

REPORT OF THE FACULTY SALARY PROCEDURES WORKING GROUP (FSPWG)

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INTRODUCTION

Background

Following the Provost Office's 2021 salary audit, through which over 600 University of Colorado (CU) Boulder faculty¹ salaries were identified as inequitable and adjusted in order to comply with the Colorado Equal Pay for Equal Work Act (CEPEWA), the Boulder Faculty Assembly (BFA) and Provost's Office agreed to cooperate in a second phase of efforts to address faculty salary equity issues on campus. Because faculty governance groups were not included in this first phase, the second was to be faculty-led, assisted by the Provost's Office. Because it focused only on legal compliance, the first phase limited its focus to salary inequities among protected class faculty only, adjusting those salaries identified as in potential violation of the CEPEWA but not addressing the drivers of salary inequity. The second phase was to focus on salary equity for all CU Boulder faculty and on addressing the various causes of salary inequity and methods for correcting its effects. Accordingly, the [Faculty Salary Procedures Working Group](#) (FSPWG) was appointed in the spring of 2022 and began its work in late summer. To assist in this effort, the CU Assistant Vice Provost of Academic Planning and Assessment requested documentation of unit-level salary policies and procedures from all campus units, assembled a database, and provided a summary analysis of such policies and procedures to assist the Working Group in understanding salary practices across the campus.

As described in the [charge](#) given to the FSPWG by the BFA and the Provost, we believe "that the university is in need of a focused discussion to identify campus, college, and unit-level procedures and practices that contribute to faculty pay inequity, to recommended actions to improve faculty merit evaluation and pay equity procedures; to assure fairer practices going forward; and to strengthen transparency around merit evaluation and salary distribution procedures." The work of the FSPWG, along with its outreach efforts to faculty stakeholder groups during the spring 2023 semester, represent our effort to fulfill this charge.

As directed in the charge, the FSPWG met regularly during the Fall 2022 semester to review collected policy documents, discuss existing policies and practices, and consider drivers of, as well as strategies for addressing, faculty salary inequity at CU Boulder. Analyses and recommendations from these Working Group discussions as well as meetings of its three Task Forces (on merit review practices, hiring/promotion/retention, and salary auditing policies and practices) were reviewed and approved by the full

¹ For the purposes of this report, "faculty" includes both TTT faculty and specialized faculty including teaching/instructor-track, clinical-track, and faculty In-residence. Because research-track faculty have a distinct merit and compensation system, they were not considered in these analyses and recommendations.

FSPWG, as were the five guiding statements of principle that are also included below. Salary equity issues identified by each of the Task Forces are incorporated into the recommendations within this report, which is divided into sections on salary-setting and adjustment practices (sections 1 and 2) and salary structure assessment policies and practices (section 3). We conclude with a few brief remarks about this document's limits, flagging issues for future work.

Overview

Under CU policy^[1], faculty salary inequities are *salary disparities between faculty within a comparison group^[2] that cannot be justified by differences in career merit,^[3] which is in turn a function of annual merit scores^[4] and years of service.^[5]* Primary units are required under this policy to regularly monitor for inequities among the salaries for all faculty rostered in the unit and to correct any identified inequities, with oversight by Deans and the Provost and further accountability provided through a salary equity appeals process. Further details on these requirements can be found in the Audit section, below.

CU Boulder claims “a strong commitment to the principles of merit-based evaluation and salary equity,”^[6] which it also affirms in its 2018 *Report of the Academic Futures Committee* (calling for CU to “regularly perform salary reviews (e.g. every two years) at the college or department level to assess salary inequities that could impact all faculty”^[7]) and again in its 2019 *IDEA Plan* (“CU Boulder must strive for salary equity, and therefore Human Resources and the Office of Faculty Affairs should engage in exploratory efforts to this end for staff and faculty, respectively”^[8]). In addition to issues of legal compliance with the CEPEWA, faculty salary inequity is corrosive of faculty morale, harms the culture and climate of academic units, promotes faculty disengagement from the business of the university and undermines faculty support of its mission, leads to higher rates of faculty turnover that threaten the university's research and teaching objectives, and is unfair to many hard-working CU faculty that are inequitably compensated for their work.

To constructively address the problem of faculty salary inequity, we need an account of the drivers that lead to such inequities and how they are exacerbated over time: prevention of future inequities is as important as rectification of existing ones. We believe that some of these drivers lie within the control of primary units that set and adjust faculty salaries, develop and apply merit criteria, and perform salary structure assessments, and so must be addressed by the faculty. For these drivers, we issue a set of recommendations to address and prevent salary inequities in this report's second and third sections, below. Other drivers are controlled by administration at the college, campus, and system levels, and so will require their cooperation and support in order to effectively change. These we address briefly in the next section.

HIRING, RETENTION AND PROMOTION

We believe the single largest driver of faculty salary inequity at CU to be the insufficient funding of faculty salary increases through regular merit review processes, which contributes to salary inequity in three ways. First, since unit salary pools have been insufficient to maintain competitive salaries over time through merit raises alone, a secondary salary adjustment system utilizing selective retention raises has developed in order to retain TTT faculty that might otherwise seek competitive salaries elsewhere. Such supplementary raises serve faculty retention imperatives but can also introduce inequity, as these salary adjustments are made available to some faculty but not others (with the category of non-TT faculty practically excluded). Second, salary stagnation caused by insufficient funding for regular merit raises leads to inequities being introduced by the hiring of new faculty at competitive salaries. This results in salary compression (a form of salary inequity insofar as compressed salaries are inadequately differentiated by differential career merit). Significant inequities can be introduced when starting salaries of new faculty equal or exceed those of more experienced CU faculty or when mid-career faculty are hired at market salaries that far exceed those of internally-promoted colleagues at comparable career stages. Finally, we believe that insufficient unit salary pools may also contribute toward failures to comply with existing salary structure assessment mandates; since units are required to address all inequities that are identified through such processes from the same salary pool that is also used for annual merit raises, other faculty raises are likely to be reduced if funds are diverted to address inequities.

