rather sharply to the salary increases provided to Penn administrators over the same time frame. Thus, SCESF recommends that over the next three years, the university should focus on a recovery in faculty salaries that parallels the recovery already appreciated by senior administrators. Further, we recommend that priority be placed on increasing mean salaries to levels competitive with our top-ranked peer institutions, especially for faculty groups that are falling behind or remaining stagnant in AAUDE comparisons. As noted in last year’s report and again here, specific groups including the faculties of Dental Medicine and Veterinary Medicine continue to fall behind.

The University is strongly committed to competitive faculty salaries that facilitate the recruitment and retention of an eminent and diverse faculty who are excellent in teaching, research and service. Penn’s faculty salaries remain competitive. With respect to economic recovery, in recent years, mean and median academic base salary percentage increases for Penn’s standing faculty have consistently exceeded growth in both the US city average and the Philadelphia consumer price index (CPI). Moreover, when adjusted for cost of living, Penn’s compensation for full professors has remained highly competitive, compared to top public, top private and most elite Ivy-Plus universities. Penn’s Deans continue to allocate salary pool increases to reward faculty merit. Faculty and staff salaries have increased in the Dental School and the School of Veterinary Medicine, where financial challenges unique to those schools still command constraint.

The Committee’s comparisons of faculty salaries to senior administrative salaries reported on Tax Form 990 are potentially misleading. First, as legally required, total compensation rather than base salary alone is reported on Penn’s Form 990, a fact that is obscured in the Committee’s report. Benefits above salary such as tuition benefits and supplemental life insurance are included in the Form 990 data and can be variable from year to year. Second, the Committee’s analysis does not take into account that some individuals whose income is listed on the 990 served in a given position for less than a full reporting year and subsequently worked a full reporting year, creating the impression that the subsequent year’s salary included a large raise. Third, as the Committee observed, the individuals reported in Penn’s tax filings include a number who are not members of the standing faculty; indeed, they represent a narrow band of individuals whose compensation is not representative of the vast majority of administrators at the University. The salaries of senior administrators, like those of faculty members, demonstrate considerable variability reflecting very substantial differences in the employment markets for these positions. The salaries reported on the 990 undergo special review and are approved by Penn’s Trustees, in a process that utilizes external consultants knowledgeable in the market for the salaries for each particular position. The University continues to be committed to awarding competitive compensation packages to all faculty members in all tracks and ranks, as appropriate and commensurate with the market for each position.

b. Variability in faculty salaries and especially in the IQR by rank (see Tables 6 to 10) is increasing over time. Further, gender inequity remains a significant concern at Penn. While salary differentials across the university may reflect both external market forces and disparate resources among schools as well as the need to reward distinguished performance, SCESF is concerned that more equitable faculty compensation is essential to maintain diversity, morale, and investment in the University’s sustained excellence.

Variability in faculty salaries reflects very substantial differences in the employment markets for new PhDs and new professional school gradu-

ates in the 12 Penn schools and academic disciplines. The University reaffirms its strong commitment to gender equity in salaries. As the Committee notes, apparent differences in the salaries of men and women faculty members are largely a function of the gender composition of various fields represented on the Penn faculty. A comprehensive review of salaries by gender was conducted in conjunction with the January 15, 2013 Progress Report on Gender Equity published in Almanac. The review found no clear indication of gender-associated salary inequity. Rather it found that “once additional variables for discipline, rank, time in rank, and status as endowed professor and/or department chair were added, the differences between men’s and women’s salaries declined to 2.6%.” As the review stated, the fact that this remaining 2.6% difference could not be accounted for statistically may indicate the limitations of the model. The Office of the Provost remains committed to addressing any unwarranted differences in faculty salaries, and every year closely reviews salaries to monitor fairness and equity.

2. Faculty Benefits

Insufficient information was provided to the committee to allow review of faculty benefits, but SCESF would like to emphasize the overall importance of faculty benefits in maintaining a diverse, committed, and outstanding workforce at the university.

The University welcomes attention to faculty benefits. In the past, data from the American Association of University Professors (AAUP) were provided to address the Committee’s emphasis. As was noted last year, the University remains interested in market competitive faculty benefits and periodic review of faculty benefits in collaboration with the Division of Human Resources. We regularly engage the University Council’s Committee on Personnel Benefits.

