

2011-2012 Annual Report
Senate Committee on the
Economic Status of the Faculty

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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. Unless otherwise specifically stated, all faculty salary information discussed in this report refers to the aggregated “academic year base salary” of individual faculty members whether salaries are paid from General Operating Funds and/or from Designated Funds.¹ In addition, all salary data exclude faculty members from the Perelman School of Medicine except for basic scientists, and also exclude all clinician educators from four other schools (Dental Medicine, Veterinary Medicine, Nursing, and Social Policy & Practice). Current benefits data are analyzed in this SCESF Report in terms of total compensation at the level of Full Professor. The report is organized in terms of three broad concerns:

- 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 analyzed through an external comparison in section IV. Section VI describes the SCESF’s overall conclusions about the economic status of the faculty. Section VII 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 the *Almanac* (5 April 2011 <http://www.upenn.edu/almanac/volumes/v57/n28/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. The merit increase amount is based on market trends, economic conditions and fiscal responsibility. The salary guidelines are further used 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 unless otherwise indicated. In studying faculty salaries for this report, the work completed by SCESF has been greatly aided by access to detailed data provided by Penn’s Central Administration, most particularly the Office of the Vice Provost for Faculty and the Office of Institutional Research and Analysis. The data provided preserve anonymity and explicitly exclude any information that would make it possible to identify individual faculty salaries. The SCESF understanding of Penn’s competitiveness with peer institutions in faculty salary levels and of faculty salary variations within Penn is supported by access to these data and by the work of the staff in the Office of Institutional Research and Analysis and in the Office of the Vice Provost for Faculty. The SCESF appreciates the continued cooperation and assistance of these two offices.

As a whole, this report is data-intensive and aims at detailed presentation and analysis. As in previous years, SCESF has endeavored to examine current data in conjunction with trend analysis over the past five to six years. This year, the analysis overall suggests that—while there are some focal persistent and important matters of salary inequity and limited external competitiveness—the economic status of the faculty has improved compared to that reported in recent years. Analysis of this year’s data continues, as SCESF noted last year, to represent what appears to be a gradual correction in the trend representing declining external competitive advantage. However, the committee is compelled to note that gains continued in the past year do not relieve the President and the Provost, the Deans, or indeed the faculty at large from ongoing scrutiny of Penn’s competitive

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.

advantage. Internally, there remains considerable heterogeneity in salary increases across schools both across and within rank. As we reported last year, the salary gap appears to be growing over time, differentially affecting faculty in specific schools and particularly in the rank of Assistant Professor. We are especially focused on the interquartile range at the rank of Assistant Professor, a concern shared as we understand by the Vice Provost for Faculty.

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.

Almost all funds for faculty salaries come from each school’s operating budget. No central fund exists for faculty salaries in general. Most of each school’s resources 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 2011-2012” as published in the *Almanac*, 5 April 2011). 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 2010-2011 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%—an increase exceeding the 3.5% limit set the year before—likewise required discussion with the Provost. Presumably, the deans had prerogative to create a case for individual increases exceeding 5.0% in situations where salaries were not competitive and academic merit was in evidence.³

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 the set of 19 public and private 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 to continuing Penn faculty, whether they continued in the same rank or were promoted to a higher rank. Faculty members who were, for example, promoted from Assistant to Associate Professor,

² For a more detailed explanation of Penn’s Responsibility Center Management model, see <http://www.budget.upenn.edu/rcm/index.shtml>
³ *Almanac* April 5, 2011, Volume 57, No. 28: <http://www.upenn.edu/almanac/volumes/v57/n28/salary.html>

effective 1 July 2011, are included among the Associate Professors for the 2011-12 year in Table 1. Salary increases they received due to their promotion are included in the percentage changes in salaries reported for Associate Professors in 2011-12. The same is true for those promoted at that time from Associate to Full Professor and for Table 2. In contrast, in Tables 3 and 6 through 12, the information refers only to faculty members who continued in the same rank during 2011-2012. Including salaries of faculty who changed ranks, as in Tables 1 and 2, risks distorting data interpretation by inflating means reported in these tables. Reports of median changes do not have this effect since those figures would not be 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 do not report change data; they 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)⁴

Mean and median salary increases for continuing faculty for Fiscal Years 2011 and 2012 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 U.S. City Average CPI and the Philadelphia CPI) for the same time period as well as the Penn "pool" salary increase of 2.9%.⁵

Table 1 shows that the all-ranks median salary increase was 2.8% and the all-ranks mean increase was 4.3%. Mean increases were 3.8% for Full Professors, 5.6% for Associate Professors, and 4.1% for Assistant Professors. Table 1 indicates that for all ranks combined, the mean and median FY 2012 percentage salary increase were notably larger—and markedly so in the case of the mean figures—than both the percentage change in the U.S. City Average CPI and the Philadelphia CPI.

The percentage of continuing faculty receiving percentage salary increases exceeding percentage growth in Philadelphia CPI are presented by school with both the US City Average and Philadelphia figures as well as the budget guidelines in Table 2. The SAS numbers are disaggregated into three disciplinary groupings—Humanities, Social and Natural Sciences. Table 2 shows a much narrower range and higher percentages of faculty obtaining salary increases in excess of CPI when compared with FY2011. The low end of the range is represented by the School of Dental Medicine where only 88.5% of faculty received an increase in excess of the 1.3% growth in Philadelphia CPI. Three schools—Annenberg, Design, and Social Policy & Practice—achieved increases in excess of the growth in Philadelphia CPI for 100% of faculty. Table 3 provides parallel information about trends for Full Professors continuing in rank and thus excludes promotion increases. Table 3 presents a similarly narrowed range of performance across schools from 87.4% of Basic Science Faculty in the Perelman School of Medicine to 100% in four schools (Annenberg, Design, Graduate Education, and Social Policy & Practice).

The SCESF recognizes that there are legitimate reasons for individual faculty members to be awarded increments less than the growth in the CPI. For example, in any given year, the salary pool might only approximate, or sometimes even fall below, as was the case in 2009-2010, the rate of growth in the CPI. Furthermore, 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 an existing pool, thereby leaving less available to address salary increases of other faculty members. Finally, some faculty members may lack 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 consid-

⁴ 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.

⁵ The fiscal year refers to the year starting on 1 July and continuing through 30 June 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 2012 refers to the fiscal year (or academic year) starting on 1 July 2011 and continuing through 30 June 2012.

ered over any extended period unless their performance has been unsatisfactory over a substantial portion 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 and exploration when and where these patterns exist given likely impact on faculty morale and ramifications for excellence in the university's mission.

