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Executive Summary

The composition of the Annual Report on Professional Scientific Salaries has significantly changed since its inception in 1994, and the audience of the Report has grown to include the Board of Regents, the Provost, and the Vice President for Business and Finance. In its current state the Report provides only a limited picture of the P&S systems market status, where the conclusion of the Report is skewed toward market positions associated with single incumbent classifications. The source of the skew is derived from two sources:

- The P&S classification sample is not representative of the P&S employee population.
- The Overall ISU vs. Market ratio is based on a simple average.

A further complication is that the definition of the salary midpoint in the Report does not match the definition of the midpoint as applied, which results in a market ratio that is falsely high. Additionally, the Report does not contain a reliability measurement for the inferences made, i.e., ISU’s aggregate market position.

Iowa State University’s 2000-2005 Strategic plan details three basic platform elements that will help ISU in achieving its goals. One of these is, “Commitment to attracting and retaining world-class faculty and staff, along with competitive employee compensation and support for success.” Measuring progress with respect to faculty and staff compensation competitiveness is also called for. The Annual Report on Professional and Scientific Salaries could become an indispensable tool used to evaluate the competitiveness of the P&S compensation system at ISU, and provide an assessment tool for individual employees to gauge their salary performance. This can only be done if the deficiencies are addressed, where:

- Sufficient resources are provided to those who participate in preparing future Reports such that deficiencies discussed can be eliminated.
- Sound statistical methods are employed in the sampling procedure and inferential-statistical analysis.
- The Report is organized in the best possible manner which reflects the high academic and professional standards of Iowa State University.

This subcommittee report proposes policy changes to address the fact that there is very little penetration into the pay matrix (i.e., motion toward the midpoint) and the expectation by employees that there should be such a motion. The specific recommendations are:

- Expectations for penetration, or translating, up the pay grade should be defined.
- Allow managerial discretion to offer salaries for new hires up to the midpoint value of the pay range, or more specifically up to the midpoint for the classification.
- A comprehensive market review of the P&S system should be conducted on a cyclic basis.
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APPENDIX A
Purpose and Scope

The Professional and Scientific Council’s Compensation and Benefits (C&B) Committee is charged with addressing salary and benefits issues that affect employees classified as Professional and Scientific (P&S) at Iowa State University (hereinafter referred to as ISU or the University). On two occasions in the last decade the C&B Committee has reviewed and made recommendations related to the “Annual Report on Professional and Scientific Salaries” (hereinafter referred to as the Report or Annual Report). Iowa State University’s Department Human Resource Services has published the Report yearly since 1994, with the exception of 1997. On two occasions in the last decade, the C&B committee has reviewed and made recommendations related to the Annual Report.

Because the composition of the C&B Committee changes annually, the history of such reviews becomes fragmented or forgotten by the Committee and Council body. This review is intended to record how the Reports have evolved over time and summarize P&S Council actions concerning the Report. A discussion of the effectiveness of the 2002 Report as an evaluation tool is also presented. Previous Council recommendations, which are still pertinent, are reiterated with new recommendations for making the Report a more useful tool in determining the values of P&S positions and the state of the P&S compensation system.
1.0 Summary Table

For the convenience of the reader Table 1.1 below summarizes several key values from the Report published to-date.

<table>
<thead>
<tr>
<th>Publication Date</th>
<th>Overall Ratio</th>
<th>Weighted Ratio</th>
<th>Benchmarks*</th>
<th>Benchmarks Common to all previous years</th>
<th>Number of Survey Sources</th>
<th>Pay Matrix Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994, May</td>
<td>1.04</td>
<td>0.99</td>
<td>104</td>
<td>-</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>1995, May</td>
<td>1.05</td>
<td>0.98</td>
<td>97</td>
<td>72</td>
<td>5</td>
<td>2.0% / 1.0%</td>
</tr>
<tr>
<td>1996, May</td>
<td>1.03††</td>
<td>0.99</td>
<td>95</td>
<td>50</td>
<td>7</td>
<td>2.3% / 0.0%</td>
</tr>
<tr>
<td>1997†</td>
<td>N/R</td>
<td>0.98</td>
<td>N/R</td>
<td>N/R</td>
<td>N/R</td>
<td>2.0% / 2.0%</td>
</tr>
<tr>
<td>1998, May</td>
<td>0.980††</td>
<td>0.998</td>
<td>103</td>
<td>39</td>
<td>5</td>
<td>6.8% / 7.4%†§</td>
</tr>
<tr>
<td>1999, May</td>
<td>0.982††</td>
<td>0.983</td>
<td>122</td>
<td>31</td>
<td>6</td>
<td>2.0% / 3.0%</td>
</tr>
<tr>
<td>2000, May</td>
<td>0.978</td>
<td>N/R†††</td>
<td>147</td>
<td>27</td>
<td>6</td>
<td>3.0% / 3.0%</td>
</tr>
<tr>
<td>2001, May</td>
<td>0.987</td>
<td>N/R†††</td>
<td>153</td>
<td>22</td>
<td>7</td>
<td>3.0% / 5.0%</td>
</tr>
<tr>
<td>2002, May</td>
<td>0.966</td>
<td>N/R†††</td>
<td>160</td>
<td>20</td>
<td>9</td>
<td>3.0% / 3.0%</td>
</tr>
</tbody>
</table>

N/R = not reported

* Between 1994 and 2002 the number of P&S classifications decreased from 479 to 440.
† The 1997 Report was not issued, though a ratio for 1997 is reported in the 1998 issue.
†† Overall Ratio not published, the value was calculated from data in Appendix A from each issue.
††† Weighted Ratio not reported. No calculation was made, as incumbent data is no longer included in Appendix A.
§ Average values reported, changes to the minimum and maximums were not uniform.