We recognize the dilemma that this creates for units and campus administration. Maintaining faculty quality through hiring and retention is an institutional imperative that we affirm. However, without sufficient support for maintaining competitive salaries for all faculty over time through adequate regular merit raises, this imperative comes into conflict with salary equity objectives, as salary stagnation forces units to choose between paying competitive salaries to some of their faculty and maintaining an equitable salary structure for all faculty. We do not believe that units should be forced to choose between these two objectives, and therefore affirm this first guiding principle:

Principle 1: *CU must be able to recruit and retain high-quality faculty, and must be able pay salaries that are competitive with our AAU peers at every career stage. The CU salary system should not require this imperative to be sacrificed for the sake of greater salary equity, but neither should its pursuit continue to generate wide salary inequities.*

In combination, these two imperatives require that all faculty be paid competitive salaries and be granted opportunities for salary-based career advancement, rather than limiting these to selected retention risks only. Although inequities may result from hiring

new faculty at market salaries, we support the competitive hiring of new faculty, and we view the slow rates of salary growth for existing CU faculty as the primary cause of inequities. Likewise, we support the retention of high-quality faculty, but note that the slow rate of salary growth can, in conjunction with competitive retention raises, result in faculty with comparable career merit being paid significantly different salaries. In both cases, we see the problem's cause not as the fair market rates being paid to some faculty, but the constraints that limit those salaries to some, but not other, deserving faculty. Thus, we recommend here only that salary adjustment practices be sufficiently supported to enable more inclusive access to competitive compensation and career advancement for all CU faculty, which we believe to be the only pathway to reconciling these otherwise-competing imperatives.

We recognize that recent budget constraints contribute to difficulties in pursuing both objectives simultaneously. Furthermore, we commend the Provost's Office for its commitment to salary equity imperatives that its support of the FSPWG implies, as well as for its recent proposed revisions to [faculty retention guidelines](#) that promise to reduce this tension between faculty retention and salary equity objectives by expanding the pool of faculty eligible for such salary adjustments and by seeking to ensure that such raises promote, rather than detract from, equity objectives. Fully implementing and financially supporting these changes should reduce the roles of both hiring and retention in introducing salary inequities into units as it increases the number of current faculty being competitively compensated. Likewise, we commend the Provost's Office for its recent and long-needed increases to tenure-track faculty promotion raises which, like the expansion of retention raises, promise to keep CU faculty salaries more competitive than would otherwise be possible, and support its current efforts to expand these to non-TT faculty, as well.

We also appreciate that campus administration largely shares the faculty's interest in securing adequate support for administering an equitable merit-based salary system, despite the obvious and ongoing fiscal challenges to doing so. Faculty-led reform of unit-level salary practices of the kind recommended below can also contribute toward these shared objectives in reducing salary inequity and maintaining faculty capacities and quality through hiring and retention. Here, we merely note the crucial role of sufficient support from unit salary pools for the salary adjustments that are needed to rectify existing inequities and to prevent new ones, and with it the need for cooperation between faculty and administration in achieving these objectives.

MERIT REVIEW PRACTICES

Regent Law requires that merit be “the prevailing factor in all salary increases,” defining this in terms of the “collegial and consultative process within the primary unit”^[9] known as *merit review*. Unlike faculty compensation systems that include regular cost-of-living

salary adjustments (COLAs) alongside merit-based raises, CU Boulder's faculty compensation system provides no COLA to adjust for inflation, allowing real salaries to decline over time but allowing faculty to mitigate this real salary erosion through the performance-based incentives of a merit system. In delegating to units the prerogatives to set and apply merit criteria, as well as how to allocate unit raise pools among rostered faculty, it delegates to them limited discretion over the extent of merit based salary differentiation among unit faculty that can result from merit raises as well as some authority to either introduce or mitigate salary inequity.

Essential Components of Merit Systems

Merit systems are recognized^[10] as conferring several key advantages over rival salary systems (some of which better maintain salary equity), including step models. If properly designed and operated, they can promote higher faculty performance, reduce salary compression, improve mission alignment, better retain productive faculty, promote faculty accountability to performance expectations, and allow faculty greater flexibility to make work-life tradeoffs. Key to securing these advantages are (1) the sufficiency of unit raise pools for awarding significant performance-based raises to highly productive faculty without neglecting career advancement goals of all faculty that meet performance expectations, along with (2) the transparency of merit criteria and procedures for assessing faculty and awarding raises.

In terms of sufficiency, merit-based salary systems must be able to offer differentiated salary adjustments such that higher-performing faculty can be rewarded with significant real salary increases while still ensuring that inflation-adjusted salaries of those meeting performance expectations don't decline. As Sutton and Bergerson note of this sufficiency requirement, "faculty performing satisfactorily must receive a constant standard of living, while faculty performing at an above satisfactory level should receive appropriately increased compensation."^[11] At minimum, sufficient salary pools would allow units to make COLA adjustments along with modest salary growth to recognize increasing career merit and to enable the career development of all faculty that meet expectations while also maintaining competitive salary growth for their faculty that exceed expectations (and thus present retention risks, whether or not they actively seek outside offers).