B. Comparisons with Peer Universities Using AAUDE

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, and Vanderbilt), public flagship universities (e.g., Penn State and the Universities of Michigan, Virginia, and Maryland), and other public universities (e.g., Michigan State, University of California-Davis, and University of California-Irvine).⁶ Penn uses AAUDE data for annual salary comparisons.

Mean faculty salaries by rank and school and disciplinary area at Penn 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 & 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 2011 and situates each school or area relative to a comparison set. The individual comparison sets often change over time as seen in different denominators for any given comparison (e.g. the comparison group for the School of Nursing changed from last year to this with the number of schools with which Penn is compared shifting from 17 to 19). Thus, more robust measures of relative changes in position are warranted. We added such a measure to the comparison supplied by the Office of Institutional Research and Analysis last year and continue to report it below.

For most of the 16 schools and areas, Penn's mean faculty salaries for all ranks in 2011-2012 rank in or near the upper fifth of the AAU institutions. The exceptions where rank is at or below the top quartile are Dental Medicine, Natural Sciences in Arts & Sciences, Nursing, and Veterinary Medicine at the rank of Associate Professor as well as Natural Sciences and Veterinary Medicine at the rank of Assistant Professor. Another group hovers between the top fifth and the top quarter in this comparison and include Dental Medicine, Engineering & Applied Science, Natural Science, Social Practice and Policy, and Wharton Public Policy at the rank of Full Professor; Engineering & Applied Science at the rank of Associate Professor; and Humanities in Arts & Sciences at the rank of Assistant Professor. We are pleased to note improvement in some persistently lower salary rankings over time. Notably, the School of Veterinary Medicine presents marked improvement of 35.7% (computed as the difference between 11/14 and 6/14) in the ranking for Associate Professor and 7.2% for Assistant Professor.

For Full Professors, there are 16 schools and areas for which there are data for 2011. For each sub-grouping, percentile rank (dividing rank by number of cases) can be calculated and compared. Of those comparisons, Penn has gained in rank within five schools or areas, remained stable in another five and lost ranking in six. While many of these rank changes are minor, others are significant. Substantial loss (5% or greater change in percentile rank, rounded up at .5 or greater) is present in Design [-10%]. A substantial gain in ranking is present for Social Policy & Practice [8.0%].

There are twelve available comparisons for Associate Professors. Penn fell in relative salary for seven schools and areas and gained rank in five. Substantial declines are present in Dental Medicine [9%], Design [6%], and Nursing [9%]. Substantial gains are seen in Basic Science Faculty in the Perelman School of Medicine [7%] and Veterinary Medicine [36%].

Among the eleven schools and areas in which salaries for Assistant Professor are compared in both years, there are seven losses, one stable ranking (in Wharton Public Policy where the ranking for this year is compared with Fall 2009), and three gains. The sole substantial change is a

⁶ For a complete list of the member institutions, see the AAU website <http://www.aau.edu/about/article.aspx?id=5476>.

gain of 7% within the rank of Assistant Professor in the School of Veterinary Medicine; all other schools and areas reflect a change in ranking of less than 5%.

Last year, we underscored concerns about the adverse balance of substantial declines over gains. Importantly, the pattern of substantial losses versus gains this year is different from what it has been in the past two years. There are fewer substantial changes in rankings in either direction and some marked and important gains in ranking. Last year, the Provost noted that most of the salaries for all ranks and schools reported in Table 4 were within the top ten in the group of universities used for comparison. Several schools and areas do not meet the benchmark of top ten for this year and have generally ranked below that mark over the past five years. They are: SEAS, Natural Sciences – SAS, and Wharton Public Policy at the rank of Professor; Dental Medicine, SEAS, Humanities – SAS, and Natural Sciences – SAS at the rank of Associate Professor; and Humanities – SAS and Natural Sciences – SAS at the rank of Assistant Professor. We are particularly conscious that Natural Sciences – SAS is the sole school or area that is out of the top ten across all ranks.

Overall, the lack of movement in ranking and small declines in the rankings that predominate this year deserve continued attention in coming years in balance with the number of smaller gains made. Achieving excellence in all schools and areas, consistent with Penn's mission and place in American academia, requires close attention to trend in external competitiveness over time.

C. Comparisons with Peer Universities Using AAUP Survey Data

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 Ph.D. 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 *U.S. News and World Report*.⁷ 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 faculty, these two institutions are also included in the comparison.

The relative standings of mean salaries of Penn Full Professors are presented for five years in Table 5. Universities are listed in Table 5 in order of the level of mean salaries of full Professors (from high to low) for the most recent academic year (2011-2012). Each row (except for Penn) gives the difference between a comparison university's mean salary and Penn's mean salary as a percentage of Penn's mean salary. For example, Table 5 shows that, in 2011-12, the mean salary of full Professors at Harvard was 9.3% higher than at Penn (at \$181,600), but 5.2% lower at Northwestern than at Penn. Importantly, the reported data likely do not reflect extra-salary compensation and subsidies (e.g. housing allowances or subsidies) or differences in cost of living for the region in which each institution is situated. These factors might make comparison of absolute salaries across universities rather ambiguous if considered in "snap shot" view of data from a single year. However, our analyses here focus on trends over time. The SCESF is not aware of differential trends in such matters over time that would undermine comparative analysis over time presented here.

The data in Table 5 show that, during the past year, mean salaries for Full Professors at Penn became more competitive with some institutions in the comparison set—eight in total and most by margins greater than rounding error. Penn realized improvements relative to competitors including Columbia (though not by a great margin), Yale (also not by a strong margin), and Northwestern. Competitor salary disadvantages over time are clear in the case of Michigan, North Carolina-Chapel Hill, Carnegie-Mellon, Virginia, Texas at Austin, and Minnesota-Twin Cities campus. Compared with last year, a small gain in competitiveness vis-à-vis Yale University resulted in six and not seven of the universities used for comparison ranking above Penn. However, in five cases, those universities have more than 5% advantage above Penn. Harvard, Chicago, Stan-

⁷ A composite rating was constructed by computing the mean of three separate academic reputation ratings: a general rating, a mean rating of key Ph.D. programs, and a mean rating of key professional schools.

ford, and Princeton ranked above Penn in 2006-2007. These institutions continued to rank above Penn in 2011-2012. Additionally, Columbia was added to the group in 2007-2008 and has moved from ranking on par with Penn [-0.5%] to being well above it [8.9%]. In addition to Columbia University, Chicago, Stanford, Princeton, and NYU have maintained or gained salary advantage over time in the time period 2006-2007 to 2011-2012. The data in Table 5 suggest some small gains as well as stability—like the overall picture presented in Table 4—representing some recent improvement in Penn's competitive advantage over some peer institutions. Whether this improvement continues over time is the larger and more imposing question about economic status. The SCESF looks forward to data reported in the coming years with the hope of a continuing positive trend.