3. Review of Compensation for Clinician-Educators

No data were provided to the committee on salary increases or salary levels for faculty in the Clinician-Educator track at Penn. However, given the growing number and relative importance of faculty in the clinical tracks, we urge the senate and the university to establish a mechanism to provide a parallel annual review of compensation for the clinician-educator track, or alternatively, to provide these data to SCESF to review in parallel with ongoing analysis of salary concerns for the non-clinical faculty.

The CE track is very heterogeneous, with a compensation structure that reflects that heterogeneity. The vast majority of CE track faculty—more than eight hundred—are faculty members in the Perelman School of Medicine (PSOM). According to current PSOM compensation guidelines, salaries can change quarterly. Given the very competitive external market for clinical faculty, PSOM continuously monitors compensation levels through the American Association of Medical Colleges, the University Health Consortium, and the Hay Group, which surveys 30 peer institutions. Volatility in productivity-based salaries does not lend itself to the same type of analysis the Committee traditionally conducts for tenure track faculty.

IX. Members of the 2013-2014 Senate Committee on the Economic Status of the Faculty

Julie Blendy, Perelman School of Medicine
 Peter Fader, Wharton School
 Erika Holzbaur, Chair, Perelman School of Medicine
 Sarah Kagan, School of Nursing
 Janice Madden, School of Arts & Sciences/Sociology
 Lorraine Tulman, School of Nursing

Ex officio

Senate Chair-Elect, Claire Finkelstein, Law School
 Senate Chair, Dwight Jaggard, SEAS
 Senate Past Chair, Susan Margulies, SEAS

The Committee would like to gratefully acknowledge the essential and valuable assistance of Vicki Hewitt of the Office of the Faculty Senate. The Committee also notes that this year’s report directly benefited from the presentation and analysis in last year’s report, much of which is still relevant and some of the text of which is included here.

Table 1

Average Academic Base Salary Percentage Increases of Continuing Penn Standing Faculty Members by Rank in Comparison With the Consumer Price Index (CPI) and Penn Budget Guidelines

Group/Condition	Metric	FYs 2012-2013
Professor	Mean	4.0%
	Median	2.9%
Associate Professor	Mean	5.6%
	Median	2.9%
Assistant Professor	Mean	3.4%
	Median	2.9%
All Three Ranks	Mean	4.3%
	Median	2.9%
US City Average CPI Growth	Mean	1.8%
	Philadelphia CPI Growth	Mean
Budget Guidelines	Mean	3.0%

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 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 Medicine 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.

FYs 2012-2013 CPI growth for the US and for Philadelphia are based on a change in CPI from June 2012 to June 2013.

Table 2

Percentage of Continuing Penn Standing Faculty Members Awarded Percentage Salary Increases Exceeding the Percentage Growth in Consumer Price Index (CPI) for Philadelphia Schools and Disciplinary Areas

Schools and Disciplinary Areas	Percentage of all Standing Faculty with Salary Increases Exceeding Growth in the CPI (Phil.) FY 2012 to 2013
Annenberg	100.0%
Dental Medicine	69.2%
Design	100.0%
Engineering & Applied Science	97.0%
Graduate Education	96.4%
Humanities (A&S)	99.0%
Law	95.4%
Medicine-Basic Science	83.5%
Natural Science (A&S)	94.8%
Nursing	94.6%
Social Policy & Practice	100.0%
Social Science (A&S)	96.2%
Veterinary Medicine	62.9%
Wharton	96.2%
All Schools/Areas	92.7%
U.S. City Average CPI Growth	1.8%
Philadelphia CPI Growth	1.5%
Budget Guidelines	3.0%

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 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 Medicine 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.

FYs 2012-2013 CPI growth for the US and for Philadelphia are based on a change in CPI from June 2012 to June 2013.

Table 3

Percentage of Continuing Penn Full Professors Awarded Percentage Salary Increases Exceeding the Percentage Growth in Consumer Price Index (CPI) for Philadelphia

Schools and Disciplinary Areas	Percentage of all Full Professors with Salary Increases Exceeding Growth in the CPI (Phil.) FY 2012 to 2013
Annenberg	100.0%
Dental Medicine	68.4%
Design	100.0%
Engineering & Applied Science	95.2%
Graduate Education	100.0%
Humanities (A&S)	99.0%
Law	94.9%
Medicine-Basic Science	80.2%
Natural Science (A&S)	93.9%
Nursing	100.0%
Social Policy & Practice	100.0%
Social Science (A&S)	94.8%
Veterinary Medicine	39.4%
Wharton	93.8%
All Schools/Areas	90.2%
US City Average CPI Growth	1.8%
Philadelphia CPI Growth	1.5%
Budget Guidelines	3.0%

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 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 Medicine 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.