The key figure of merit reported is the ISU/Market ratio. A value of 1.0 would indicate ISU salaries are on par with prevailing market values. A ratio value less than 1.0 would indicate ISU salaries are below the prevailing market values. Two ratios are listed above. The Overall Ratio is the simple average of all the ISU Salary/Market Value ratios for the classifications studied while the Weighted Ratio factors in the number of incumbents in the classifications studied.

The number of sources used requires some discussion. The wide range of functions represented by the P&S classifications necessitates the use of several salary surveys. Within each source, there may be several job descriptions that are comparable to ISU classifications or there may only be one. Of the survey sources used, there are only two common to all the Reports: the College & University Personnel Association (CUPA) Administrative Compensation Survey and the University of Missouri Higher Education Salary Survey. Several salary surveys are not conducted on an annual basis, some are no longer available or relevant, and new sources have been added as they become available. There is no single source on which to base a market study of the P&S classification system.

Heading off each section of the Annual Report histories is an inset table showing the definition of the “midpoint” and “benchmarks” in each issue of the Report. The midpoint definitions are highlighted in this manner because over the years the issue of said definition has been a point of discussion amongst the P&S population. The benchmark definition is highlighted to facilitate discussion in Section 4.0.
2.0 History

Readers with a solid institutional memory and familiarity with the Annual Reports may wish to skim the history section or jump directly to section 4.0 Evaluation and Discussion of the 2002 Report.

On July 1, 1993, ISU restructured the P&S employee group per recommendations set forth by Mercer, Inc.¹ The following May the Human Resources Office published the first “Report on Professional and Scientific Salaries,” as an annual report from Dorothy Sally, Manager, P&S Classification & Compensation.² As stated in the introduction to the 1994 Report, it served a “critical component” of active compensation management – “regular review of the institution’s salaries in relationship to its labor market.” Additionally, the Report was provided to managers to assist in making salary decisions. It states, “The narrative, tables and graphs provided in this report should be used in guiding compensation decisions.”

2.1 The 1994 Report

<table>
<thead>
<tr>
<th>Definitions 1994</th>
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<tbody>
<tr>
<td><strong>Midpoint</strong> - “…the midpoint of the range reflects the market rate for the job,” and that the midpoint “is the level at which comparisons are made when conducting salary surveys.”</td>
</tr>
<tr>
<td><strong>Benchmark</strong> - “…positions are selected on the basis that they represent a cross section of jobs from entry level to director level positions. They also represent fairly common jobs found in higher education.”</td>
</tr>
</tbody>
</table>

The Report proposed a salary model based on several assumptions and expectations:

- Translation through the pay grade would be primarily performance-based, where movement would be accelerated toward the midpoint, and slowed after the midpoint is reached.
- Any movement beyond the midpoint would be based on above-average performance.
- The midpoint was defined as listed above.
- Movement toward the midpoint was assumed. “To be competitive with the market, over a period of time, an employee performing satisfactorily would be expected to move to the midpoint of his or her pay grade,” but that “movement to the midpoint may take several years.”

A ratio of ISU’s salaries to the overall market was presented, both as a simple average, and as an averaged weighted by the number of employees within each job title. The Report states that the “weighted ratio is a more accurate and meaningful comparison to the market.”

Market comparisons of 104 classifications out of 479 classifications (22%), called “benchmarks,” were made against similar jobs listed in six national and regional salary survey reports. The market was defined as “other colleges and universities of similar size and scope.” Further, the appropriate market for grades P11 through P16 was defined as “regional,” and for positions at or above P17 it was defined as a “national” market. Based on data collected, it was concluded that average P&S salaries appeared to be competitive with respect to the market on an aggregate basis. The simple market composite ratio was 1.04 and the weighted ratio was 0.99. Data from four surveys was combined to compare the P&S Pay Matrix to market data in the “Salary Structure Data” subsection. The Report indicated that lower pay grades were more commonly below
market, possibly due to promotional turnover or term positions on contracts and grants, however, the Pay Matrix appeared to be in line with market data.

The conclusion of the initial Report was that ISU P&S salaries appeared to be competitive and that, “The narrative, tables and graphs provided in this report should be used in guiding compensation decisions.”

2.2 The 1995 Report

<table>
<thead>
<tr>
<th>Definitions 1995</th>
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<tbody>
<tr>
<td><strong>Midpoint</strong> - “…is the salary midway between the minimum and maximum of a pay range and is considered to be the going rate or market value of the job. Midpoint or market value assumes the employee consistently performs all responsibilities in a full satisfactory manner is fully trained and has significant experience in the job.”</td>
</tr>
<tr>
<td><strong>Benchmark</strong> - “…those jobs that are highly visible and common to a variety of institutions and normally employ many workers ranging from entry level to director level positions.”</td>
</tr>
</tbody>
</table>

The 1995 Annual Report was published as a Revised edition dated July 5, 1995. The main body, titled “Survey Information” in 1994, became “Section I: External Competitiveness.” Dropped for this issue was a histogram of the market ratio for all classifications studied and a chart from the CUPA Survey titled, “CUPA 1993/94 Salary Increases by Job Family.” A substantial new addition included a new chart titled “Distribution of New Hires Starting Salary in the Pay Matrix FY95” and a table called “Salary Offers, New Hires July 1994 through March 1995.” An entire section was added to describe salary structures versus gender demographics, “Section II Internal Equity.” Section II contained substantial new data in chart format, which included a chart of employee distribution across grade levels and a table titled “Distribution of Employees by Pay Grade and Position Within Pay Matrix. As seen in Table 1 (above) the number of benchmarks was reduced but the market ratios were relatively unchanged. The total number of P&S classifications, at the time, was not provided.