The SCESF was careful to select universities similar to Penn on several criteria from the AAUP data set in order to make overall mean salary comparisons at the Full Professor rank. However, AAUP salary data do not appear to permit control for specific schools aggregated in the data provided by each university and in the number of Full Professors appointed in each school. These elements would, if available, enhance data analysis given that mean salary levels vary by school as do the number of professors appointed to the faculty of each school on which those means are based. Therefore, relative standing of Penn mean salaries shown in Table 5 might be misleading in understanding what has occurred in particular schools or departments over time. Thus, interpretation of the analysis presented in Table 5 must be considered in relation to data that provide more discrete information by schools and departments such as that contained in Table 4.

IV. Penn Faculty Benefits

Attention to the role of faculty benefits, as part of compensation, was presented in data first reported in our analysis last year. It appears again in this report. Table 5 Detail 2 presents mean salary and benefits (referred to as total compensation in last year's report) for Full Professors at Penn and the same sample of 18 comparable research universities used in Table 5. These universities are those with which Penn is compared in Table 5. As in Table 5, the Penn academic base mean salaries are based on standing faculty in the rank of Professor and exclude faculty in the School of Medicine except basic scientists and all standing faculty in the Clinician Educator Track. The comparison in Table 5 detail 2 uses the AAUP Faculty Compensation Survey definition of total compensation. Penn participates in this survey on annual basis. The Office of Institutional Research and Analysis kindly provided the benefits including in calculation of total compensation used in this analysis. The following benefits are included in the AAUP Faculty Compensation Survey:

- Retirement (includes TIAA/Vanguard and Early Retirement)
- Medical combined w/ dental (Includes Basic Medical, FAS 106 Retirees Health, and Dental Benefits)
- Disability
- Tuition
- FICA
- Unemployment
- Group Life
- Worker's Comp
- Other (includes Benefits & Counseling, HR Training Programs, Quality of Life Programs, ADP and Other Outsourcing, and Union Legal Funds)

For clarity, SCESF prefers the term "Salary and Benefits" rather than "Total Compensation" as important benefits like sabbatical leave are not included in this calculation.

The SCESF analysis of Table 5 Detail 2 is reported with marked caution and consideration of the sharp limitations of the AAUP data. We are concerned that the differences may be due to dissimilar reporting as well as potentially dissimilar benefits packages. We cannot tell which is the case, so these data do not allow us to evaluate where Penn sits in relation to peer institutions. These data show that, in 2005-2006, Penn ranked second behind Harvard in mean total compensation for Full Professors. At that time, Penn's mean total compensation was \$197,500 compared with Harvard's \$208,500. Princeton and NYU ranked third and fourth by comparison, following Penn by several thousand dollars. In the most recent year (2011-2012), Penn's rank had declined from second in the first year of this comparison to seventh. Harvard continues to rank far above Penn (\$248,800 versus \$231,800) and other universities which made significant strides in the intervening years continue to rank above Penn. Co-

lumbia has overtaken Harvard, outstripping Penn's salary and benefits for Full Professors continuing in rank by 12.8% (\$261,500). NYU, Chicago, Stanford and Princeton continue to rank above Penn in mean salary and benefits at the level of Full Professor by generally stable margins. Table 5 Detail 2 represents a trend of decline followed by possible stability in position over time vis-à-vis peer institutions.

The SCESF is cautious about overstating any interpretation of data within Tables 4, 5, and 5 Detail 2. We acknowledge that Table 4 is limited by year to year changes in the composition of AAUDE comparison groups for schools and areas. Similarly, Tables 5 and 5 Detail 2 cannot illuminate, for example, issues within specific schools and departments. Nevertheless, the SCESF wishes to underscore that, in a time of fragile economic recovery and scrutiny directed toward higher education and top-tier research institutions, complacency regarding external competitiveness is risk that the President, the Provost, the Dean and certainly the Faculty can ill afford. We endorse stabilization where it is evident, we applaud gains where they have been made, and we reiterate that sagacious interpretation of external financial competitiveness data as well as careful attention to this matter over time are essential to the standing and competitiveness of the University.

V. Penn Faculty Salaries: Internal Comparisons

This section describes several dimensions of faculty salary variability within Penn. As with the external salary comparisons above, the salary data reviewed in this section exclude all standing faculty members who are appointed as Clinician Educators from Dental Medicine, Veterinary Medicine, Nursing, and Social Policy & Practice and include only basic science faculty in the School of Medicine. Internal comparisons of Penn faculty salaries are somewhat complicated. As previous SCESF Reports highlight, significant variability in Penn faculty salaries is attributable to several recognized factors. These factors include 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. Despite these rather granular factors, SCESF remains concerned that existing salary variability may include some inequities that mandate redress. We have been elevated in knowledge gained in conversation with the Vice Provost that our scrutiny of salary variability and the possibility of inequity is shared and explored. Some inequity such as salary setting based on incomplete or inaccurate information about merit or bias that could be involved in the process of deciding salary increments cannot be addressed by SCESF as they entail identification of individual or group inequity using individual faculty salaries other confidential or particularistic data. However, SCESF is committed to consistent review of issues in overall salary variability and to raise questions about possible overall inequities that may explain some degree of the observed variation. Such review and questioning aim toward further review and action by Department Chairs, the Deans, and the Provost with a view to correcting any and all identified and confirmed inequities.

A. Variability in Average Salary Increases by Rank and School/Area

Median salary increases are detailed with first and third quartile percentage increases by school and rank in Tables 6, 7, and 8. These tables show some variability in median salary increases across schools, as well as among the first and third quartile increases (Q_1 and Q_3 , respectively). To reiterate from Section II, the salary increase guideline of 2.9% for FY 2012 was indeed only a guideline, and pertained to an aggregate of all increases for all ranks combined for each of Penn's schools (i.e., merit increases for continuing faculty members, special increases for faculty members who have been promoted in rank, and market adjustments for faculty members with competitive salary offers from other institutions). Deans within the schools have the discretionary power to allocate more or less of this pool to faculty salary increases than the guideline, depending upon each school's financial circumstances. Therefore, a comparison of the median increase awarded to faculty members of a particular rank and school with the salary guideline only gives an indication of the extent to which the guideline was implemented in that particular category. Accordingly, a median increment of less than 2.9% should not be regarded as a specific failure of salary policy, since there is no policy for each rank and each school to be awarded at least 2.9% of previous year salaries. Furthermore, the 2.9% guideline pertains to the mean increase, a measure of central tendency that is usually higher than the median salary increases as shown in Table 1.