FYs 2012-2013 CPI growth for the US and for Philadelphia are based on a change in CPI from June 2012 to June 2013.

Table 4

Rank of Mean Salaries of Penn Faculty by Academic Fields as Compared to 60 Selected Universities Participating in the American Association of Universities Data Exchange (AAUDE) Survey

Academic Field	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
Full Professor						
Annenberg	1/38	1/38	1/40	1/41	1/41	1/39
Dental Medicine	10/38	11/43	2/44	9/45	10/45	9/43
Design	9/53	8/51	5/51	5/55	10/53	11/52
Engineering & Applied Science	14/56	14/53	11/53	13/57	13/55	14/54
Graduate Education	4/48	4/45	4/44	6/47	6/47	7/45
Humanities (A&S)	10/56	8/53	9/54	9/58	7/56	11/55
Law	10/41	7/39	7/37	8/40	7/39	8/38
Natural Science (A&S)	15/57	13/54	15/54	14/58	12/56	11/55
Nursing	2/26	2/25	2/24	1/17	1/19	1/19
Perelman-Basic Science	3/37	5/53	6/54	6/58	6/56	8/55
Social Policy & Practice	6/25	5/23	7/23	8/25	6/25	6/23
Social Science (A&S)	9/57	9/54	8/54	9/57	8/56	9/55
Veterinary Medicine	4/17	3/14	3/13	3/14	3/14	4/13
Wharton-Business & Management	7/53	5/50	4/51	5/55	5/53	2/52
Wharton-Public Policy	-	15/50	15/52	-	13/54	12/53
Wharton-Statistics	1/34	1/34	1/32	1/36	1/34	2/34
Associate Professor						
Annenberg	-	-	-	-	-	-
Dental Medicine	8/35	14/41	9/42	9/43	13/43	9/41
Design	7/53	6/51	3/51	3/55	1/51	3/51
Engineering & Applied Science	10/56	9/53	7/53	8/57	11/54	11/53
Graduate Education	4/48	5/44	4/44	8/48	8/45	9/44
Humanities (A&S)	10/56	6/53	12/54	12/57	11/55	13/54
Law	N/A	N/A	-	-	-	-
Natural Science (A&S)	11/57	11/54	14/54	14/58	15/56	17/55
Nursing	5/26	7/24	6/23	3/17	5/19	3/19
Perelman-Basic Science	3/37	5/53	7/54	8/58	4/55	4/54
Social Policy & Practice	-	3/24	-	-	-	-
Social Science (A&S)	11/57	11/54	8/54	7/57	8/56	14/55
Veterinary Medicine	3/17	8/14	9/13	11/14	6/14	6/13
Wharton-Business & Management	2/53	1/50	2/50	2/54	2/51	2/51
Wharton-Public Policy	-	-	-	-	-	-
Wharton-Statistics	-	2/27	-	3/31	2/27	2/30
Assistant Professor						
Annenberg	-	-	-	-	-	-
Dental Medicine	11/36	8/42	8/43	-	-	-
Design	5/52	7/49	4/50	6/55	6/51	4/50
Engineering & Applied Science	13/56	10/53	5/53	6/57	7/54	8/54
Graduate Education	6/47	6/45	6/43	7/47	-	15/43
Humanities (A&S)	19/56	17/53	14/54	14/58	14/56	17/55
Law	-	-	6/25	5/25	6/27	-
Natural Science (A&S)	18/57	15/54	15/54	15/58	15/56	22/55
Nursing	5/26	3/24	3/23	2/17	3/19	2/19
Perelman-Basic Science	6/37	7/53	10/54	8/58	6/56	9/55
Social Policy & Practice	-	6/24	6/25	6/25	-	5/24
Social Science (A&S)	10/57	13/54	11/54	8/57	7/56	8/55
Veterinary Medicine	1/17	6/14	5/13	6/14	5/14	5/12
Wharton-Business & Management	6/53	10/50	5/50	4/54	4/52	4/51
Wharton-Public Policy	-	-	1/51	-	1/54	1/53
Wharton-Statistics	1/33	1/33	-	-	-	-

Median salary data from this particular data source is not complete, and therefore, the more complete average salary data set is used. The AAUDE survey instructions request academic base salaries and this was the metric used for submitting Penn faculty salaries.

