

University of Denver Faculty Senate
Financial Planning Committee
Salary Analysis Project
November 9, 2004

SALARY STUDY REPORT

Introduction

Historically the University of Denver (DU) has been blessed with dedicated and quality faculty. Some might even suggest that the dedication of the faculty played a major contributing role in the university's survival of financial crises in the 70's and 80's as they stood by the university during extended periods of low and no salary increases. Even before this, Denver and the mountains were viewed as a good place to live and work and the university tended to trade on this very positive image by paying faculty somewhat less than many other private institutions around the country, perhaps with some justification as the cost-of-living here in those earlier years was relatively low.

However, times have changed and the academic culture along with it in more recent years. Faculty are just as dedicated as they have always been but the generational messages of the 'baby boomers' and 'gen X' have not been lost on them. Just being a good place to live no longer has the influence it once had as professionals aspiring to careers in academia are now more interested in the career opportunities that an institution provides in addition to receiving value for value. In addition, the 90's have seen Denver join other large urban areas in becoming a much more expensive place to live.

DU has changed too. Beginning with the new administration in the late 80's DU is now on a sound financial footing, through construction and renovation has developed an exceptional physical plant, and is in the process of looking to the future to enhance the quality of its students; faculty; and curriculum. In fact it is the stated goal of the administration to move DU up into line with a compatible set of comparable private educational institutions.

There is widespread support among the faculty for this goal and its associated objectives. Given this goal, there are strong positive correlations between salaries/benefits and the quality of faculty, students and curriculum which constitute the interdependent components of the academic enterprise. In the spirit of assisting the university administration in achieving this goal, the Financial Planning Committee of the Faculty Senate felt it could provide a valuable service by undertaking a salary analysis study that would take a look at where we are and what it will take to become at least an average member of a Compatible group of comparable private institutions.

Study Questions

1. How have DU merit salary increases fared with respect to the rate of inflation in the Denver Metropolitan Area (DMA) since 1990?
2. What is DU's position with regard to average salary and benefits vs. other comparable institutions and are there any trends?
3. What are the differences in average faculty salaries between the three tenure track professional ranks for DU vs. other comparable institutions and are there any patterns to these differences?
4. What will it take for DU to move in line with average salaries and benefits for an identified set of compatible institutions?

Data Sources and Utilization

Comparative Institutions: Proposed Peer Groups for DU were identified in a Sustainability Task Force Report to the University Planning Advisory Council (UPAC) dated April 5, 2002. Data utilized in this endeavor came from a variety of sources including: IPEDS reports; the Chronicle of Higher Education; Moody's; the NCAA website; and U.S. News 3/11/02.

DU Merit Salary Increases: This information was provided by the Provost's Office from 1990 to date. These data were only deemed to be accurate and compatible beginning with this time period. The data is in percentage form and reflects Grand Totals that include holdbacks by Deans, Special Equity and Executive Pools, and required Divisional contributions. Not included, because the extent of this activity and its impact on salaries is not known at this time, is a bit of matching done by the Provost's Office with some units in the last year or two.

Inflation Rates: Consumer Price Index (CPI) information was obtained from the U.S. Department of Labor, Bureau of Labor Statistics (BLS). CPI data utilized are based on index values where 1982-1984 values equaled 100. Data were collected from 1984 on for the U.S., its four geographic sub-regions, and as many peer-institution metropolitan areas as were available with compatible CPI data.

Salary and Benefits: The principal source of salary and benefits used were Faculty Salary Reports published by the National Education Association (NEA) in its Almanac of Higher Education. NEA obtains these figures from the U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS). This source was utilized because it provided the most useful information and contained data for all of the comparable institutions needed for this study. Compatible data was available from 1994-1995 through 2002-2003 and is presented in thousands of dollars. Occasional missing data points were estimated linearly

from adjacent data points. For some reason, most of these situations occurred in the 2000-2001 academic year.

Salary data from the American Association of University Professors (AAUP) Faculty Salary Surveys published by the Chronicle of Higher Education was also collected and used to verify and validate the NEA figures. Some AAUP data was used for the three professional ranks in the 2003-2004 academic year, as NEA data was not yet available for this year.

Comparative Group Institutions

Comparable institutions that are evaluated in this study were determined by UPAC's Sustainability Task Force. Using a wide range of criteria, the Sustainability Task Force in its report identified comparable institutions in three groupings: Competitive; Aspirational; and Super-Aspirational. A listing of these groupings, along with some of the comparative descriptive information and rankings of these programs used in the UPAC report dated April 5, 2002 is provided in Table 1. The names of the last two of these institutional groupings have been changed to Compatible and Top-Ranked in the current report to more accurately reflect their true comparative roles. Members of these two groupings were selected based on their substantial similarities in character with DU including the overall mix of programs offered.