The overall mean salary increase for all continuing faculty members for FY 2011-2012 was 4.3% (see Table 1), an increase over the previous

two years. The overall median salary increase for all continuing faculty members was 2.8% for FY 2011-2012, just below the salary guideline. This mismatch in mean and median percentage salary increases may be attributed to differences in wealth, competitive pressures, and budget priorities among the various schools as permitted under RCM. In addition, extraordinary retention efforts may have further pre-empted the guideline in specific cases.

1. Median Increases across Ranks and Schools/Areas in Comparison with General Guidelines

Full Professors (see Table 6) in six of 14 schools and areas received median salary increases at or above the salary guideline level of 2.9%. The median for all schools in this rank was 2.8%, just slightly below the guideline. Those in Dental Medicine, Design, Engineering & Applied Science, Humanities – SAS, Perelman – Basic Sciences, Natural Sciences – SAS, Social Sciences – SAS, and Veterinary Medicine received median increases below guideline though most of those were just below at 2.8.

Associate Professors (see Table 7), for which we have 11 reporting schools and areas, saw median salary increase for FY2011 at or above the 2.9% guideline in only four cases. Dental Medicine, Engineering & Applied Science, Graduate Education, Perelman – Basic Science, and Social Science – SAS saw median increases of 2.8% while Humanities – SAS and Natural Science – SAS received median increases of 2.7% and 2.5% respectively. Importantly, the lower than guideline increases in Humanities – SAS and Natural Sciences – SAS persist from the prior year.

Assistant Professors (see Table 8), for which we have only 10 reporting schools and areas, attained median salary increases at or above the guideline in six cases. Mirroring less than guideline increases in the other ranks, those in Humanities – SAS saw a 2.5% median increase, Perelman – Basic Science 2.8%, Natural Science – SAS 2.5%, and Social Sciences – SAS 2.7%.

The number of reporting schools and areas varies for each rank for two primary reasons. First, a rank may not exist in that particular school as with Associate Professor in the Law School. Second, the number of faculty within a rank may be so small as to make identification of individual data possible and thus the numbers are not reported.

2. First Quartile Salary Increases across Ranks and Schools/Areas in Comparison with Increases in CPI

The SCESF has consistently questioned the principles by which salary increases are awarded in the context of increases in the CPI (the U.S. city average and the Philadelphia CPI from Table 1). As one means of monitoring the situation, the Committee routinely compares salary increases at the 25th percentile for schools with data at the different ranks in Tables 6, 7, and 8 relative to the analogous change in the US City Average CPI of 1.7% and the Philadelphia CPI of 1.3%. In sharp contrast to last year's report, the comparison for this year's data shows that at each rank, *all schools and areas* had a 25th percentile salary increase that exceeded the Philadelphia CPI change and the US City Average CPI.

B. Variability in Average Salary Levels by Rank

Five-year data on mean and median faculty salaries by rank are shown in Table 9 for all schools combined.⁸ The second-to-last column gives raw ratios of these values relative to the values for Assistant Professors. These ratios suggest that, in FY 2012, mean salaries were 66% higher for Full Professors than for Assistant Professors and 5% higher for Associate Professors than for Assistant Professors. Median salaries were 80% higher for full than for Assistant Professors, and 11% higher for Associate than for Assistant Professors.

Between 2007-8 and 2011-12, the ratio of median salaries decreased slightly for Full Professors to Assistant Professors (from 1.94 to 1.80) and for Associate Professors to Assistant Professors (from 1.23 to 1.11). Such ratios give a crude perspective on rank differences in salary because of aggregation biases across schools, so interpretation must be made cautiously. For example, a considerably larger difference between Assistant and Associate Professor mean salaries might be expected. However, a more modest difference might appear if, for example, a relatively high-paying School has a considerably lower percentage of Associate Professors than other schools, a difference that could reduce the observed mean salary for

⁸ The mean salary figures for Full Professors recorded in Table 9 are higher than those recorded in Table 5, which are drawn from AAUP reports. Table 5 includes all faculty members at the rank of Full Professor (including those newly appointed to a rank) whereas Table 9 is limited to faculty members who continued in the same rank from the prior year (a difference—generally an addition to the left-hand end of the distribution—that reduces the AAUP mean). Moreover, data in this Table 9 differ from data in Table 9 in the 2006-07 report describing some of the same time periods. The differences reflect errors in the calculation of academic base salary in the 2006-07 report.

Associate Professors. Similarly, to choose the other possibility, if a relatively high-paying School has a considerably higher percentage of Assistant Professors than other schools, that difference could increase the observed mean salary for Assistant Professors. A more meaningful comparison of variation in faculty salaries by rank is achieved by computing the ratios for continuing faculty members for each school and then computing a mean weighted ratio, weighting for the number of continuing faculty members at each rank in each School.⁹ Thus, Table 9 also gives the weighted ratios. The weighted ratios show that in FY 2012, mean (median) salaries of Full Professors were 81% (79%) higher than Assistant Professors and mean (median) salaries of Associate Professors were 22% (20%) higher than Assistant Professors.

C. Variability of Salary Level by Rank with Interquartile Data

Variability in salary level by rank may also be investigated with more distribution-sensitive statistics. This report, relying on Table 10, discusses three facets of such analysis of variability in the following order: measures of salary variability, differences in variability across ranks, and trends in variability over time.

1. Measures of Variability

The measure of variability of median salaries across schools and areas of continuing faculty members selected here 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 much 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: Q_2), 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").¹⁰ 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.

2. Differences in Variability across Ranks

As seen in Table 10, the ratio of the IQR to the median varies across rank in much the same way it did in the previous year. In FY 2012, the ratio of the IQR to the median was 0.48 for Full Professors, 0.29 for Associate Professors, and 0.73 for Assistant Professors. Short-term variations in this ratio may be a consequence, at least in part, of variations in external competitiveness for faculty of different ranks and of the extent to which Penn is matching the highest-end salaries of its competitors in case of retention. The question of greater interest is whether these ratios are exhibiting systematic patterns of change over time.

3. Trends in Variability over Time

The most striking feature of Table 10 is the rise in the past five years of the IQR to median ratio, particularly for full Professors, suggesting that variability in payment levels continues to grow (from 0.46 to 0.48). For Full Professors, in 2007-2008 the gap between the 25th and 75th percentile was 61,030; in 2012 that gap had grown to 79,617. For Associate Professors the variability change is smaller and inconsistent. The variability for the Assistant Professor rank is much less stable in trend over time with a continued increase in IQR and in IQR to median ration. It is for this rank that SCESF shares the concern of the Vice Provost for Faculty and endorses investigating the variability in salaries for the rank of Assistant Professor within and across schools and areas as well as departments where they exist.