The Report advises managers to make market considerations when making salary decisions, but recognizes that no system is in place to move salaries toward the midpoint for employees performing satisfactorily – though the University of Iowa adopted a formal policy addressing that “problem.” The discussion on midpoint salary goes on to promulgate a policy of differential pay increases for employees within a pay grade despite identical performance ratings, smaller salary increases for employees in upper quartiles (i.e. above the midpoint). “Employees in the upper quartiles are already receiving adequate compensation for their positions and this permits those in the lower levels of the pay range to improve their situations relative to the midpoint.” It should be noted the Report acknowledges, “…in the long term it was clearly the initial level of pay that made the most difference in ultimate pay level, not differences in individual performance from year to year,” though the source was not cited. A proposed Pay Matrix for FY96 showed a 2% increase in the minimum of each pay range and 1% increase in the maximum. The difference was intended to begin narrowing the pay ranges, a goal suggested by the Mercer study.

The Conclusion section of the Report added a paragraph concerning motion toward the midpoint of a salary grade. “Special attention should be given to those individuals who, despite satisfactory performance are not progressing toward the established market rate defined by the
midpoint of a salary grade.” On an aggregate basis, it was concluded that P&S salaries were competitive with respect to the external market.

2.3 The 1996 Report

In 1996 the title of the Report changed from “Report on Professional and Scientific Salaries” to “Annual Report on Professional and Scientific Salaries.” The chart titled “Market Composite Pay Structure Ratios” was moved to Appendix B and the “Salary Offers, New Hires…” was dropped from the Salary Structure section. Only the weighted ISU/Market ratios were presented in the Market Analysis section, and a new section titled Hiring Practices absorbed some of the Report body. The Salary Structure section was renamed Pay Structure.

The Introduction section was expanded to contain a bulleted summary of ISU P&S compensation policies and practices:

- to ensure that the compensation program does not discriminate against an individual or group
- to pay salaries that are competitive on an overall basis with the appropriate job market places
- to ensure equity between jobs within the university-wide P&S system
- to provide career paths and opportunities at the university level
- to base salary increases on individual contributions and performance within the constraints of available resources

Although all the 1994, 1995, and 1996 Reports described the midpoint as a salary suitable for an incumbent who consistently performs in a “…fully satisfactory manner, is fully trained and has significant experience in the job,” the Pay Grade Midpoint section now simply promulgates performance-based adjustments.

A bulleted summary details points of concern surrounding the midpoint values that have generated “Considerable discussion…over the past few years.” The points of concern are repeated below:

- average salary increases have in recent years been in the range of inflation; concerns are growing about salary compression and lack of progression in pay grades.
- no guidelines have been provided regarding the factors governing relative pay within the pay ranges.
- P&S salary adjustments are based primarily on performance, movement toward the midpoint can only be addressed through that mechanism on an annual basis.

As in the previous Report, it is acknowledged that “…salary increases in many organizations, including ISU, are based on performance appraisals, in the long term it is clearly the initial level of pay that makes the most difference in ultimate pay level, not differences in individual performance.
from year to year.” And that, “…no uniform system has been adopted to move satisfactorily performing employees toward the midpoint of their grades.” The Pay Matrix proposal was to increase minimums 2.3% with no change of the maximums, again to narrow the salary ranges.

The Report’s Conclusion section was pared down to one paragraph. No suggested model was issued concerning moving satisfactory employees toward the midpoint, as in the 1995 Report. Conclusions per the relative market position were made in the Market Analysis section, and were similar to previous years.

2.4 The 1997 Report

In 1997 the Annual Report was not issued. Carla Espinoza, Assistant Vice President for Human Resource Services, explained, “We went through a staffing transition; we were short-staffed, and developing classification priorities forced us to put the report at the end of the priority list. By the time we were able to put it back on our priority list the 1998 Report was due, so I decided not to go back and do 1997.” The nature of the Report’s audience was shifted in 1997 as well. It was recorded that Dorothy Sally was charged with enhancing the Report for presentation to the Vice President of Business and Finance as a measurement tool, in particular to provide a picture of where time and energy are being focused. Though the Report was not publicly issued, an aggregate market ratio was subsequently provided in 1998.

2.5 The 1998 Report

<table>
<thead>
<tr>
<th>Definitions 1998</th>
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<tbody>
<tr>
<td><strong>Midpoint</strong> – “…is the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. Midpoint or market value assumes the incumbent has significant experience in the job and consistently performs in a satisfactory manner.”</td>
</tr>
<tr>
<td><strong>Benchmark</strong> – “Benchmarks are those jobs readily identified in a variety of institutions.”</td>
</tr>
</tbody>
</table>

Despite a one-year absence, due to priority and staffing pressures, an Annual Report was issued in May of 1998. Several changes were made. Appendix B was modified; the current P&S Pay Matrix replaced “Composite Pay Structure”. A table was added to the Hiring Practice section illustrating the number of new employees hired at the minimum, within the 1st quartile and above the first quartile; further changes are detailed below.

Significant changes included an explanation of the non-uniform increases to the 1999 P&S pay matrix. Significant increases above the average value of 7.4% were made to the grade maximums for grades 16 and higher. The increase “… will eliminate red circle pay for approximately 47 positions and allow for some salary movement for long term employees.” Red circle pay was a carry over from the Mercer Inc. restructured system and old pay matrix. Any employee whose salary was above the maximum of the grade within which their classification was assigned was “red circled” and would not receive annual salary increases until such time as said...
salary fell within the pay matrix. The Report does cite “an analysis of pay ranges” in its justification for the Pay Matrix proposal; however, no data is presented or cited.

Discussion of the pay grade midpoint and issues concerning penetration into the pay grade were similar to the previous year. Managers were advised to use knowledge of the actual market information for a specific job for the purpose of salary progression discussions. No mention of what resources were available to managers for acquiring said knowledge was made. However, the Report states the midpoint is considered the “prevailing market rate” for the job. It is noted that the actual market value for the position may fall above or below the grade midpoint, as the grade midpoint is an aggregate value for each grade.