Transparency is necessary for the effectiveness of performance incentives and mission alignment, as well as for the perceived fairness and legitimacy of the salary system. Faculty must be able to determine which professional activities are valued by their units, what is expected of them, and what is needed to meet, exceed, and far exceed expectations. As Hanley and Forkenbrock note, it is "especially important that the faculty have a clear basis for knowing that whatever increases they may receive were the result of a transparent and comprehensible process" and that salary allocation

criteria are “fully consistent with the values and objectives of the academic unit, as adopted by the faculty.”^[12]

In our review of salary procedure documents from primary units, we found a wide range of adherence to this objective, with some units having developed *promising practices* that we recommend considering, but with others likely out of compliance with Regent Law requirements to maintain and disseminate written merit criteria, suggesting opportunities for improvement in many units.

Principle 2: *Units should establish and share with all their faculty fair, valid, clear and transparent merit criteria, for both the annual merit review process and for assessing career merit. Such criteria/rubrics should be detailed enough so that each faculty member knows on what basis she/he is being evaluated each year.*

Given the well-documented links between transparent salary adjustment procedures and criteria and salary equity, this principle is intended to both affirm such transparency as a foundational value for faculty salary systems and to serve as a recommendation to increase this transparency where doing so could contribute toward salary equity objectives.

The role of unit-level merit review procedures in salary inequity

Insofar as units allocate raises in accordance with annual merit scores (whether from a single year or rolling averages across multiple years), merit raises would not introduce salary inequity where salaries were previously equitable. As noted above, equity principles require salaries to be differentiated by differential merit, with merit scores providing the basis for such differentiation.. Unit-level merit review practices can introduce or widen existing faculty salary inequities in three ways, described below.

1. Biased merit criteria

First, merit criteria may be biased, advantaging some faculty and disadvantaging others (e.g. by attaching greater weight to activities that are associated with particular subsets of faculty rather than equally accessible to all faculty). Insofar as such biases are endogenous to criteria on which merit assessment is based, faculty salaries can become inequitable while remaining differentiated by merit scores. As this bias gets imported into, and thereby distorts, merit scores, these inequities often elude detection through standard salary structure audits, which rely on merit scores rather than the underlying activities on which they are based. CU has on several occasions attempted to reduce this kind of bias in merit criteria (e.g., in the “Inclusive Excellence” exercise of the 2010s and more recently by urging units to consider DEI work in merit assessment), but it remains unclear how much these efforts have achieved in reducing such sources of bias. While the FSPWG did not review primary unit merit criteria (beyond the scope of

our charge), we view transparent merit criteria and review procedures among the more effective safeguards against internal biases, and recommend several promising practices below for mitigating this potential source of salary inequity.

Issue MR1: Biases endogenous to unit merit criteria may advantage the work of some faculty over others, introducing assessment inequities that manifest through merit scores and thereby contribute to salary inequities that defy normal auditing processes.

Recommendation MR1 (to units and administration): Units should continue to review and update their merit criteria to ensure that it is equitable and inclusive, and that it appropriately recognizes all valuable work done by faculty in the unit.

Issue MR2: The transparency of unit merit criteria and procedures for determining merit scores varies widely among campus units; indeed, there are some units that have failed to document their criteria and procedures altogether, while others have them documented but with provisions that may be out of compliance with university policies. Opaque criteria allow for introduction of bias into merit assessment and frustrate effective salary audits while undermining the perceived fairness and legitimacy of the merit review system, likely leading to lower satisfaction with compensation and more salary grievances.

Recommendation MR2 (to units and administration): Units should consider *promising practices* related to the transparency of merit criteria and review procedures; all units should comply with policy requirements^[13] to provide faculty with written merit criteria, with supervising administrators providing appropriate oversight.

2. Converting from Merit Scores to Salary Increases

Second, procedures for merit assessment or algorithms for converting annual merit scores into salary increases may contribute to salary inequity in various ways. We identified several aspects of merit review procedures (based on our review of unit documentation) that could potentially contribute to inequity and make recommendations for how these sources might be minimized.

Issue MR3: Few units document required skims (reserving a designated portion of funding from the raise pool before distribution of that pool, e.g. for use in promotion raises or unit contributions toward retention raises) and/or procedures for addressing salary inequity from unit salary pools, suggesting that other units lack such procedures for rectifying identified inequities.

Recommendation MR3 (to units): Units should consider *promising practices* from units that document how they utilize raise pools to improve identified salary inequities; all units should comply with policy requirements, ideally through documented practices, with supervising administrators providing appropriate oversight.

Issue MR4: Many units allocate merit raises on a percentage basis (or hybrid formula that includes it), awarding larger nominal raises to faculty with higher salaries when merit scores are equal. This practice widens salary inequity where it already exists and is in conflict with requirements that units reduce inequities resulting from retentions and market hires over time. In basing salary adjustments on existing salary, it may also violate the Regent Law requirement that all salary adjustments be based primarily upon merit.

Recommendation MR4 (to units): Consider eliminating percentage-based merit raises or otherwise correcting for the inequity-widening effects of them with stronger remedial salary adjustments, at least where any salary inequities exist in the unit. Equity principles (and state law) require equal raises for equal merit. As documented in the *promising practices*, flat dollar raises for a given merit score is one approach for replacing percentage-based merit raises.