Using the federal CIP (Classification of Instructional Programs) codes for 2000, departments at comparable universities were mapped to Penn Schools.

** Between Fall 2007 and Fall 2008, several modifications were made to CIP Code classifications for medical sciences. In Fall 2009, at the school's request, Wharton-Public Policy began being compared to Economics rather than Policy programs. Calculations of rank only include those universities that have relevant departments. Therefore, the number of universities among which Penn is ranked varies by field. Rank is suppressed for all cells which contain fewer than five Penn faculty members.

Table 5

Percentage Differences in Mean Academic Base Salary Levels of Full Professors at a Sample of Comparable Research Universities for Academic Years 2006-2007 Through 2012-2013

Full Professor Mean Academic Base Salaries: Percentage Differences*

	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Columbia	N/A	-0.5%	3.4%	10.9%	9.3%	8.9%	13.5%
Stanford	5.0%	6.4%	7.4%	6.6%	7.6%	7.6%	10.9%
Chicago	3.8%	4.6%	6.0%	8.2%	8.7%	8.9%	8.9%
Harvard	13.4%	13.2%	13.7%	12.4%	10.7%	9.3%	8.6%
Princeton	4.6%	5.5%	6.4%	6.4%	6.2%	6.7%	7.0%
NYU	-4.5%	-0.6%	0.8%	0.9%	0.5%	0.4%	0.3%
Penn	\$156.5K	\$163.3K	\$169.4K	\$170.1K	\$175.1K	\$181.6K	\$187.0K
Yale	0.7%	1.1%	3.1%	2.4%	1.1%	-0.7%	-0.4%
Duke	-9.3%	-6.6%	-4.8%	-5.5%	-6.7%	-3.5%	-3.6%
MIT	-6.8%	-7.2%	-5.4%	-5.3%	-5.3%	-5.4%	-4.4%
Northwestern	-5.9%	-5.9%	-4.5%	-2.2%	-3.2%	-5.2%	-5.5%
UCLA	-14.9%	N/A	-14.7%	-13.0%	-12.2%	-10.5%	-10.7%
UC Berkeley	-16.1%	N/A	-15.3%	-14.3%	-14.8%	-15.2%	-15.0%
Michigan	-16.7%	-16.1%	-16.1%	-15.3%	-16.1%	-18.1%	-20.5%
NC (Chapel Hill)	-19.0%	-15.1%	-15.8%	-15.9%	-18.2%	-20.7%	N/A
Carnegie-Mellon	-18.8%	-19.0%	-19.4%	-19.1%	-20.7%	-21.8%	-21.7%
Texas (Austin)	-22.6%	-22.8%	-21.9%	-21.6%	-22.0%	-22.5%	-23.0%
Virginia	-18.2%	-18.7%	-21.3%	-20.8%	-22.0%	-22.0%	-23.4%
MN (Twin Cities)	-25.5%	-25.7%	-24.8%	-26.6%	-29.6%	-30.8%	-28.2%

Notes: Penn academic base mean salaries are based on standing faculty members at the rank of professor. Excluded are all members of the Faculty of Medicine except basic scientists, and all standing faculty members who are appointed as Clinician Educators. Data Source: AAUP Salary Surveys.

*Universities are ordered from highest to lowest mean salaries for full professors as of 2012-2013. For each year reported, the difference between the Penn mean salary and the mean salary for a comparison university was computed as a percentage of the Penn salary.