The Conclusion section was similar to the previous years. The conclusion that ISU’s P&S salaries were “in line” with the market were again made in the Market Analysis Section.

2.6 The 1999 Report

| Definitions 1999 |
|------------------|------------------------------------------------|
| **Midpoint**     | “…is the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. Midpoint or market value assumes the incumbent has significant experience in the job and consistently performs in a satisfactory manner.” |
| **Benchmark**    | “Benchmarks are those jobs readily identifiable in a variety of institutions.” |

A cautionary statement was added to the Market Analysis section: “Caution should be used in drawing conclusions from the data.” along with the following explanatory paragraph:

When analyzing market data, a number of factors must be taken into consideration including the level of match between the jobs being compared, the number of institutions responding to the survey, the comparability of institutions responding, the geographic area, etc. In most cases, the composite is based on data from up to three survey sources with limited number of respondents reported. Analyzing the market is one component of monitoring the effectiveness of pay practices within an organization. Another critical factor to evaluate effectiveness is the ability to attract and retain qualified and competent staff.

The Pay Structure section was renamed Pay Matrix. It was noted that due to the tight labor markets nation-wide a new policy was implemented, effective July 1, 1999, to allow managers to hire new employees within the first-third of a pay grade, based on individual qualifications. The proposal for the FY 2000 pay matrix was to increase the minimums 2% and maximums 3%, again widening the ranges. The Report states that “this adjustment is consistent with market data,” but no data was cited or presented to support the statement.

In the Pay Grade Midpoint section, the table “Distribution of Employees by Pay Grade and Location within the Pay Matrix” illustrated the percentage of employees in each pay grade who fell below the midpoint. Previously the table showed the percentages of employees below the first quartile and the midpoint values.

The Conclusion section retained the same structure from the previous year.
In the spring of 1999 the P&S Council Executive committee charged the Compensation & Benefits committee with evaluating the Annual Reports in an effort to answer several questions. In meeting with a P&S C&B subcommittee, Carla Espinoza noted that the audience for the Annual Report was expanded to include Board of Regents, the Provost’s Office, the Vice President of Business and Finance and department heads. Espinoza emphasized that the Report was not her preferred method communicating with P&S employees. According to the subcommittee record, the Report is now intended for use by administrators looking at employee groups, not for decisions concerning individual positions or incumbents.

2.7 The 2000 Report

<table>
<thead>
<tr>
<th>Definitions 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Midpoint</strong> – “…is the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. In the ISU pay systems, midpoint is considered to be the average market value of the jobs in the range.”</td>
</tr>
<tr>
<td><strong>Benchmark</strong> – “Benchmarks are those jobs readily identified in a variety of institutions.”</td>
</tr>
</tbody>
</table>

The 2000 Annual Salary Report dropped the use of a weighted average for the aggregate ISU vs. Market Ratio, as the simple average was not significantly different from the weighted average. Notice was not provided to the reader that this transition had occurred, nor was justification for the change given. It should be noted that President M. Jischke, who strongly supported calculating the overall market ratio on a weighted average basis (see next section), left ISU for Purdue in 2000. Discontinuation of a weighted average was reflected in Appendix A, as the column listing the number of incumbents in each classification was omitted.

The cautionary statement was moved to the introduction, while the explanatory paragraph remained – in part – in the market analysis section. The Pay Grade Midpoint section was dropped. A brief statement concerning the definition of the midpoint was introduced in the Pay Matrix discussion. A table describing the number and motive for employee resignations, or separations, received for the fiscal year was added to the market analysis section. Rounding out the changes, minority demographics were added to the Internal Equity section. Lastly, no authors or technical contacts were listed for the 2000 Report, only the Office of Human Resource Services was listed on the cover page.

In the Hiring Practices section it was noted that the number of employees hired above the first-third was 28% compared to 35% of the new hires above the first quartile from the previous year. It was concluded that the broader hiring range was effective in providing latitude in competitive hiring decisions made by managers.

As previously stated, audience of the 2000 Report grew to include Vice President for Business and Finance, Board of Regents Office, Provost’s Office and department heads. The growth in the audience to include the Board of Regents implies the information and conclusions detailed within the Report are of a high-level nature. For the first time, the Report was posted on the HR web site as a PDF file.

The Conclusion section retained the same structure as the previous year.
2.8 The 2001 Report

**Definitions 2001**

**Midpoint** – “...is the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. In the ISU pay systems, midpoint is considered to be the average market value of the jobs in the range.”

**Benchmark** – “Benchmarks are those jobs readily identified in a variety of institutions.”

Gender and minority demographics were eschewed to Appendix D and E respectively. Instead of distributions of minority populations per pay grade, charts of the average salary per pay grade for minorities compared to the general P&S population were presented. It was proposed that the pay matrix should be increased 3% at the minimum and 5% at the maximum. The Report states that “this adjustment is consistent with market data,” but no supporting data was expressly presented.\(^{11}\)

The Conclusion section was dropped.

2.9 The 2002 Report

**Definitions 2002**

**Midpoint** – “...is the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. In the ISU pay systems, midpoint is considered to be the average market value of the jobs in the range.”

**Benchmark** – “Benchmarks are those jobs readily identified in a variety of institutions.”

The 2002 Report retained virtually the exact same structure as the 2001 Report.\(^{12}\)
3.0 P&S Council Actions per the Annual Salary Reports

Since the Annual Report’s inception the P&S Council has reviewed and made suggestions for enhancing the original and subsequent Reports. In May of 1994, ISU President Dr. Martin Jischke met with the P&S Council. Then P&S Council President Dan Woodin reported that the aggregate ISU vs. Market ratio was not weighted by the number of employees in each classification, though Dr. Jischke was sure that was not true. President Jischke followed up on the matter and found a weighted average was indeed not used. By his request a weighted average was incorporated into the 1994 Report, also published in May. Based on the 104 classifications studied the Overall Ratio, i.e. simple average, was 1.04, while the Weighted Ratio was 0.99, a 5% difference.