Competitive: Basically these are the principal institutions that DU currently competes with for undergraduate students based on admissions information gathered by the university. This Competitive group is dominated by Public institutions, half of which are DU's regional competitors, and these institutions have DU at a considerable disadvantage in terms of tuition. Most, like DU, are tier 2 institutions. But DU, with the exception of UNC, has the lowest reputational score which is a clear indication of DU's marketing or identity problem. With the recent lowering of its acceptance rate, DU fares well in all other respects when compared with the public institutions but falls behind all three of the private institutions included in this grouping.

Compatible: This peer grouping contains all Private doctoral degree granting institutions that have been determined to have extensive characteristics in common with DU. These are similar educational institutions with which DU would like to be competing amongst for students. All of these are at least tier 2 institutions and more than half are tier 1. DU is currently well behind almost every one of these institutions in all of the comparative statistics including tuition. However, it is this latter fact that is at least one of the reasons that DU has set its goal of moving into this Compatible group. Membership in this grouping would give DU considerably more flexibility and latitude in charging tuition and would significantly change how tuition affects its competitiveness in attracting students. In fact, institutions at this level tend to compete more on reputation than tuition.

**Table 1: Sustainability Task Force
Proposed Comparative Groups*
for DU**

Peer Groups	Institution	Location	Public or Private	Undergraduate Gen Rank	Average Reputation Score	Fall 2001 Tuition & Fees Out of State	Top 10% of class	Accept Rate %	Fresh. Reten. %	Actual Grad Rate
	University of Denver	Denver, CO	Priv	Tier 2	2.6	\$21,456	33	78	84	68
Competitive	University of Colorado - Boulder	Boulder, CO	Pub	Tier 2	3.7	\$17,367	21	86	83	64
	Colorado State University	Ft. Collins, CO	Pub	Tier 2	3.0	\$11,694	24	78	82	62
	Colorado College	Colorado Springs, CO	Priv	28	3.9	\$24,528	50	57	92	79
	University of Northern Colorado	Greeley, CO	Pub	Tier 4	2.3	\$10,512	12	79	68	44
	University of Colorado - Denver	Denver, CO	Pub	Tier 4	2.7	\$12,668	17	73	72	37
	University of Arizona	Tucson, AZ	Pub	Tier 2	3.7	\$10,356	33	84	77	53
	Boston University	Boston, MA	Priv	Tier 2	3.4	\$26,228	57	49	86	70
	Arizona State University	Tempe, AZ	Pub	Tier 3	3.3	\$10,354	26	77	74	47
	University of San Diego	San Diego, CA	Priv	Tier 2	2.8	\$20,458	60	50	88	64
	University of Oregon	Eugene, OR	Pub	Tier 2	3.4	\$14,493	21	90	81	56
	Group Average				3.22	\$15,866	32.1	72.3	80.3	57.6
Compatible	Carnegie Mellon University	Pittsburgh, PA	Priv	23	4.2	\$25,872	72	36	92	76
	Wake Forest University	Winston-Salem, NC	Priv	26	3.4	\$23,530	67	49	93	83
	University of Southern California	Los Angeles, CA	Priv	34	3.8	\$25,533	80	34	94	71
	Case Western Reserve	Cleveland, OH	Priv	38	3.5	\$21,168	71	71	91	83
	Tulane University of Louisiana	New Orleans, LA	Priv	46	3.5	\$26,886	55	73	85	77
	Pepperdine University	Malibu, CA	Priv	48	3.1	\$25,250	69	36	87	74
	Southern Methodist University	Dallas, TX	Priv	Tier 2	3.1	\$20,796	31	82	85	72
	Syracuse University	Syracuse, NY	Priv	Tier 2	3.3	\$22,004	40	58	91	74
	University of Miami (Florida)	Coral Gables, FL	Priv	Tier 2	3.2	\$23,647	45	53	83	67
	Fordham University	Bronx, NY	Priv	Tier 2	3.1	\$22,585	27	63	88	74
	Group Average				3.42	\$23,727	55.7	55.5	88.9	75.1
Top-Ranked	Duke University	Durham, NC	Priv	8	4.6	\$27,768	86	26	97	93
	Dartmouth College	Hanover, NH	Priv	9	4.4	\$26,562	86	21	96	91
	Cornell University	Ithaca, NY	Priv	14	4.6	\$26,062	82	31	96	90
	Washington University St. Louis	St. Louis, MO	Priv	14	4.1	\$26,377	85	30	96	86
	Emory University	Atlanta, GA	Priv	18	4.0	\$25,240	90	45	92	87
	Vanderbilt University	Nashville, TN	Priv	21	4.1	\$25,190	71	55	92	84
	University of Virginia	Charlottesville, VA	Pub	21	4.4	\$18,453	83	39	97	91
	Group Average				4.31	\$25,093	83.3	35.3	95.1	88.9

* Table 1 peer Groups come from Sustainability Task Force Report to UPAC

Note: Data provided from *U.S. News* 3/11/02

Tuition and Fee data obtained from IPEDS reports

Top-Ranked: These institutions are also all Private doctoral degree granting entities with one being quasi Public. All of these programs are in the top half of the tier 1 rankings and DU is far behind them in all of the comparative descriptive measures. DU's longer term goal is to achieve competitive membership in this group with regard to attracting students.