Table 6

Full Professors: Median Academic Base Salary Percentage Increases of Faculty Continuing in Rank Who Were Penn Full Professors for FY 2013, Along with the First and Third Quartile Salary Increases

School/Area	First Quartile (Q1), Median (Md.), and Third Quartile (Q3) Percentage Salary Increases by Year FYs 2012-2013		
	Q1	Md.	Q3
All Schools	2.3%	2.8%	3.4%
Annenberg	3.0%	3.7%	4.0%
Dental Medicine	0.5%	2.9%	3.0%
Design	2.3%	2.9%	3.0%
Engineering & Applied Science	2.8%	3.1%	4.0%
Graduate Education	3.0%	4.0%	4.5%
Humanities (A&S)	2.6%	2.7%	2.9%
Law	3.2%	3.6%	4.1%
Medicine-Basic Science	2.0%	2.0%	2.5%
Natural Science (A&S)	2.5%	2.8%	3.0%
Nursing	3.4%	3.4%	3.8%
Social Policy & Practice	-	3.1%	-
Social Science (A&S)	2.6%	2.7%	3.1%
Veterinary Medicine	3.1%	1.5%	1.5%
Wharton	2.8%	3.0%	3.5%
Budget Guidelines	-	3.0%	-

Notes: The Budget Guideline is provided for comparison purposes. As per Penn policy, it is a guideline for the salary increment pool for all standing faculty members in each school, but not specifically for each rank.

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 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 Medicine 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.

Salary increases include increases from all sources (e.g. merit, market, retention).

The median (Md.) percentage salary increase is the mid-point of all increases within each school and rank (i.e. half of all increases are below the median and half are above).

At the lower end of the salary increase percentages, 25% of all increases are below Q1, while 75% are above.

The difference between the third (Q3) and first quartile (Q1) percentages provides a measure of the variability in the percentage increases for each school and rank.

Median increases are reported only if the number of faculty members in a given school and rank is five or more; quartile increases are reported only if the number of faculty members is nine or more.

Table 7

Associate Professors: Median Academic Base Salary Percentage Increases of Faculty Continuing in Rank Who Were Penn Associate Professors for FY 2013, Along with the First and Third Quartile Salary Increases

School/Area	First Quartile (Q1), Median (Md.), and Third Quartile (Q3) Percentage Salary Increases by Year FYs 2012-2013		
	Q1	Md.	Q3
All Schools	2.5%	2.8%	3.3%
Annenberg	-	-	-
Dental Medicine	-	3.0%	-
Design	-	3.0%	-
Engineering & Applied Science	2.8%	3.0%	4.0%
Graduate Education	2.0%	3.0%	3.2%
Humanities (A&S)	2.7%	2.8%	3.2%
Law	N/A	N/A	N/A
Medicine-Basic Science	2.0%	2.0%	2.0%
Natural Science (A&S)	2.5%	2.7%	3.0%
Nursing	2.3%	2.9%	3.2%
Social Policy & Practice	-	-	-
Social Science (A&S)	2.7%	2.9%	4.4%
Veterinary Medicine	1.5%	1.5%	3.0%
Wharton	2.9%	2.9%	4.1%
Budget Guidelines	-	-	-

Notes: The Budget Guideline is provided for comparison purposes. As per Penn policy, it is a guideline for the salary increment pool for all standing faculty members in each school, but not specifically for each rank.

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 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 Medicine 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.

Salary increases include increases from all sources (e.g. merit, market, retention). The median (Md.) percentage salary increase is the mid-point of all increases within each school and rank (i.e. half of all increases are below the median and half are above).

At the lower end of the salary increase percentages, 25% of all increases are below Q1, while 75% are above.

The difference between the third (Q3) and first quartile (Q1) percentages provides a measure of the variability in the percentage increases for each school and rank.

Median increases are reported only if the number of faculty members in a given school and rank is five or more; quartile increases are reported only if the number of faculty members is nine or more.

Table 8

Assistant Professors: Median Academic Base Salary Percentage Increases of Faculty Continuing in Rank Who Were Penn Assistant Professors for FY 2013, Along with the First and Third Quartile Salary Increases

School/Area	First Quartile (Q1), Median (Md.), and Third Quartile (Q3) Percentage Salary Increases by Year FYs 2012-2013		
	Q1	Md.	Q3
All Schools	2.7%	2.9%	3.6%
Annenberg	-	-	-
Dental Medicine	-	-	-
Design	2.9%	3.5%	4.0%
Engineering & Applied Science	3.0%	3.0%	5.0%
Humanities (A&S)	2.7%	2.8%	2.8%
Law	-	-	-
Medicine - Basic Science	2.0%	2.0%	2.6%
Natural Science (A&S)	2.7%	2.7%	3.0%
Nursing	3.0%	3.0%	3.2%
Social Policy & Practice	-	-	-
Social Science (A&S)	2.7%	2.7%	3.7%
Veterinary Medicine	1.7%	2.0%	2.5%
Wharton	2.9%	3.2%	4.1%
Budget Guidelines	-	-	-

Notes: The Budget Guideline is provided for comparison purposes. As per Penn policy, it is a guideline for the salary increment pool for all standing faculty members in each school, but not specifically for each rank.