From 1995 through 1998 the P&S council took no formal actions concerning the Annual Reports. However, discussions concerning penetration into, or translation through a grade, were taking place, as evidenced within the Annual Reports.

In the spring of 1999 the P&S Council Executive Committee charged the C&B Committee with evaluating the Annual Report.8 The Executive committee posed several questions for the C&B committee to answer. In an effort to answer the questions two subcommittees were formed which resulted in two separate subcommittee reports.2,14

Much of the information for the subcommittee reports was collected in discussions with Human Resource Services staff. On October 26, 1999, C&B members met with Carla Espinoza to discuss several questions.15 On this occasion the definition of the P&S Pay Matrix Midpoint was sharpened. According to Espinoza, ISU’s definition of the midpoint was defined in the Mercer, Inc. reorganization recommendations: it was set at 85% to 92% of market value. An example illustration on the use of the midpoint was given:

The market value for a plant scientist is $50K so the midpoint is set at 85 to 92% of 50K. They attempt to hire at below or above the midpoint based on years of experience.

This indicates a disconnection between the midpoint as defined in the Report and the midpoint as applied to the P&S Pay Matrix. Espinoza further stipulated that number of years in service in a position has no bearing on P&S salaries and there is no relationship between years of service and upward movement through the pay matrix. This supports statements made to that effect in previous Reports.

Following submission of the subcommittee reports, the C&B committee issued a motion containing recommendations for future Reports, which was subsequently endorsed by the P&S Council at the May 4, 2000, general meeting.8,16 On May 15, 2000, P&S Council President Danette Kenne forwarded the recommendations, to Carla Espinoza, Provost Rollin Richmond, and Assistant Provost Ellen Rasmunsen.17 The recommendations, in brief, were:

1. Incorporate a clear statement of purpose into the Introduction.
2. Document how source surveys were used to determine External Competitiveness.
3. Provide narrative explaining trends highlighted by the charts of “P&S Staff Demographics.”

Revision 3
5. Clarify the implications of the Pay Grade Midpoint.
6. Set expectations of progression through the range (if any).
7. Include ethnicity by grade.
8. Include trend data on separations by class and by reason.

Recommendation items 1, 3, 7 and 8 were realized in the 2000 Report. Items 2, 4, 5 and 6 were not fully realized. Item 1 was the driving force for introducing the cautionary statement. The recommendation text stated, “A clear statement of purpose would discourage supervisors from drawing inappropriate conclusions.” Of these four items, numbers 2, 5, and 6 are still pertinent and are discussed in the following section. Item 4 was likely discounted as reclassifications have a minor effect on P&S employee distribution.

Starting with the Fall 2002 academic session, C&B committee priorities included salary compression, P&S/Merit pay overlap, and review of the P&S pay scale. To study any of these subjects requires data, and one such source is the Annual Report. At the November 6, 2002, P&S Council meeting Carla Espinoza stated that employees should not use the Report as the sole source of information for benchmarking their position; it is up to the individual employee to locate other sources.18 Espinoza also noted that with regular Council turnover, the same questions concerning the Report resurface. In studying the Report several old questions did resurface and new ones arose, which led to the preparation of this document. Reoccurring questions may be eliminated by addressing them within future Reports.

4.0 Evaluation and Discussion of the 2002 Report

Iowa State University’s 2000-2005 Strategic plan details three basic platform elements that will help ISU in achieving its goals. One of these platforms is, “Commitment to attracting and retaining world-class faculty and staff, along with competitive employee compensation and support for success.” Measuring Progress with respect to faculty and staff compensation competitiveness is also called for within the Strategic Plan. The 2002 Report contains a significant amount of data, much of which is located in the appendices. In the following discussion the reader is encouraged to remember that though some “serious deficiencies” are discussed, the overall effort put forth in generating the Report and its data is significant and considered a worthwhile expenditure despite any of the deficiencies. It’s our belief that by reconciling the deficiencies, the Report would become an indispensable tool for evaluation of the state of the P&S compensation system. In the recommendation section, several organizational recommendations are made but are not discussed below.
4.1 Statistical Issues

<table>
<thead>
<tr>
<th>Statistical Definitions</th>
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<tr>
<td><strong>Sample</strong> – for the purpose of our discussion the term Sample will refer to the classifications used in the Report.</td>
</tr>
<tr>
<td><strong>Population</strong> – for the purpose of our discussion the term Population will refer to all P&amp;S classifications.</td>
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</table>

The Overall Ratio has not been based on a weighted average since the 1999 Report; a simple average has been used. This should be considered a serious deficiency. A weighted average should be used as classifications do not necessarily contribute equally to the value of the Overall Ratio. Sampling 160 classifications out of 440, representing hundreds of employees, requires a weight factor for multiple incumbent classifications. However, the reader should be made aware of the method used. In the 1999 Report the simple average and the weighted average were numerically equivalent, but that does not equate to statistical equivalence. It was serendipitous that the values were similar in 1999, but it should be noted that they were significantly different in 1995 (1.05 vs. 0.98). The decision to drop the weighted average was motivated by workload pressure and the similar value of the two ratios in recent Reports. In statistical terms, the non-weighted average is skewed toward the market values associated with single-incumbent positions. In layman’s terms, a weighted average calculates the market value of the employee population sampled, whereas the non-weighted average calculates the market value of classifications, i.e. job titles.