D. Variability by Gender

In response to recommendations made in prior years, this SCESF Report includes two tables describing gender differences in faculty salaries. Table 11 provides the percentage increases in salaries for faculty continuing in rank by rank and gender for the first, second, and third quartiles for FY 2011.¹¹ The figures are generally very close and in some cases identical. Only in third quartile are any differences appreciable and then not by great margins.

Table 12 reports the unweighted and weighted observed mean and median salaries for men and women continuing in rank by rank. The most striking information concerning compensation and gender lies here and not in Table 11. The weighted estimates account for difference in gender

⁹ Exceptions are made for schools/areas in which there are no Assistant Professors or only an extremely small number.

¹⁰ 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).

¹¹ This information is presented only at the aggregate level because, for a number of school/areas-rank cells, the number of one gender (generally held by women) is fairly low.

distributions in schools and areas of the University and thus are most informative. Table 12, in the weighted analyses, shows that male Full Professors are better paid than female Full Professors and by a margin that continues to decline over time. The male advantage for Associate Professors is inconsistent. It is always present in the means and is reversed for median comparisons; here too there is a pattern of decline over time. For Assistant Professors, the differences between the mean salaries by gender are perplexing and seem to have increased in the past year. Here again, we endorse the concern and investigation we discussed with the Vice Provost for Faculty. Most importantly, we anticipate the forthcoming report on Gender Equity from University Administration to shed critical light and greater discernment on the matter of gender equity in salary and other aspects of faculty work life.

VI. Conclusions

A. Economic Status of the Faculty

1. External Competitiveness

Comparisons of Penn faculty salary percentage increases with percentage increases in the CPI. The median is the appropriate average to consider as a summary statistic for the economic status of the faculty overall. The all-ranks median increase was above the Philadelphia CPI increase and the US City Average CPI this year.

Comparisons with other universities. Salary comparisons for Full Professors at Penn with AAUDE and AAUP data in this year's report suggest that, in light of a delicate economic recovery, we may be seeing some promise of correction in a trend of declining competitive advantage. However, trend over time is the only credible evaluation of comparisons with other universities. SCESF views improvement this year favorably and looks forward to analysis in the coming two years. The five-year comparison with the larger AAUDE data shows a less persistent pattern of lost ground and reduced ranking. Substantial losses are fewer and there some notable and laudable improvements.

The results of the annual AAUP (nominal) salary survey for a group of 19 "peer" research universities places the mean salary of Penn Full Professors seventh in rank order for 2011-2012—an improvement over the prior two years. Here again, SCESF is cautiously optimistic. Nonetheless, we very much underscore that some gains in a single year do not amount to a trend and do not represent an overwhelming correction to a consistent trend of declining rank vis-à-vis peer institutions. Toward this end, SCESF offers acknowledgement to the President, the Provost and the Deans for corrections and enthusiastic support for continued improvements.

2. Internal Variability

Distribution of faculty salary and resources accorded them in annual increases notably vary among and within the three professorial ranks (Table 10). Some variability in average faculty salaries among schools and areas is likely 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, the increase in these differences, and especially the growing difference at the rank of Assistant Professor are warranted by factors such as competitive pressures. Similarly, SCESF notes variability by gender at the rank of Assistant Professor. We eagerly await the forthcoming Gender Equity Report from University Administration.

B. Conditions of Concern

1. External Competitiveness

Penn faculty salaries and compensation are generally competitive with those in the comparison set of universities. However, in order to recruit and retain a superior faculty, Penn's salaries must be competitive with those of peer institutions. The comparisons conducted for this report show general evidence of some improvement in a situation which had in recent years evinced consistent and worrying decline. Stability and, even more, improvements in competitive advantage are most welcome. As we note in our analysis, stability in some areas and gains in others do not obviate the need for clear and consistent oversight.

2. Internal Equity

The SCESF remains disquieted by some issues of internal equity, positing that some variability may be related to the understandably idiosyncratic nature of responses to external offers. We endorse efforts discussed by the Vice Provost for Faculty to investigate variability and reduce inequity where possible.

VII. SCESF Communication with Provost's Office

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

The Provost's Office continues to be responsive to the SCESF's requests for data. We are again grateful to Provost Vincent Price, Vice Provost for Faculty Lynn Lees, and Assistant Vice President for Institutional Research and Analysis Stacey Lopez for their cooperative attitude and for their efforts in delivering data and responding to requests in a timely and thoughtful fashion.

B. SCESF Recommendations and Questions for the Administration for 2012-2013

In accordance with Faculty Senate policy, following are recommendations and questions for the administration that arose in the SCESF discussions, including some updates on the status of recommendations made in previous SCESF reports.

1. Salary Competitiveness

To provide high-quality instruction, research, and service, the University must maintain and attain faculty salaries at levels that are highly competitive with salaries provided by peer universities, while simultaneously sustaining other components of university operations.

SCESF Recommendations

a) Mean salaries at Penn showed some gains or stability in the comparison with AAUDE data in a number of schools and areas (see Table 4). However, gains are not consistent and are represented in a single year's salary data. The SCESF recommends that priority be placed on increasing mean salaries to competitive levels for the faculty groups that continue to fall behind or are stagnant in AAUDE comparisons.

The President and Provost are pleased with the gains during this past year in Penn's comparative standing in relation to selected peer schools. They remain committed to maintaining Penn's ability to offer highly competitive faculty salaries, while recognizing that some of our peers enjoy greater financial resources than Penn. Salary decisions are made at the level of Schools and Departments, taking into account the available salary pool. The Provost's Office agrees to examine in more detail those categories identified as "falling behind" in AAUDE comparisons and to explore with deans actions that may be justified and financially feasible.

b) SCESF notes that there is room for improvement for faculty salaries in many of the rank by school and area comparisons (Table 4), particularly in those schools and areas which consistently rank below the top ten or have dramatically lost rank in the comparison group. We continue to question whether the University can retain and attract the highest-quality faculty members unless some faculty salaries improve markedly in relation to peer institutions and maintain or advance a competitive advantage if Penn is to hold its national standing as it seeks to attract faculty candidates and retain current faculty. We applaud the Vice Provost for Faculty's attention to inequities in faculty salary within and across schools and areas. Further, we hope that our dialogue which advanced this year on this issue will continue in the next year and extend to a more sophisticated discussion on the issue of external competitiveness.