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 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 Medicine 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. Salary increases include increases from all sources (e.g. merit, market, retention).

Salary increases include increases from all sources (e.g. merit, market, retention). The median (Md.) percentage salary increase is the mid-point of all increases within each school and rank (i.e. half of all increases are below the median and half are above).

At the lower end of the salary increase percentages, 25% of all increases are below Q1, while 75% are above.

The difference between the third (Q3) and first quartile (Q1) percentages provides a measure of the variability in the percentage increases for each school and rank.

Tables continue on the following page..

Table 9

Mean Academic Base Salary Levels of Penn Standing Faculty Members who Continued in Rank by Rank

Rank	Academic Year	Average	Amount	Not Weighted	Weighted	
Professor	2008-2009	Mean	\$169,739	1.78	1.85	
		Median	\$155,600	1.94	1.85	
	2009-2010	Mean	\$172,615	1.78	1.85	
		Median	\$158,337	1.95	1.84	
	2010-2011	Mean	\$177,139	1.69	1.82	
		Median	\$161,270	1.85	1.81	
	2011-2012	Mean	\$183,176	1.66	1.81	
		Median	\$166,463	1.80	1.79	
	2012-2013	Mean	\$188,537	1.64	1.82	
		Median	\$171,500	1.88	1.82	
	Associate Professor	2008-2009	Mean	\$110,913	1.16	1.25
			Median	\$98,206	1.23	1.23
2009-2010		Mean	\$110,058	1.13	1.24	
		Median	\$99,550	1.23	1.22	
2010-2011		Mean	\$112,139	1.07	1.23	
		Median	\$100,474	1.15	1.21	
2011-2012		Mean	\$115,457	1.05	1.22	
		Median	\$102,929	1.11	1.20	
2012-2013		Mean	\$117,826	1.02	1.22	
		Median	\$104,508	1.14	1.22	
Assistant Professor		2008-2009	Mean	\$95,382	1.00	1.00
			Median	\$80,030	1.00	1.00
	2009-2010	Mean	\$97,223	1.00	1.00	
		Median	\$81,068	1.00	1.00	
	2010-2011	Mean	\$104,693	1.00	1.00	
		Median	\$87,105	1.00	1.00	
	2011-2012	Mean	\$110,157	1.00	1.00	
		Median	\$92,400	1.00	1.00	
	2012-2013	Mean	\$115,168	1.00	1.00	
		Median	\$91,400	1.00	1.00	

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 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 Medicine 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.

The data are weighted by the number of continuing faculty members at each rank in each school.

Table 10

**Variability of Academic Base Salary Levels for Faculty Who Continued in Rank:
First, Second and Third Quartile Median Salary Levels by Rank and Year**

Rank	Academic Year	Q1	Median	Q3	IQR	IQR to Median Ratio	# of Areas
Professor	2008-2009	\$130,610	\$155,600	\$200,000	\$69,390	0.45	14
	2009-2010	\$131,572	\$158,337	\$202,875	\$71,303	0.45	14
	2010-2011	\$135,000	\$161,270	\$209,131	\$74,131	0.46	14
	2011-2012	\$139,318	\$166,463	\$218,935	\$79,617	0.48	14
	2012-2013	\$142,300	\$171,500	\$224,500	\$82,200	0.48	14
Associate Professor	2008-2009	\$86,376	\$98,206	\$117,700	\$31,324	0.32	13
	2009-2010	\$85,700	\$99,550	\$115,266	\$29,566	0.30	13
	2010-2011	\$86,613	\$100,474	\$117,300	\$30,687	0.31	13
	2011-2012	\$90,000	\$102,929	\$120,025	\$30,025	0.29	13
	2012-2013	\$91,950	\$104,508	\$122,829	\$30,879	0.30	13
Assistant Professor	2008-2009	\$72,568	\$80,030	\$103,293	\$30,725	0.38	14
	2009-2010	\$73,750	\$81,068	\$106,080	\$32,330	0.40	14
	2010-2011	\$76,000	\$87,105	\$135,000	\$59,000	0.68	14
	2011-2012	\$78,849	\$92,400	\$146,000	\$67,151	0.73	14
	2012-2013	\$82,025	\$91,400	\$158,000	\$75,975	0.83	13

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 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 Medicine 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.