Issue MR5: Many units document basing merit raises on merit scores from a single year rather than a rolling average across multiple years. Regent Policy advises the latter, for purposes of equity; rolling averages also credit faculty for meritorious work in periodic zero raise pool years and facilitate their pursuit of longer-term projects like books.

Recommendation MR5 (to units): Consider basing merit raises on multi-year rolling averages of annual merit scores rather than on single year scores alone.

3. Sources of Inequity External to Review Criteria

Third, sources of bias exogenous to merit review criteria or practices/procedures may lead to inequity by affecting a faculty member's allocation of time between more and less valued (by unit merit criteria) activities. For example, women or racial minority tenure/tenure-track faculty may be encouraged to commit more time to service activities (e.g., to increase diversity on committees) at the opportunity cost of research time that could be more highly rewarded in merit review. We believe that such bias is quite common at CU (and elsewhere) but is also difficult to track or remedy. Since increased awareness of such bias originating outside of merit criteria or processes can mitigate its effects on merit evaluation, we encourage units to discuss how their own practices may better avoid such consequences.

Issue MR6: Practices exogenous to merit review may differentially channel faculty time and effort into less valued/rewarded professional activities (e.g. service) at the expense of more valued/rewarded activities (e.g. research, teaching), inadvertently contributing to inequity that is internalized into merit scores and consequently defies normal salary audits.

Recommendation MR6 (to units): Chairs and Directors should review unit practices for such effects, clarifying unit expectations for professional activities that are accorded relatively low value within merit assessment and taking care to ensure that burdens for such activities are equitably shared among all faculty or appropriately recognized and credited through merit review or compensated through reduced teaching load, administrative stipend, or summer salary.

Raise Pool Allocation Practices

In addition to contributing to salary inequity through the merit review process itself, raise pool allocation practices within units can affect salary equity in several other ways. Skims from these pools can be used to support retention raises for faculty (as is often required in cost-sharing for such raises), which can contribute to salary inequity in two ways: directly insofar as retention raises for faculty can cause inequity, and indirectly as unit support for retention raises reduces raise pool funds that could otherwise be used to address salary structure problems. Current efforts to make retention practices more equitable could, if implemented, potentially minimize this impact by making retention raises more equitable (or using preemptive retentions to promote salary equity objectives), but in the process place more strain on an already oversubscribed unit raise pool. Skims from unit raise pools can also be used for equity mitigation efforts, as policy requires, but few units document using this practice. Insofar as inequity mitigation efforts are part of the larger merit review process, we can identify opportunities for reform of unit merit review practices that could potentially reduce salary inequity by more effectively rectifying it, albeit at the further cost to a scarce resource (unit raise pools) that is already inadequate.

Issue MR7: Unit raise pools have cumulatively added approximately as much to faculty salaries as inflation has eroded from them over the past 15 years, leaving units barely able to adjust salaries for inflation if devoting their full raise pools to COLAs. Yet, this raise pool is also expected to support performance raises, partly support retention raises, and fully support rectification of salary inequities. At such levels, unit raise pools have been grossly inadequate if expected to equitably reward faculty for their performance (whether in the form of merit raises or equitable retentions) and to rectify accumulated salary structure problems in inequity and compression. Units that devote more of their zero-sum salary funds to rectifying existing salary structure problems may, in the process, cause new

and additional salary structure problems as they divert funds from other salary adjustments, deterring commitment to addressing such issues.

Recommendation MR7 (to campus): Provide resources beyond unit raise pools to units that are willing to seriously address their existing salary structure problems, sharing the cost of such rectification in a manner similar to cost-sharing arrangements used in retentions (alternatively, doing so through preemptive retentions). Going forward, make all efforts to ensure that the primary (merit-based) salary system is adequately funded to reduce the need for supplementary salary adjustments and salary inequity amelioration. Consider doing this on a time-limited basis such that units failing to take advantage of cost-sharing opportunities be held fully responsible for rectifying their future identified inequities.

Apart from maintaining faculty salaries in alignment with career merit, as is required by salary equity policy, CU must maintain faculty salaries that are competitive with peer universities, given the core organizational imperative of recruiting and retaining high-quality faculty. These two imperatives need not necessarily conflict with one another, but scarcity can force the prioritization of one over the other, as competitive faculty recruitment and retention have been prioritized over salary equity. We appreciate that temporary fiscal emergencies sometimes warrant triage strategies that do this temporarily, with commitment to rebalancing those competing imperatives once the emergency has passed, but permanent fiscal constraints cannot justify a permanent prioritization of one over the other without essentially voiding the lower-priority imperative.

AUDITING PRACTICES

Key to avoiding and/or correcting inequitable salary structure problems are regular auditing practices, which facilitate the identification of such problems and in doing so enable their expeditious mitigation.^[14] Salary structure assessments make salary structure problems visible (and so utilize transparency) while also directing units to address and “fully resolve” any salary inequities that are identified. Transparency is a valuable tool in promoting greater salary equity, with research showing its role in reducing gender gaps in university faculty salaries.^[15] However, the transparency associated with CU auditing policy and practices is limited in that salary data and diagnostic tools are typically made visible only to unit Chairs and Directors rather than to all faculty.

Faculty Salary Transparency

Increasing faculty salary transparency can promote greater salary equity in several ways. When salary data and salary structure assessment methodologies are made

available to faculty, this provides additional accountability to ensure unit compliance with audit requirements and thereby can improve inequity mitigation practices. Absent transparent salary data or review procedures, faculty lack access to data necessary for filing salary grievances, which require demonstration of an unidentified or unresolved inequity, undermining this important accountability mechanism while also decreasing trust in unit-level salary actions. Salary transparency has also been found to improve job performance insofar as salary increases can be linked to performance reviews.^[16]

For such reasons, we identify increased transparency as among our foundational principles and feature it in our first set of recommendations for reform of auditing practices.