The Provost's Office is committed to continuing a dialogue with SCESF on the issue of inequities in salaries.

c) Variability in faculty salaries and especially in the IQR by rank (see Tables 6 to 10) suggests inequity in retention efforts. We recommend that due consideration be afforded rewards for distinguished performance among those faculty who choose not to seek, or use, attractive offers of external appointment to negotiate salary increases. We believe that veering away from retention through external competition and toward that which truly recognizes performance is essential to equity, morale, and investment in the University's sustained and growing future excellence. The SCESF recognizes that these are decisions taken at the level of the Dean and Department Chair but we make this recommendation with the aim of enhanced guidance on this matter from the Provost to the Deans.

Salary increases are designed to reward "distinguished performance," which is broadly defined to encompass scholarly productivity, service, and teaching. Variations in salaries within a rank among Schools arise from several factors, only one of which arises from responses to outside offers. Also important are years in rank and disciplinary differences in salary levels. The Provost will continue to discuss with School Deans issues posed by market competition, retention, and merit within school faculties. School deans are aware of equity issues and regularly respond to them.

2. Salary Equity

Inequity among individual faculty salaries by rank within departments and schools organized as single departments must be identified and eliminated.

SCESF Recommendations:

a) As noted in the SCESF Report last two years, Tables 2 and 3 give information about the percentage of faculty members receiving increases less than the rise in the cost of living, but they give data only for a single academic year. The real cost to the faculty member of a series of increases each of which is only slightly below the CPI growth percentages could be significant. In general, we would like to see Tables 2 and 3 supplemented with information cumulating increases and changes in the cost of living over a longer time interval. The Committee does not currently review such data and therefore cannot currently comment on whether or not CPI growth is a concern over time and, if it is, what the extent of the problem might be. The Committee wishes continued discussion with the Provost's Office on appropriate frames for measurement of this critical measure of economic status.

The Provost's Office agrees to explore this request with the Office of Institutional Research and Analysis.

3. Gender Equity

Both SCESF and the Vice Provost for Faculty note a concern in gender equity at the rank of Assistant Professor which stands out against a general analysis revealing broader equity at the ranks of Associate and Full Professor.

SCESF Recommendation

SCESF awaits more complete analysis of gender equity in salary in the forthcoming Gender Equity Report.

The Gender Equity Report includes a detailed analysis of differences in faculty salaries according to gender. (See URL of January Almanac report.) The Office of Institutional Research and Analysis carried out a regression analysis which explained 81% of the variance in the salaries of male and female faculty, taking into account differences in rank, time in rank, discipline, and position as a department chair or endowed chair. The remaining variance in faculty salaries according to gender is small and has been declining over time. The Provost's Office is committed to the principle of gender equity in salaries, and we have explored with each of the Penn Schools existing gender differences in salaries to identify the origins of individual disparities. We will continue these discussions as part of the annual review of faculty salary increases.

4. Faculty Benefits

SCESF appreciates the continued provision of data for Table 5 Detail 2 and anticipates continued productive analysis of these data over time in complement to comparative mean salary data.

SCESF Recommendation

a) The SCESF continues to believe benefits should be comprehensively reviewed every five years to ensure competitiveness.

Faculty Benefits are discussed on an on-going basis by the University Council's Committee on Personnel Benefits on which faculty are represented. We agree that a more systematic review of faculty benefits is appropriate every few years and will explore with the Division of Human Resources an appropriate procedure for doing so on a five year cycle.

b) The SCESF recognizes that examination of faculty total compensation incompletely analyzes faculty benefits within the university and across ranks. Sabbatical leave is among important benefits not addressed in current data. Consequently, we request as we did last year that, in addition to data on mean total compensation, specific information regarding sabbatical leave within the university, across schools and areas and also as compared to peers be provided where possible beginning next year.

This past year additional information on the accrual of sabbatical leaves across schools was compiled for the Ad Hoc Faculty Senate Committee on Sabbaticals. In addition, the Faculty Senate received information on the use of sabbaticals by standing faculty, which was collected in the Faculty Survey. The Provost's Office will continue a discussion with the Faculty Senate about the meaning and management of sabbaticals.

VIII. Members of the 2012-2013 Senate Committee on the Economic Status of the Faculty

Carolyn Gibson, School of Dental Medicine
Sarah Kagan, School of Nursing, Chair
Andrea Liu, School of Arts & Sciences/Physics
Janice Madden, School of Arts & Sciences/Sociology
Lorraine Tulman, School of Nursing
Ex officio

Senate Past Chair, Camille Charles, SAS/Sociology
Senate Chair Elect, Dwight Jaggard, SEAS
Senate Chair, Susan Margulies, SEAS

The Committee would like to explicitly acknowledge the essential and valuable assistance of Sue White of the Office of the Faculty Senate.

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 2011-2012
Professor	Mean	3.8%
	Median	2.8%
Associate Professor	Mean	5.6%
	Median	2.8%
Assistant Professor	Mean	4.1%
	Median	2.8%
All Three Ranks	Mean	4.3%
	Median	2.8%
U.S. City Average CPI Growth	Mean	1.7%
Phil. CPI Growth	Mean	1.3%
Budget Guidelines	Mean	2.9%

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 2011-2012 CPI growth for the U.S. and for Philadelphia are based on a change in CPI from June 2011 to June 2012.

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 2011 to 2012
Annenberg	100.0%
Dental Medicine	88.5%
Design	100.0%
Engineering & Applied Science	98.0%
Graduate Education	93.6%
Humanities-SAS	98.5%
Law	97.8%
Perelman-Basic Science	89.0%
Natural Science-SAS	93.3%
Nursing	90.9%
Social Policy & Practice	100.0%
Social Science-SAS	98.1%
Veterinary Medicine	96.8%
Wharton	95.7%
All Schools/Areas	95.4%
U.S. City Average CPI Growth	1.7%
Phil. CPI Growth	1.3%
Budget Guidelines	2.9%

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 2011-2012 CPI growth for the U.S. and for Philadelphia are based on a change in CPI from June 2011 to June 2012.

Table 3

Percentage of Continuing Penn Full Professors Awarded Percentage Salary Increases Exceeding the Percentage Growth in the 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 2011 to 2012
Annenberg	100.0%
Dental Medicine	89.5%
Design	100.0%
Engineering & Applied Science	98.4%
Graduate Education	100.0%
Humanities-SAS	99.0%
Law	97.5%
Perelman-Basic Science	87.4%
Natural Science-SAS	91.4%
Nursing	90.9%
Social Policy & Practice	100.0%
Social Science-SAS	96.6%
Veterinary Medicine	94.1%
Wharton	95.2%
All Schools/Areas	94.8%
U.S. City Average CPI Growth	1.7%
Phil. CPI Growth	1.3%
Budget Guidelines	2.9%

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 2011-2012 CPI growth for the U.S. and for Philadelphia are based on a change in CPI from June 2011 to June 2012.

