



Office of Institutional Effectiveness  
Fall 2017 Faculty Salary Internal Compression Analysis

In Summer Semester 2017, the Office of Institutional Research was charged with producing and providing a faculty salary study to the Office of the Provost. In October 2017, the resulting report *Kennesaw State University Faculty Salary Study* was reviewed by an external reviewer. The reviewer deemed the original study inadequate and recommended the study not be used to inform faculty salary decisions. The external reviewer also made short-term recommendations to distribute available funds (\$500,000) to faculty on a sliding scale and disperse the majority of the funds to non-new faculty members to off-set internal compression issues until a comprehensive salary study could be executed. This report seeks to fulfill the reviewer's recommendations and provide a methodological approach for disbursing available funds.

### Definitions

Salary Compression – Occurs when the pay differences among employees with different levels of experience, skills, level, or seniority becomes small.

Salary Inversion – Occurs when employees with less experience, less skills, lower level, or less seniority are compensated better than employees with more of the aforementioned qualities.

### Study Methodologies

Faculty base salary data were extracted from the Faculty Information System on October 5, 2017. The sample (n=613) included professors, associate professors, and assistant professors who were active or on-leave, full-time, and tenured or tenure-track as of the date the data were extracted. Twelve month faculty salaries were converted to nine month based on KSU Academic Affairs standard calculation (base salary/1.3). Faculty members with a distinguished title in the Faculty Information System or who held any designation listed below as of October 5 were removed from the analysis in an attempt to prevent skewing the data distribution.

Dean	President
Associate Dean	Provost
Assistant Dean	Vice President
Department Chair	Associate Vice President
University-Level Administrator	Assistant Vice President
College-Level Administrator	Librarian
Special Assistant	

**Faculty member identification.** Department-level analyses were run on two faculty groups: 'Not new' faculty who have worked at KSU for four years or more and 'New' faculty who have worked at KSU for less than four years. At the recommendation of the external consultant, the distinction between new and not new faculty was based on the rationale that a) the definition of new faculty significantly increased the N because there were too few first-year only faculty and b) in four years, one can either earn tenure, be close to earning tenure, or be in the process of transitioning out of their role.

The differences between each set of average salaries by department were then calculated. Some departments did not have a comparison group to calculate a difference in averages.

Departments with an average salary difference of \$5,000 or less between faculty groups were

identified to receive funds to address compression or inversion. The provost approved the \$5,000 threshold post-hoc to include a reasonable number of departments/ faculty to disburse funds, where a lower threshold would benefit too few faculty, and a larger threshold would result in very small salary increases and not significantly address compression. Not new faculty members residing within the identified departments were recommended to receive additions to their salaries to address compression. The administrative leadership within each respective college and/ or department ultimately determined the individual disbursement to faculty members.

**Fund disbursement.** The recommended disbursement of \$250,000 in Spring Semester 2018 was determined by first allocating funds per department then by rank. Fund disbursement by department was identified using a calculation that accounts for variation in average department salaries, faculty headcounts across departments, and distributions of faculty ranks within departments.

**Department allocation.** Average salary ( $\bar{x}_{ij}$ ) was computed for each faculty rank ( $i$ ) within each department ( $j$ ). To account for varying distributions in faculty rank within each department, averages were then weighted by the number of faculty members within each rank in each department ( $n_{ij}$ ).

$$\text{Weighted average salary by rank within department } (S_{ij}) = \bar{x}_{ij} * n_{ij}$$

To determine the proportion of funds each department will receive out of the total amount, each weighted average salary was divided by the sum of all weighted average salaries ( $T$ ). Each resulting proportion was then multiplied by \$250,000, resulting in total funds attributable per rank per department. Finally, all funds within each department were summed to identify fund allocation per department.

$$\text{Sum of weighted average salaries } (T) = \sum (S_{11} + S_{21} + S_{31} + S_{12} + \dots + S_{ij})$$

$$\text{Total funds attributable per rank per department } (TOT_{ij}) = (S_{ij}/T) * 250,000$$

$$\text{Total funds allocated per department} = \sum (TOT_{11} + TOT_{21} + TOT_{31})$$

**Rank allocation.** Each department's disbursement to faculty is ultimately determined by the administrative leadership within each respective college and/or department. A suggested fund allocation methodology by rank and department was provided to each affected college dean on a sliding salary scale based on CUPA-HR average salaries by rank, where associate professor salaries average 77% of full professors and assistant professor salaries average 87% of associate professors. Salary distributions began at the highest rank available within each department and scaled down accordingly.

### **Analysis Limitations**

When identifying which departments will receive funds, the 'new' to 'not-new' faculty comparison does not consider faculty rank. For example, a large proportion of a department's not-new faculty could have been promoted to professor quickly, thereby receiving additional raises, or a department's new faculty could have been hired as associate professors, garnering higher starting salaries. The comparison also does not consider terminal degrees, job performance annual reviews, or prior experience. Varying policies across the university regarding the nature of a distinguished title and the compensation procedures associated with holding a distinguished title rendered the variable unreliable, resulting in the decision to remove those with a title in an attempt to account for faculty with additional compensation included in their base salary. Some distinguished titled faculty may not receive additional compensation for their duties or may receive such compensation in the form of a stipend. While faculty with administrative roles or distinguished titles in the FIS at time of data extraction were excluded, other job duties not noted in the data set may affect salary. Because this study attempted to address compression at a group level, individual salary compression issues may still exist within departments. No external comparisons or benchmarking were included. Even where compression exists, faculty salaries may align with or exceed appropriate external comparators. Lastly, many departments have a small number of new faculty, compounding the influence of some of the previously stated limitations.