A more serious deficiency is the distribution of classifications used in the 2002 Report. The sample used in the Report does not constitute a representative sample of either the P&S employee population, or the distribution of classifications per pay grade. The former would be preferable. The chart in Appendix A demonstrates this problem. Compared to the P&S population distribution, the number of classifications at P18 and higher are over-represented in the sample studied by 19%. The P20 grade alone represents 9% of the classifications sampled in the 2002 Report, but the number of staff employed at grade 20 only represents 1% of the P&S population. By over-representing grades 18 through 20, the calculated market composite ratio is skewed toward the values associated with the three highest pay grades. The object of sampling a population is to select a sample that is representative of the population. As the Report is using inferential statistics to estimate the P&S market position, a rigorous sampling design which incorporates a representative sample should be utilized. Additionally, a measure of the reliability should be incorporated into the Report. Such a measure is essential, according to Mendenhall’s *Statistics for Management and Economics*, “…in a practical inference-making situation, every inference should be accompanied by a measure that tells you how much faith you can place in the inference.”

These two sources of skew in the calculating the “market composite ratio” combine to give undue weight to single-incumbent positions and positions in the higher grades. In the 1995 Report, 52% of the classifications investigated were single-incumbent, and 68% were P17 or above. In the 1999 Report, 51% of the titles studied were single-incumbent, and 66% of those single incumbent positions were at or above P17 (Incumbent data has not been presented since the 1999 Report). This “double-skew” should be eliminated in future sampling efforts. The source of this distribution mismatch is associated with the definition of a benchmark classification, i.e., “Benchmarks are those jobs readily identified [emphasis added] in a variety of institutions.” Sampling is conducted via...
locating matching positions, and no statistical consideration is given to the composition of the general P&S population. Again a rigorous sample procedure should be employed. As shown in the table in Section 1.0, the benchmark classifications shift from year to year. By employing a statistically sound sampling procedure the final market ratio will be less sensitive to changes in the sample.\textsuperscript{20}

### 4.2 Midpoint Definitions

A theme that runs through all of the Reports is the definition of the midpoint. As noted in the Definition tables beginning Sections 2.1 through 2.9, the definition of the midpoint and assumptions about it have changed over time. The 2002 Report defined the midpoint as “…the salary midway between the minimum and maximum of a pay range. It is considered to be the prevailing market rate or market value of the job. In the ISU pay systems, midpoint is considered to be the average market value of the jobs in the range.” But as was pointed out in Section 3.0 the midpoint, as applied, suppresses the market value systematically, to 85-92\% of the prevailing market value. A clear definition of the midpoint should be presented; otherwise the Report misrepresents the meaning of midpoint and how it relates to the market value on an aggregate and individual basis. The overall market position(s) would be artificially high. Previous recommendations to HR included a request for clarification of the definition of the midpoint (item #5 from section 3.0).

### 4.3 Expectations for Penetration Into the Matrix

The definition of the midpoint also has implications when considering the issue of motion (penetration), or lack of, toward the midpoint. That there is no centralized mechanism to move an employee who performs satisfactory work (or better) toward the midpoint indicates a serious deficiency in the P&S compensation system. These expectations were stated in the initial 1994 Report, but by 1999, the Report stated “no centralized system is in place to advance satisfactorily performing employees toward the midpoint.” Subsequent Reports do not address the issue of progression toward the midpoint (item #6 from Section 3.0). If penetration toward the midpoint is the goal then it must be clearly defined. If advancing toward the midpoint is not the goal, then it must be clearly stated. According to Fox Lawson & Associates, a compensation and human resources consulting firm:

> Psychology teaches us that individuals will perform and continue to perform at certain levels as long as they are rewarded for their efforts. It is a simple equation. If the reward comes after the performance, it is likely that the employee will perform again. Sounds sort of like the rat in the maze. But the principle is quite solid.\textsuperscript{22}

Without defined expectations for salary growth, the employee expectation of translating through the grade for satisfactory, or better, performance will not be realized and there would be limited motivation for employees to perform beyond base expectations. Further frustration is derived from hiring practices that suppress employee pay below the prevailing market value, considering that the midpoint is an average of the market values for classifications within a grade. The implication is that employees are hired at less than the average market value and there is no mechanism in place to help the employee achieve the goal of average market pay. Again, according to Fox Lawson & Associates\textsuperscript{31}, for government sector entities:
A typical time line for moving employees through the range is as follows:

- 0 to 3 years experience: first quartile of range
- 3+ to 5/6 years: second quartile of range
- 5/6+ to 8/10 years: third quartile of range
- 8/10+ years: fourth quartile of range

The expectation of salary growth with respect to time in service is not extraordinary and encourages employees to stay with an organization. The issue of penetration into the pay matrix, or expectations of such, needs to be addressed by the P&S community and the University’s administration, but such discussion is beyond the scope of this subcommittee report.

### 4.4 Survey Information as an Aggregate and Individual Analysis Tool

Over the course of the last 9 years the audience and purpose of the Report has shifted. The initial Report was intended to provide manager and employees base information for discussions concerning compensation. Now, the stated intent is for evaluation of employee groups, not for decisions concerning individual positions or incumbents.

#### 4.4.1 Aggregate Analysis Tool

As highlighted in section 4.1, the Report’s sampling design limits the validity of the market composite ratio for the purpose of measuring the general health of the P&S system. The usefulness of evaluating trends must also be called into question. According to the previous subcommittee discussions in 2000, Carla Espinoza said she believed future Reports would be more generic and more accurate. Accuracy is directly related to methodology. In its current state, the Report should be considered a snap shot of the P&S system which skews the results toward market values associated with single incumbent classifications. As discussed above, a sound statistical sampling would be the foundation for health and trend measurements, and a measure of reliability should be reported.

The Market Analysis Section provides turnover rates for the current and previous year. It would be useful to show the turnover rate for a minimum the 5 years along with turnover rates for the “Peer 11” universities. In lieu of a Peer 11 comparison, an aggregate turnover rate for an appropriate “market” should be reported.