Principle 3: *Criteria, methods, and relevant (public) data for conducting unit-level salary structure assessments should be transparent to all unit faculty. Faculty should have access to all data (e.g., scatter plots, unit level salary lists) used to assess salary inequity within their units and are entitled to an explanation of algorithms or methodologies used by their units to determine their equitable salary upon request.*

Given evidence linking salary transparency to increased salary equity, as well as the Working Group's charge to "strengthen transparency around merit evaluation and salary distribution procedures," our recommendations begin with one related to increased transparency.

Issue A1: Salary structure problems within units are often too opaque for affected faculty to provide the required accountability to their units through effective salary grievances (i.e. faculty may not be able to determine whether or not their own salary is equitable without access to relevant unit salary data, undermining their ability to hold their units accountable for compliance with salary equity policy). We believe that this opacity also fails to prompt conversations between faculty and chairs that could potentially lead to equity issues being resolved through available mechanisms (e.g. retention raises) without resorting to formal grievance processes.

Recommendation A1 (to units): Adopt *promising practices* related to salary structure and assessment process transparency, prioritizing cooperative and proactive remedial efforts to inclusively address identified salary inequities through informal resolution processes over escalation to formal grievance processes.

Unlike other salary practices, which can actively contribute to salary structure problems by setting or raising salaries in a way that creates or widens inequities, auditing practices only contribute passively, by omission, when they fail to identify existing

inequities or the salary-affecting actions that contribute to them. The failure to prevent new inequities or rectify existing ones can thus be treated as a contributing factor to these inequities, so we here make several recommendations designed to improve salary structure auditing practices at various levels.

Current Auditing Policy - Procedures

Campus policy already mandates auditing practices that, if properly and regularly performed, would significantly reduce (if not entirely eliminate) salary inequities among CU faculty. All units are required to perform annual salary structure audits as part of the merit review process (with some colleges, such as Leeds, this is done for the college by the Dean's Office), then to "fully resolve" any identified inequities (whether from this required audit or through an equity grievance) through salary adjustments from the unit's raise pool (within the current year if possible but over multiple years if necessary, utilizing up to half of the unit's pool until identified inequities have been sufficiently addressed) and to "verify in writing" to Deans that they have done so.^[17]

According to this policy, the Provost is directed to provide each unit with scatter plots of faculty salaries within each tenure-track (TT) rank (instructor-rank faculty have been excluded from equity audits) by a measure of experience (years since terminal degree, or YSTD), which are "intended as a diagnostic tool to assist the unit head in examining relative career merit of faculty." Salary disparities among unit faculty with "similar experience" (i.e. on the YSTD axis) "should be accounted for in terms of differences in career merit" while in cases of faculty with comparable salaries and experience (i.e. clustered points on both axes of the scatter plot) "their career merit also should be judged equal." The first diagnostic tests for *inequity* (i.e. salaries that are differentiated on bases other than differential career merit) while the second also tests for *compression* (inadequately differentiated salaries where differential career merit would require greater salary differentiation). Both are equity issues, and both are required to be identified during annual unit-level salary structure audits.

Units have some latitude in how they use scatter plots and their underlying data to assess their salary structures. Trend lines can be readily drawn from these data, with salaries above and below this baseline within a comparison group requiring justification in terms of relative career merit within that group. Because salary disparities must be "accounted for in terms of differences in career merit," units must develop some procedure or utilize some algorithm for comparing career merit (the Provost's CEPEWA review used z scores from multiyear averages of annual merit scores, but this is not required by the CU Boulder Academic Affairs Policy on Salary Equity (AAPSE)). Differential career merit should account for all deviation from baselines, with a temporary exception made for "high salaries" that are needed "to attract or retain a faculty member" (i.e. market-rate starting salaries or retention raises) on the condition

that inequities introduced in this way be mitigated such that “in time” all faculty salaries within the comparison group will again “be highly correlated with their relative career merit” rather than permanently structured by adjustments from this secondary salary system.^[18] Since units are required to “fully resolve” identified inequities, they must be able to determine not only *whether* any salaries are inequitably low (no actions are required to correct inequitably high salaries) but also *how much* of a gap exists between current salaries and what would be warranted by career merit.

Units are allowed to develop and use “alternative approaches” to these scatter plots so long as these alternative methods “provide a better basis for the evaluation and maintenance of equity” and have been approved by their Dean and Provost.^[19] In our review of unit salary documents and from our working group deliberations, we found a wide range of salary structure assessment methodologies, ranging from some that appear to be inadequately sensitive to existing inequity or otherwise unable to properly identify extant salary structure problems to some that are statistically sophisticated and/or contextually rich. We recommend consideration of the latter in the *promising practices* resources.

Current Auditing Policy - Accountability

Several accountability mechanisms are designed to ensure that units comply with this mandate, with units required to “verify in writing” to their Dean each year that they have performed this audit as well as to submit for approval mitigation plans for identified inequities. Deans are to be “accountable for the equity of faculty salaries for units that report to him or her” and “should be satisfied that each unit has made salary recommendations consistent with maintaining equity.”^[20] An additional layer of oversight is provided by campus-level administration, with the Provost being “responsible for monitoring equity in faculty salaries,” requiring the Provost’s office to “review each unit’s in-depth assessment of its salary structure” as well as reviewing “each unit’s equity review verification” and “any unresolved inequities identified by the unit or the Dean.”^[21] Further accountability should be provided through the Salary Equity Appeal process, which is intended to hold units accountable to their faculty for compliance with these required auditing practices (including both the regular salary structure assessment and development of remedial plans where applicable).