Tables continue on the following page..

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

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

Between Fall 2007 and Fall 2008, several modifications were made to CIP Code classifications for the medical sciences. In Fall 2009, at the school's request, Wharton-Public Policy began being compared to Economics rather than Policy programs.

Because Penn's disciplines are not represented at all peer institutions, 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 2005-2006 Through 2011-2012

Full Professor Mean Academic Base Salaries: Percentage Differences*	Percentage Differences*						
	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Harvard	12.5%	13.4%	13.2%	13.7%	12.4%	10.7%	9.3%
Chicago	3.5%	3.8%	4.6%	6.0%	8.2%	8.7%	8.9%
Columbia	N/A	N/A	-0.5%	3.4%	10.9%	9.3%	8.9%
Stanford	4.2%	5.0%	6.4%	7.4%	6.6%	7.6%	7.6%
Princeton	4.6%	4.6%	5.5%	6.4%	6.4%	6.2%	6.7%
NYU	-3.9%	-4.5%	-0.6%	0.8%	0.9%	0.5%	0.4%
Penn	\$149.9K	\$156.5K	\$163.3K	\$169.4K	\$170.1K	\$175.1K	\$181.6K
Yale	0.9%	0.7%	1.1%	3.1%	2.4%	1.1%	-0.7%
Duke	-9.0%	-9.3%	-6.6%	-4.8%	-5.5%	-6.7%	-3.5%
Northwestern	-6.1%	-5.9%	-5.9%	-4.5%	-2.2%	-3.2%	-5.2%
MIT	-6.4%	-6.8%	-7.2%	-5.4%	-5.3%	-5.3%	-5.4%
UCLA	-14.3%	-14.9%	N/A	-14.7%	-13.0%	-12.2%	-10.5%
UC Berkeley	-15.8%	-16.1%	N/A	-15.3%	-14.3%	-14.8%	-15.2%
Michigan	-16.2%	-16.7%	-16.1%	-16.1%	-15.3%	-16.1%	-18.1%
NC (Chapel Hill)	-23.1%	-19.0%	-15.1%	-15.8%	-15.9%	-18.2%	-20.7%
Carnegie-Mellon	-17.4%	-18.8%	-19.0%	-19.4%	-19.1%	-20.7%	-21.8%
Virginia	-17.9%	-18.2%	-18.7%	-21.3%	-20.8%	-22.0%	-22.0%
Texas (Austin)	-22.8%	-22.6%	-22.8%	-21.9%	-21.6%	-22.0%	-22.5%
MN (Twin Cities)	-26.4%	-25.5%	-25.7%	-24.8%	-26.6%	-29.6%	-30.8%

Notes: Mean academic base salary is provided for tenured and tenure-track standing faculty members at the rank of professor. Excluded are 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 2010-2011. 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.

For details 1 and 2 of Table 5, see the following page.

Table 5, detail 1

Mean Academic Base Salary Levels of Full Professors at a Sample of Comparable Research Universities for Academic Years 2005-2006 through 2011-2012

	Full Professor Salaries: Percentage Differences*						
	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Harvard	168.7	177.4	184.8	192.6	191.2	193.8	198.4
Chicago	155.1	162.5	170.8	179.5	184.1	190.4	197.8
Columbia	N/A	N/A	162.5	175.2	188.6	191.4	197.8
Stanford	156.2	164.3	173.7	181.9	181.4	188.4	195.4
Princeton	156.8	163.7	172.2	180.3	181.0	186.0	193.8
NYU	144.0	149.5	162.4	170.7	171.7	175.9	182.4
Penn	149.9	156.5	163.3	169.4	170.1	175.1	181.6
Yale	151.2	157.6	165.1	174.7	174.1	177.1	180.4
Duke	136.4	142.0	152.6	161.2	160.8	163.4	175.3
Northwestern	140.8	147.2	153.6	161.8	166.3	169.5	172.1
MIT	140.3	145.9	151.6	160.3	161.0	165.8	171.8
UCLA	128.4	133.2	N/A	144.5	148.0	153.7	162.6
UC Berkeley	126.2	131.3	N/A	143.5	145.8	149.1	154.0
Michigan	125.6	130.4	137.0	142.1	144.0	146.9	148.8
NC (Chapel Hill)	115.3	126.8	138.6	142.7	143.0	143.3	144.0
Carnegie-Mellon	123.8	127.0	132.2	136.5	137.6	138.9	142.0
Virginia	123.1	128.0	132.7	133.4	134.7	136.5	141.6
Texas (Austin)	115.7	121.2	126.0	132.3	133.3	136.5	140.7
MN (Twin Cities)	110.3	116.6	121.3	127.4	124.8	123.2	125.7

Notes: Mean academic base salary is provided for tenured and tenure-track standing faculty members at the rank of professor. Excluded are all standing faculty members who are appointed as Clinician Educators. Data Source: AAUP Salary Surveys.

*Universities are ordered from highest to lowest mean salary for Full Professors for the most recent data year.

Table 5, detail 2

Mean Total Compensation Levels of Full Professors at a Sample of Comparable Research Universities for Academic Years 2005-2006 through 2011-2012

	Full Professor Salaries: Mean Total Compensation*						
	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Columbia	N/A	N/A	196.7	212.6	221.8	239.1	261.5
Harvard	208.5	218.5	227.2	238.1	239.9	242.1	248.8
NYU	190.8	198.1	215.1	226.1	227.5	233.1	241.7
Stanford	188.2	203.8	212.6	223.3	223.6	231.0	240.8
Chicago	185.3	195.8	205.6	216.9	225.0	233.4	240.7
Princeton	191.2	198.9	209.6	219.1	220.8	228.0	234.2
Penn	197.5	208.5	210.3	219.6	215.2	223.9	231.8
Northwestern	171.8	186.8	195.1	205.1	210.7	214.7	217.9
Yale	183.1	190.3	199.0	210.4	211.3	214.5	217.6
UCLA	166.2	172.8	N/A	189.8	195.2	203.0	215.7
Duke	170.6	178.1	188.3	198.7	199.9	202.6	214.8
MIT	174.5	182.1	191.3	198.0	200.0	206.0	214.2
UC Berkeley	163.4	170.4	N/A	188.5	192.4	197.3	205.0
Michigan	152.3	157.6	165.7	171.8	175.6	179.4	180.9
NC (Chapel Hill)	138.3	152.7	167.5	172.6	173.2	175.4	177.5
Virginia	152.1	157.9	163.4	164.3	166.8	168.1	174.4
Carnegie-Mellon	153.4	156.8	164.9	170.2	171.5	172.2	173.7
MN (Twin Cities)	143.3	152.7	154.3	167.2	165.3	164.5	167.7
Texas (Austin)	137.2	143.5	149.3	156.9	158.9	163.5	166.5

Notes: Mean academic base salary is provided for tenured and tenure-track standing faculty members at the rank of professor. Excluded are all standing faculty members who are appointed as Clinician Educators. Data Source: AAUP Salary Surveys.