#### 4.4.2 Individual Analysis Tool

As a tool for assisting in individual compensation discussions some of the data is useful:

1) Appendix A allows employees in single incumbent positions to directly compare their salary to the prevailing market value (notwithstanding the midpoint definition).
2) Appendix A allows employees in positions with few incumbents to directly compare their salary to the prevailing market value and to the average salary of the other incumbents.
3) Appendix A allows employees in positions with many incumbents to directly or indirectly compare their salary to the prevailing market value and to the average salary of the other incumbents.
4) Appendix C allows employees to compare their salary to incumbents in the same grade with the same number of years in service.
5) If made aware of the information, Appendix A and the Hiring Practice section may be useful in negotiating an initial salary for a new employee.

It should be noted that for Item 3, direct comparisons would depend on the classification. For example, an Accountant classification would be more uniform across departments than an Assistant Scientist with respect to job duties and market value. Similarly, Item 4 is more limited as no classification information is provided.

Currently, the Report is the only “tool” made publicly available by ISU to employees who want to study their salary with respect to market, even if it is not intended to be such a “tool.” External salary survey information, such as professional society reports, may be located but such sources are not in the context of the P&S system and in most cases must be purchased, or a membership may be required. We understand that more resources are available within Human Resource Services but employees may prefer to do their own “homework” before asking a supervisor to begin compensation discussions. The Report does not explicitly state what resources are available through Human Resource Services or whom to contact to initiate an individual evaluation of market or equity position. However, Carla Esponiza recently stated that her office has for some time been discussing the creation of a resource databank which would demonstrate what data is used in constructing the Report. Now may be the time to pursue this more aggressively. Compensation issues may be considered sensitive; and easy access to such evaluation tools may ease the stresses for parties involved in compensations discussions.

As the Report lacks any demographics illustrating the level of education percentages within each grade, employees cannot make judgments concerning their market position with respect to their degree level. Many professional society salary surveys provide such demographics. Inclusion of education demographics would allow employees to put professional society salary surveys into the context of the P&S system.

In its current state, the Report is a useful evaluation tool for employees whose classification is common in higher education (many of the single-incumbent classifications fit this description). For multiple incumbent classifications, it is useful only for the few whose classification is fairly ubiquitous in higher education. In all cases, if an employee’s classification was not included in the sample, the Report is of limited use.

The only way to make the Report useful for all individuals would be to include all classifications in the study. The level of effort to complete such a task is unknown to the authors. Carrie Haefner, a principal author of the current Report, stated in a discussion that she did not know what FTE level (full time equivalent) or number of hours was required to complete the Report. Offhand, since 160 of 440 classifications were used in the current Report, including all P&S classifications in the Report would require 2.75 times the effort. This is a simple estimate and is provided as an illustration only.
5.0 Recommendations For the Annual Report

Our primary recommendation to the University administration is to provide adequate resources to the departments involved in producing future Reports so that a Report of the highest quality can be produced. With an audience that includes the Board of Regents, the quality of the Report should reflect the high academic and professional standards of Iowa State University, and the priority given to the Report should be examined in that light. As ISU’s strategic plan calls for a measure of the competitiveness of staff compensation, directing resources toward producing the best possible Annual Report will help ISU in achieving University-wide goals.

A complete review of the P&S system should be conducted internally on a periodic basis. We recommend every five years. Adequate resources should be provided to the departments involved in producing the Report such that all P&S classifications, where market data can be acquired, are used in the market analysis (with statistical considerations as discussed). Such an effort would provide the best overall picture of the P&S system. Such a Report would also provide an individual assessment tool for the majority of P&S employees, as discussed in the previous section. In absence of market data, average salary data for each classification would still be useful.

5.1 Statistical Methods

As previously discussed, the statistical methods used in building the classification sample and reporting the key figure of merit, the ISU vs. Market Ratio, are not rigorous. The following recommendations would strengthen future Reports:

5.1.1 A statistically sound sampling procedure should be developed and used. ISU should bring its significant resources to bear on this issue, i.e. the Office of Institutional Research, the Department of Statistics, Administrative Data Processing, etc.

5.1.2 A statistically appropriate market composite ratio should be used. The calculation methods should be explicitly defined and reported for the reader. Methods that skew the data should be eliminated. Any remaining sources or methods that may skew the data should be described for the reader.

5.1.3 Incorporate a reliability measure of the overall market ratio into the Report.

5.1.4 The midpoint should be explicitly defined, i.e. there should be no ambiguity between the midpoint as it is applied operationally and the definition stated in the Report.

5.1.5 If the midpoint for a classification is systematically suppressed below the prevailing market value, as stated in Section 3.0, the suppression should be accounted for in the market analysis.
5.2 Report Organization

There is a significant quantity of data contained in Appendix A and C. However, organization of the data does not provide the most useful illustration for the readers. The recommendations below address this issue:

5.2.1 Updates to Appendix A

5.2.1.1 Organize the table first by grade, level then alphabetically by classification title.

5.2.1.2 Calculate a grade specific market ratio.

5.2.1.3 Add columns that show the high and low salary for multiple incumbent positions.

5.2.1.4 Provide a chart comparing the distribution of the classifications used in the study to the distribution of employees per grade and distribution of classifications per grade.

5.2.1.5 Cite the salary survey sources used in calculating the market value for each classification in the Report. This can be done in footnote fashion.

5.2.1.6 Add a column detailing the number of incumbents in each classification.

5.2.1.7 Reiterate the data in a new appendix by reporting market data by Affirmative Action categories: organized by Affirmative Action category, then Grade level and Classification (alphabetical) with each AA category grouped separately providing a group “ratio.” This clarifies differing salary trends among the various market sectors – ex., it would clearly show whether the Information Technology market is moving at a different rate than the market for Academic Service employees. A section would also have to be added to the Report discussing the concept of comparable worth and how it relates to market considerations in Iowa. A narrative can be added to the Report body to discuss any trends and/or anomalies.