Finally, required campus-level salary equity audits potentially provide an additional layer of oversight and accountability. The Office of Academic Affairs is required to “conduct biennially a statistical study to review salary trends” for the purpose of monitoring protected class salary inequity. This required campus-level audit “is intended both to monitor the process and to find statistical measures that will assist the units in conducting their own equity evaluations,” which implies that both the “statistical measures” used to assess salary inequity among protected class faculty salaries as well

as any findings of such inequities are intended to be shared with units.^[22] While campus policy doesn't detail how the Provost's office is to "monitor the process" of unit salary structure audits, potentially effective campus-level oversight could compare findings from both audits. Where campus-level audits find significant salary inequities among protected class faculty but primary units fail to identify and resolve these inequities through their required audits, this evidence of inadequately sensitive unit-level assessment methodologies or practices warrants additional scrutiny, perhaps accompanied by provision of technical assistance.

Current Auditing Policy - Implementation Issues

We believe that these requirements of existing campus policy, if fully and properly implemented and enforced, would effectively identify and mitigate extant faculty salary inequities, whether these arise through hiring, merit review, or retention practices. However, we don't believe that key elements of this policy have been fully or properly implemented at the unit, college, or campus levels. Indeed, many (perhaps most) Chairs and Directors appear to be unaware that this policy even exists, and its requirements are not a part of the training for new Chairs and Directors. Some units are (anecdotally) not receiving scatter plots, most do not know what to do with them, and many appear to be doing nothing with them (or approved alternatives) at all. By contrast, a few units have developed equity assessment methods that are worthy of emulation: some have written policies and/or regular processes for analyzing their salary structures for problems like equity or compression; some have proactively addressed these salary structure problems as the result of decisions by Chairs or unit faculty; but many (perhaps most) units have done none of these things. Where CU salary equity policy has been implemented by units, the impetus for doing so appears to have been from enlightened Chairs or other unit faculty members rather than oversight from ARPAC review processes or college or campus level administration.

Ignorance of the policy is likely one reason for this failure; lack of oversight and enforcement is another. Both may be driven, in part, by the inadequacy of financial support for faculty salary adjustments. Regardless of its source, the widespread noncompliance with existing requirements prevents auditing practices from effectively promoting salary equity. Ignorance about requirements and lack of technical capacity to develop and perform effective unit-level salary audits can be addressed through the following recommendations.

Issue A2: Many Chairs and Directors are unaware of or unfamiliar with CU's [Policy on Salary Equity](#) set through the AAPSE and detailed above, with the regular auditing practices and mitigation plans that it requires. As a result, their units perform no such audits, and thus fail to identify or begin to rectify existing salary inequities.

Recommendation A2 (to campus administration): Provide training to Chairs and Directors on CU salary equity policy and procedures as well as assistance (resources, technical assistance, etc.) to units in developing effective auditing practices.

Issue A3: Some Chairs and Directors are aware of and familiar with policy requirements but opt not to comply with them (and have been allowed by administration to do so). As a result, their units perform no such audits, and so fail to identify (much less to rectify) existing salary structure problems.

Recommendation A3 (to campus administration): Commit to addressing salary inequity, which requires commitment to enforcing existing salary equity policies and procedures (regular salary structure audits, mitigation plans, etc.). Utilize existing mechanisms of accountability of Deans to the Provost to ensure that Deans are holding units accountable for policy compliance. Consider adding an additional level of accountability whereby campus-level administration can be held responsible for failing to follow campus policy.

Issue A4: Many units do not know how to use scatter plot data to diagnose salary structure problems, making this tool inadequately sensitive to extant equity problems that therefore go unidentified and unaddressed. Units also lack access to alternative diagnostic tools or methods to more precisely determine equitable salaries from scatterplot data.

Recommendation A4 (to units): Consider adopting *promising practices* related to statistical salary analyses of scatterplot data and/or alternative diagnostic methods. This issue of capacity-building in salary structure analysis could also be addressed through better information sharing across schools and units.

Current Limitations of Salary Structure Analysis

The next set of issues and recommendations concern several limitations on salary structure analysis beyond the failure of units to perform any kind of regular audit. These limitations prevent some CU faculty from having access to relief that would be provided by effective salary structure audits.

Principle 4: *All faculty members are entitled to having their salaries regularly reviewed for inequity, and to have salary adjustments for inequities that are identified.*

Two main sources of exclusion from access to salary reviews prevent some faculty members from the protections that these offer. First, units have not been provided with scatter plots for non-TT faculty, effectively excluding them from unit-level salary structure analyses. Second, some comparison groups are too small to allow for

meaningful salary structure analysis when defined in terms of unit and rank. For these issues we turn to our next recommendations.

Issue A5: Teaching (non-TT) and other specialized faculty are not currently included on provided scatter plots, resulting in their exclusion from unit-level audits. As a result, an entire category of CU faculty are currently excluded from protections that are afforded (at least in principle, if not yet in practice) to other CU faculty.

Recommendation A5 (to campus administration): Include scatter plots for all ranks of teaching faculty and clarify that their salaries are to be included in required unit-level audits.