*Universities are ordered from highest to lowest mean salary for Full Professors for the most recent data year.

Tables continue on the following page..

Table 6
Full Professors: Median Academic Base Salary Percentage Increases of Faculty Continuing in Rank Who Were Penn Full Professors for FY 2012, 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 2011-2012		
	Q1	Md.	Q3
All Schools	2.5%	2.8%	3.4%
Annenberg	2.8%	3.1%	3.9%
Dental Medicine	2.0%	2.8%	2.9%
Design	2.3%	2.8%	3.5%
Engineering & Applied Science	2.6%	2.8%	3.5%
Graduate Education	2.8%	3.1%	3.2%
Humanities-SAS	2.5%	2.5%	2.9%
Law	3.1%	3.3%	3.6%
Perelman-Basic Science	2.8%	2.8%	4.0%
Natural Science-SAS	2.4%	2.5%	2.9%
Nursing	3.0%	3.5%	5.0%
Social Policy & Practice	-	3.0%	-
Social Science-SAS	2.5%	2.8%	3.1%
Veterinary Medicine	2.6%	2.8%	3.5%
Wharton	2.5%	2.9%	3.3%
Budget Guidelines	-	2.9%	-

Notes: The Budget Guideline show under each rank is for comparison purposes. As per Penn policy, it is a guideline for a 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 the all increase were below the Q1, while 25% were 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 2012, 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 2011-2012		
	Q1	Md.	Q3
All Schools	2.5%	2.8%	3.5%
Annenberg	-	-	-
Dental Medicine	-	2.8%	-
Design	-	3.5%	-
Engineering & Applied Science	2.8%	2.8%	3.0%
Graduate Education	2.0%	2.8%	3.2%
Humanities-SAS	2.5%	2.7%	3.8%
Law	N/A	N/A	N/A
Perelman-Basic Science	2.5%	2.8%	2.9%
Natural Science-SAS	2.3%	2.5%	2.7%
Nursing	2.6%	3.5%	4.4%
Social Policy & Practice	-	-	-
Social Science-SAS	2.5%	2.8%	3.4%
Veterinary Medicine	2.6%	2.9%	9.2%
Wharton	2.7%	3.0%	3.5%
Budget Guidelines	-	2.9%	-

Notes: The Budget Guideline shown under each rank is for comparison purposes. As per Penn policy, it is a guideline for a 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.

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.

Tables continue on the following page..

Table 8

Assistant Professors: Median Academic Base Salary Percentage Increases of Faculty Continuing in Rank Who Were Penn Assistant Professors for FY 2012, 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 2011-2012		
	Q1	Md.	Q3
All Schools	2.5%	2.8%	3.6%
Annenberg	-	-	-
Dental Medicine	-	-	-
Design	2.8%	3.5%	4.1%
Engineering & Applied Science	2.9%	3.5%	5.0%
Graduate Education	-	-	-
Humanities (A&S)	2.5%	2.5%	2.7%
Law	-	3.9%	-
Perelman - Basic Science	2.8%	2.8%	5.0%
Natural Science-SAS	2.5%	2.5%	3.0%
Nursing	-	2.9%	-
Social Policy & Practice	-	-	-
Social Science-SAS	2.5%	2.7%	3.3%
Veterinary Medicine	2.8%	3.0%	8.1%
Wharton	2.6%	3.0%	3.5%
Budget Guidelines	-	2.9%	-

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.

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	
Full Professor	2007-2008	Mean	\$160,803	1.72	1.85	
		Median	\$147,875	1.94	1.84	
	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	
	Associate Professor	2007-2008	Mean	\$106,061	1.13	1.26
			Median	\$94,172	1.23	1.26
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	
Assistant Professor		2007-2008	Mean	\$93,547	1.00	1.00
			Median	\$76,421	1.00	1.00
	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	

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.

Tables continue on the following page..

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
Full Professor	2007-2008	\$125,970	\$147,875	\$187,000	\$61,030	0.41	14
	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
Associate Professor	2007-2008	\$83,455	\$94,172	\$111,000	\$27,545	0.29	13
	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
Assistant Professor	2007-2008	\$69,922	\$76,421	\$110,000	\$40,078	0.52	14
	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

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 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 2011-2012

Rank	Gender	Q1	Md.	Q3
Full Professor	Men	2.5%	2.8%	3.2%
	Women	2.5%	2.9%	3.8%
Associate Professor	Men	2.5%	2.8%	3.2%
	Women	2.5%	2.8%	3.6%
Assistant Professor	Men	2.6%	2.9%	3.5%
	Women	2.5%	2.8%	3.7%

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.

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							
2007-2008	Mean	\$150,286	\$163,176	8.6%	\$151,196	\$163,176	7.9%
	Median	\$137,013	\$149,623	9.2%	\$148,819	\$159,493	7.2%
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%
Associate Professor							
2007-2008	Mean	\$96,729	\$110,812	14.6%	\$106,225	\$110,812	4.3%
	Median	\$89,972	\$98,170	9.1%	\$110,305	\$107,276	(2.75%)
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	(2.82%)
2009-2010	Mean	\$101,538	\$114,421	12.7%	\$111,580	\$114,421	2.6%
	Median	\$92,925	\$102,750	10.6%	\$109,374	\$108,377	(0.91%)
2010-2011	Mean	\$103,011	\$116,923	13.5%	\$111,945	\$116,923	4.5%
	Median	\$93,557	\$105,175	12.4%	\$111,297	\$110,787	(0.46%)
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	(0.08%)
Assistant Professor							
2007-2008	Mean	\$88,223	\$97,907	11.0%	\$97,840	\$97,907	0.1%
	Median	\$72,641	\$82,900	14.1%	\$95,495	\$94,331	(1.22%)
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	(0.91%)
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%

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 the male and female salaries divided by the female salary. Negative percent differences occur when the female salary exceeds the male salary.