5.2.2 Updates to Appendix C

5.2.2.1 Provide charts of the pay distribution for each grade, with number of employees on the y-axis and the x-axis spanning the minimum to maximum pay for the grade.

5.2.2.2 Provide a three-axis chart displaying the pay with number of employees on the vertical y-axis, salary range on the x-axis, and years-in-service categories (bins for the 0-2, 3-4, … 11+ years) on the z-axis. By visually representing the data the distributions may be better comprehended.

5.2.2.3 Add a high and low salary column to each pay grade table.
Some of the above recommendations will add several pages to the appendices. However, that is why such data is reported in an appendix – it allows the reader full access to the data used but does not clutter the discussion or analysis sections of the Report.

5.2.3 Updates to the Market Analysis

As discussed previously, turnover rates should be shown for all years where it is known, and turnover rates for the Peer 11 universities, or an aggregate value that reflects the appropriate market, should be reported.

5.2.4 Definitions

Much of the confusion concerning the midpoint revolves around the definition. Inclusion of a Definitions Section at the beginning of the Report may prove useful. Alternately, key definitions may be made at the beginning of each section. Definitions should remain consistent from year to year. If a change or shift in definitions is required said changes should be noted for the reader.

5.3 Other Recommendations

Provide demographics concerning the level of education of employees within each grade and the market positions.

6.0 Policy Recommendations

In reviewing the changes made to the Annual Reports since the initial 1994 Report, it is apparent that the issues surrounding the midpoint salaries and expectations of reaching the midpoint need to be addressed. The fact that there is no mechanism or clear expectation for employees to achieve the midpoint salary, despite meeting the job requirements, will only serve to demoralize the P&S workforce. Employees are expected to meet the requirements of the job, but if there is no reward for meeting or exceeding expectations then what is the performance motivator? As discussed, previous Reports have stated:

“…although salary increases in many organizations, including ISU, are based on performance appraisals, in the long term it is clearly the initial level of pay that makes the most difference in ultimate pay level, not differences in individual performance from year to year.”

Coupled to the midpoint formula, which systematically depresses the midpoint with respect to the prevailing market values, it appears there is no hope for most P&S employees hired at or below the midpoint to realize a salary that meets or exceeds the prevailing market value. This appears to be in opposition to ISU’s 2000-2005 Strategic Plan, where ISU states its “Commitment to attracting and retaining world-class faculty and staff, along with competitive employee compensation and support for success.” Systematically suppressing salaries below the prevailing market value can hardly be considered a competitive practice. Two possible solutions are summarized:
6.0.1 Expectations for penetration, or translating, up the pay grade should be defined.
Employees who perform all duties satisfactorily or better should be rewarded by advancing toward
the midpoint of their grade, or more specifically, toward the prevailing market value of their
classification. Two possible models can be used: performance or service. If salary is to be tied to
performance, there should be a well-formulated mechanism for accounting for the performance and a
suitable reward should be provided. If salary is to be tied to time-in-service (i.e. Merit type system),
there should be a well-formulated pay ladder for employees who meet job expectations. Both
systems have merits and demerits, but as there is “no centralized system…in place to advance
satisfactorily performing employees toward the midpoint,” the P&S system is perceived stagnant or,
at best, the P&S compensation system is driven by the whims of the State Legislature.

6.0.2 Allow managerial discretion to offer salaries for new hires up to the midpoint value
of the pay range. Currently managers are allowed make salary offers up to the first-third of a pay
grade without needing additional approval from the Provost or appropriate Vice President.
Considering that the midpoint represents the average prevailing market value and that there is no
mechanism to move employee salaries toward the average prevailing market value, it seems
appropriate to allow managers the unhindered ability to hire qualified candidates at the average
prevailing market value. If there were a mechanism to move the salary of employees who perform
satisfactorily or better toward the midpoint of their classification then restricting initial salaries to the
first-third would be appropriate – in a probationary sense. This solution will exacerbate salary
compression issues; and, in the current economic climate, finding funding to make market and equity
adjustments for incumbents would be problematic. However, in the long-term the balance would be
restored by equity adjustments and regular turnover.

A comprehensive review of the P&S system should be conducted every five years, as
discussed in Section 5.0. Said review cycle should be promulgated as a formal policy.

7.0 Conclusions

The Annual Report on Professional and Scientific Salaries could become an indispensable
tool for evaluation of the status of the P&S compensation system at ISU. This can only be done if
proper statistical methods are used, the Report is organized in the best possible manner, and sufficient
resources are provided to those who prepare future Reports such that deficiencies discussed can be
eliminated. Additionally, a comprehensive market review of the P&S system should be conducted on
a cyclic basis.

In its current state the Report provides only a limited picture of the P&S system’s market
status, and the conclusions drawn are skewed toward market positions associated with single
incumbent classifications. The Report is also limited for individual analyses of market position to
classifications where there is a single incumbent, low incumbent numbers, or classifications that are
ubiquitous in nature.

If conclusions in the Annual Report are to be publicly distributed and to higher-level bodies
such as the Board of Regents, then the Report should reflect the high academic and professional
standards of Iowa State University.
8.0 Acknowledgements

The subcommittee would like to acknowledge the helpful contributions by Carrie Haefner, Dan Woodin, Kerry Dixon, and Carla Espinoza who provided citation materials and/or answered the author’s questions. We also wish to acknowledge those on the P&S Executive and Compensation and Benefits Committees who provided helpful comments and proof reading.

Bibliography

This document and all bibliographic references, where possible, will be submitted to the P&S Council Records in the ISU Parks Library University Collections and Archives. Reference (20) is available in the Parks Library General Collection, in the 2nd and 4th editions.

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