Issue A6: Some units (e.g., smaller departments, institutes) have too few faculty within some comparison groups to allow for meaningful analysis of salary structure issues. As a result, salary structure problems like inequity are impossible to identify for these faculty.

Recommendation A6 (to units and campus administration): Where this occurs, consider combining multiple otherwise comparable units to form sufficiently-large comparison groups (e.g. as the CEPEWA process did with CU's College of Arts and Sciences (A&S) divisions) to allow for meaningful assessment of all CU faculty salaries. For example, where two or more units within the same A&S division have too few Associate Professors per unit for meaningful salary structure assessment but have comparable salaries in other ranks, these can be combined to create larger comparison groups and in so doing extend equity protections to faculty in smaller units that currently lack such protections.

Issue A7: Some units (departments and institutes) are too diverse in their disciplinary specializations to allow for meaningful analysis of salary structure problems within comparison groups (e.g. institutes and interdisciplinary units with faculty at divergent discipline-based pay scales). Procedures described in section E.1.f of the AAPSE apply only to institutes, not interdisciplinary departments, and are confusing, leaving such faculty practically unable to access salary equity protections afforded to other faculty.

Recommendation A7 (to affected units and campus administration): Revisit section E.1.f of the AAPSE; consider developing something comparable for interdisciplinary units. One way or another, ensure that faculty affiliated with such units can be included in salary structure audits and that the units understand processes by which they are supposed to conduct salary assessments.

Next, we focus on an ambiguity about how to assess career merit, which, as noted above, is central to how salary equity is defined and crucial for unit-level salary structure audits.

Issue A8: Audits require relatively precise measures of career merit, but nowhere in CU or campus policy is career merit operationally defined. This ambiguity undermines salary structure assessments that are supposed to be based on relative career merit.

Recommendation A8 (to campus administration and units): Campus should consider a model (parallel to the use of scatter plots as the diagnostic tool) with a required default definition for career merit (e.g. z score of multi-year average annual merit score) unless an alternative operational definition that is better able to identify extant salary structure problems has been approved by the relevant Dean and Provost. Units should consider (and the FSPWG can share) other models (e.g. from CU's School of Education (EDUC)) for this latter purpose. Units should not be able to shirk salary equity audit requirements based on this ambiguity about the operational definition of career merit. Because equity audits require comparison between faculty salaries in terms of career merit, merit must therefore be quantifiable and comparable, whether on an annual or career basis.

Mitigation of Existing Inequities

Finally, we identify issues related to the development and implementation by units of remedial inequity mitigation plans which, along with regular salary structure audits, can contribute to faculty salary inequity not by introducing or widening it, but by failing to identify and then to correct for inequities that originate in other salary practices. Here we refer back to Principle 3, which calls for the institutionalization of remedial mitigation plans alongside regular audits in order to fully resolve identified faculty salary inequities, along with another core principle.

Principle 5: *Units should have well-developed plans for rectifying over time any salary inequities identified through regular salary structure audits or through salary equity grievances, as well as those introduced or increased through proposed salary-affecting actions (e.g. in hiring, retention). These plans must include adjustments needed to reduce those inequities as well as a timeline for salary equity to be restored.*

This principle, which can also be viewed as a recommendation, affirms what we understand to be included in the new retention offer guidelines, which ask units to identify any equity impacts of proposed retention raises as well as to develop and submit for approval plans to rectify inequities that such salary adjustments might create or widen. It is also consistent with CU policy, which allows for temporary salary

disparities from market-based salary adjustments like retention raises but only on the condition that these be mitigated over time until returned to equity, where all salaries within comparison groups are again differentiated only by differential career merit.

We believe that CU has postponed the rebalancing between faculty recruitment and retention imperatives and those concerned with maintaining salary equity long enough, even if the fiscal emergency that prompted its postponement has become a new normal. Having recently addressed some of its accumulated salary structure problems in 2021's CEPEWA compliance exercise, we believe that it is now time for faculty and administration alike to commit to working together to address its remaining problems as well as attending to their various drivers so that these salary structure problems don't return.

FUTURE WORK

While this document represents an early analysis of salary practices at CU Boulder in terms of their potential to worsen or improve salary structure problems like inequity, significant future work will be required to successfully implement and assess these recommendations as well as to fully understand and adequately address the university's current salary structure problems. This includes, but is not limited to, a deeper dive into salary data that could potentially document the extent as well as the key drivers of salary inequity and better identify promising practices by identifying units that are making the most progress in addressing their salary structure problems. While the FSPWG was able to draw on the collected experience of its members in understanding the sources and extent of such problems, we lacked access to salary data from which detailed analyses could be made and important hypotheses tested. Further review and discussion leading to additional recommendations for merit pool increases or alternate sources to fund reparations of inequities in units could also be prioritized for future work, with our recommendations calling for more support but without identifying concrete sources or strategies for securing this. This might include considering what options may be available internally and benchmarking what other universities are doing under similar fiscal constraints. Additionally, the current lack of oversight of the salary audit process needs to be formally addressed. This could include creating a potential accountability board, oversight by BFA including the submission of annual reports, or other solutions. An important item to be addressed in future work is creating dedicated training for Directors, Chairs, and Deans related to addressing these issues. Lastly, with the complex nature of contracts and appointments of non-TT faculty, we also recommend an in-depth study of salary equity relative to these faculty ranks.