Table 11

Percentage Salary Increase Distribution of Faculty Who Continued in Rank by Gender and Rank

**First Quartile (Q1), Median (Md.), and Third Quartile (Q3)
Percentage Salary Increases by Year FYs 2012-2013**

Rank	Gender	Q1	Md.	Q3
Professor	Men	2.1%	2.8%	3.3%
	Women	2.7%	3.0%	3.6%
Associate Professor	Men	2.3%	2.8%	3.2%
	Women	2.6%	2.9%	3.4%
Assistant Professor	Men	2.7%	2.9%	3.7%
	Women	2.6%	2.9%	3.5%

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 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 Medicine 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.

Tables continue on the following page..

Table 12
Mean Academic Base Salary Levels of Penn Standing Faculty Members who Continued in Rank by Gender and Rank

Academic Year	Metric	Unweighted			Weighted		
		Women	Men	% Difference	Women	Men	% Difference
Full Professor							
2008-2009	Mean	\$160,576	\$171,779	7.0%	\$161,153	\$171,779	6.6%
	Median	\$143,983	\$157,550	9.4%	\$155,980	\$167,245	7.2%
2009-2010	Mean	\$161,532	\$175,440	8.6%	\$166,672	\$175,440	5.3%
	Median	\$148,541	\$160,000	7.7%	\$165,669	\$170,459	2.9%
2010-2011	Mean	\$166,221	\$180,044	8.3%	\$171,246	\$180,044	5.1%
	Median	\$152,030	\$163,900	7.8%	\$169,116	\$175,273	3.6%
2011-2012	Mean	\$172,035	\$186,174	8.2%	\$179,817	\$186,174	3.5%
	Median	\$158,631	\$169,112	6.6%	\$178,818	\$180,559	1.0%
2012-2013	Mean	\$178,939	\$191,240	6.9%	\$187,183	\$191,240	2.2%
	Median	\$167,606	\$172,921	3.2%	\$185,992	\$186,997	0.5%
Associate Professor							
2008-2009	Mean	\$104,061	\$114,076	9.6%	\$110,244	\$114,076	3.5%
	Median	\$93,636	\$101,900	8.8%	\$110,470	\$107,352	-2.8%
2009-2010	Mean	\$101,538	\$114,421	12.7%	\$111,580	\$114,421	2.5%
	Median	\$92,925	\$102,750	10.6%	\$109,374	\$108,377	-0.9%
2010-2011	Mean	\$103,011	\$116,923	13.5%	\$111,945	\$116,923	4.4%
	Median	\$93,557	\$105,175	12.4%	\$111,297	\$110,787	-0.5%
2011-2012	Mean	\$107,783	\$119,589	11.0%	\$118,674	\$119,589	0.8%
	Median	\$97,250	\$108,000	11.1%	\$116,981	\$116,890	-0.1%
2012-2013	Mean	\$107,877	\$123,145	14.2%	\$119,369	\$123,145	3.2%
	Median	\$98,350	\$110,153	12.0%	\$120,389	\$119,917	-0.4%
Assistant Professor							
2008-2009	Mean	\$89,046	\$100,012	12.3%	\$99,900	\$100,012	0.1%
	Median	\$76,400	\$84,615	10.8%	\$97,667	\$96,777	-0.9%
2009-2010	Mean	\$89,601	\$102,559	14.5%	\$99,455	\$102,559	3.1%
	Median	\$77,925	\$85,152	9.3%	\$97,554	\$99,938	2.4%
2010-2011	Mean	\$98,764	\$108,534	9.9%	\$105,668	\$108,534	2.7%
	Median	\$82,250	\$90,253	9.7%	\$102,623	\$104,670	2.0%
2011-2012	Mean	\$104,768	\$113,590	8.4%	\$109,710	\$113,590	3.5%
	Median	\$84,913	\$94,425	11.2%	\$106,715	\$110,943	4.0%
2012-2013	Mean	\$104,802	\$121,832	16.3%	\$118,713	\$121,832	2.6%
	Median	\$86,398	\$97,732	13.1%	\$116,496	\$122,546	5.2%

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 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 Medicine 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.