[1] CU Boulder Academic Affairs Policy on Salary Equity (AAPSE), updated Spring 2015. No direct link, but linked to OFA Salary and Equity webpage: <https://www.colorado.edu/facultyaffairs/faculty-career-milestones/evaluation-and-compensation/salary-and-equity>

[2] Units form comparison groups, since inequities cannot be based on salaries of faculty members in other units. Operationally, ranks within units are also used to form comparison groups, but ranks are not mentioned in policy documents as forming separate comparison groups. The CEPEWA audit uses different formulas for different ranks.

[3] Units are required to “describe in writing the factors used in determining career merit,” which is also required for standards to assess annual merit. These standards should be the same—policy documents make no reference to separate criteria or processes for assessing annual and career merit—with career merit a function of annual merit scores over time. This is further implied by Regent Policy, which defines merit as “peer evaluation of faculty performance in the areas of teaching, scholarly/creative work, and leadership and service” and characterizes career merit as allowing “a unit to remedy any inadvertent discrepancies caused by the vicissitudes of budgets and timing of productivity,” which implies that it is comprised of annual merit scores over multiple years.

[4] One question that arises is whether career merit is defined only in terms of annual merit scores as determined by the unit through merit evaluation processes or whether other indicators of merit (like outside job offers) might justify permanent salary differences between otherwise-comparable faculty within a comparison group. According to the CEPEWA audit, state law allows permanent salary differences that result from retention offers, which is treated as “a factor indicative of job-related experience, quality and quantity of production, and exceptionally high merit,”² as well as number of additional past and current appointments (citing chair and director appointments as examples), casting this as “a factor indicative of job-related experience and quality and quantity of production.”³ Regent Policy, however, requires that merit “be the prevailing factor in all recommended salary increases,” noting immediately afterward that “determinations of merit shall be made by a collegial and consultative process within the primary unit using clearly articulated standards of merit and employing existing primary unit (defined in the glossary) guidelines, including peer review,” which implies that merit scores determined by the unit rather than secondary indicators like outside offers or internal appointments be used to define career merit for purposes of justifying faculty salary disparities. Regent Law distinguishes raises based on merit from retention raises (“Merit shall be the prevailing factor in all salary increases. Salaries shall not be justified solely based on offers from other institutions.”), which implies that outside offers are not constitutive or necessarily indicative of merit, and so cannot in themselves justify permanent salary differences between otherwise-comparable faculty within a comparison group.

[5] Comparison groups are described in terms of “professional experience,” since units “must review the salary of each individual relative to other faculty members in the unit with similar career merit or professional experience,” and such that “if several faculty members have similar experience but their salaries differ significantly, the differences should be accounted for in terms of differences in career merit; if professional experience and salaries are equal for two individuals, their career merit also should be judged equal.” Scatterplots operationalize this in terms of “years since terminal degree” only, but the

² <https://www.colorado.edu/hr/colorados-equal-pay-equal-work-act/faculty-equity-review-2021-22-equity-increases>

³ Ibid.

CEPEWA also uses years of service at CU and years in rank (along with YSTD) as factors indicative of job-related experience for salary differentiation purposes.

[6] AAPSE, Preamble.

[7] On p. 11, in “For Our Faculty” section of Executive Summary.
<https://www.colorado.edu/academicfutures/>.

[8] On p. 34, “Closing” section. <https://www.colorado.edu/odece/cu-boulder-diversity-plan>.

[9] Regent Policy 11.B.1.B.1.a.

[10] See, for example, Hearn, J.C. (1999). Pay and performance in the university: An examination of faculty salaries. *The Review of Higher Education* 22(4), 391-410, and Terpstra, D.E. and Honoree, A.L. (2008). Faculty perceptions of problems with merit pay plans in institutions of higher education. *Journal of Business & Management* 14(1), 43-59.

[11] Sutton, T. P., & Bergerson, P. J. (2001). Faculty compensation systems: Impact on the quality of higher education. *ASHE-ERIC Higher Education Report*, 28(2). San Francisco, CA: Jossey-Bass, p. 9.

[12] Hanley, P.F. & Fortenbrock, D.J. (2006) Making fair and predictable salary adjustments for faculty of public research universities. *Research in Higher Education* 47(1), 111-12.

[13] According to Section 5.B.5.A2 of Regent Law, units are required to provide “specific written criteria” by which faculty are to be assessed during appointment, reappointment, tenure, and promotion, as a key component of “a fair and unbiased evaluation.” Administrative Policy Statement (APS) 5008 reiterates the requirement that units develop and use written standards in the annual merit evaluation process, noting that each “faculty member’s performance shall be evaluated based upon performance standards developed by each academic unit and according to any written expectations agreed to between the faculty member and the unit” (II-A) and that “a description of the evaluation process and the criteria to be used must be available, in writing, to each faculty member.” (II-F).

[14] Taylor, L. L., Lahey, J. N., Beck, M. I., & Froyd, J. E. (2020). How to do a salary equity study: With an illustrative example from higher education. *Public Personnel Management*, 49(1), 57–82.

[15] Lyons, E. and Zhang, L. (2022). Salary transparency and gender pay inequality: Evidence from Canadian universities. *Strategic Management Journal* (online early). <https://doi.org/10.1002/smj.3483>.

[16] Belogolovsky, E., & Bamberger, P. A. (2014). Signaling in secret: Pay for performance and the incentive and sorting effects of pay secrecy. *Academy of Management Journal*, 57(6), 1706–1733.

[17] AAPSE, §A.4.

[18] AAPSE, §E.4.

[19] AAPSE, §A.4.

[20] AAPSE, §A.4.

[21] AAPSE, §C.2.

[22] AAPSE, §C.1.