Cost-of-Living Analysis

The Provost's Office classifies the annual raise pool as a merit-pay raise, not a cost of living adjustment. One rationale for this is to allow both the Provost's Office and the various Deans to be able to hold back a portion of the raise pool for special merit awards or equity adjustments. However, from the standpoint of an employee, it is of significant interest to know whether the raise pool, from year to year, allows the employee to 'keep up with' inflation.

Table 2 provides data regarding the level of the CPI, and the percentage change in the level (representing inflation). The table shows information for the U.S. and its four geographic sub-regions. The Denver data is for the Denver-Boulder Metropolitan Area (DMA), including Greeley. The time period covered goes back to 1984.

Besides the 19 year averages, other time periods displayed in the averages for the percent change data include 14 year averages going back to 1990, which covers the period for which reliable merit-salary pool information was available. This also coincides with the period of Chancellor Ritchie's tenure, during which the financial health of DU improved significantly over that characterizing the seventies and eighties. There is also a 10 year average from 1992-2001 during which time the DMA consistently outpaced the nation and geographic regions in terms of inflation. This is illustrated in the table by the figures in bold-faced type that indicate the years in which the U.S. or geographic sub-regions had higher rates of inflation than Denver.

Table 3 lists cities containing comparative group institutions for which compatible inflation information was available. While the list is incomplete, the table does show information for cities representing more than half of the comparative institutions in each of the three groupings. Again the figures in bold-faced type indicate years in which various cities had higher rates of inflation than Denver. The picture here is a bit more mixed, but higher inflation rates for Denver still dominate the same 10 year period from 1992 to 2001.

Of importance too is the inclusion of DU annual merit-raise pool information in Table 3. The merit-pay information is based on the raise pool as established by the Provost's Office before set-asides by that office and set-asides by any other of the various university units. As can be seen, there are years where the merit-based pool exceeded the rate of inflation and years where it did not. A t-test on the difference between Denver's inflation rates and DU's merit increases has a t-statistic of 2.318 (with d.f. = 13), indicating a p-value of between 2-5% on a two-tailed test. Simply put, this suggests that

Table: 2 Consumer Price Index 1984 - 2003

CPI INDEX						
Year	U.S.	NE	S	MW	W	Denver
84	103.9	104.5	103.8	103.6	103.6	104.3
85	107.6	108.4	107.1	106.8	108.0	107.1
86	109.3	111.1	108.9	108.0	110.5	107.9
87	113.6	116.0	112.4	111.9	114.3	110.8
88	118.3	121.8	116.4	116.1	119.0	113.7
89	124.0	128.6	121.5	121.5	124.6	115.8
1990	130.7	136.3	127.9	127.4	131.5	120.9
91	136.2	142.5	132.9	132.4	137.3	125.6
92	140.3	147.3	136.5	136.1	142.0	130.3
93	144.5	151.4	140.8	140.0	146.2	135.8
94	148.2	155.1	144.7	144.0	149.6	141.8
95	152.4	159.1	149.0	148.4	153.5	147.9
96	156.9	163.6	153.6	153.0	157.6	153.1
97	160.5	167.6	156.9	156.7	161.4	158.1
98	163.0	170.0	158.9	159.3	164.4	161.9
99	166.6	173.5	162.0	162.7	168.9	166.6
2000	172.2	179.4	167.2	168.3	174.8	173.2
01	177.1	184.4	171.1	172.8	181.2	181.3
02	179.9	188.2	173.3	174.9	184.7	184.8
03	184.0	193.5	177.3	178.3	188.6	186.8

PERCENT CHANGE					
U.S.	NE	S	MW	W	Denver
3.56	3.73	3.18	3.08	4.25	2.68
1.86	2.49	1.68	1.12	2.31	0.75
3.65	4.41	3.21	3.61	3.44	2.69
4.14	5.00	3.56	3.75	4.11	2.62
4.82	5.58	4.38	4.65	4.71	1.85
5.40	5.99	5.27	4.86	5.54	4.40
4.21	4.55	3.91	3.92	4.41	3.89
3.01	3.37	2.71	2.79	3.42	3.74
3.01	2.78	3.15	2.87	2.96	4.22
2.56	2.44	2.27	2.86	2.33	4.42
2.83	2.58	2.97	3.06	2.61	4.30
2.95	2.83	2.68	3.10	2.67	3.52
2.29	2.44	2.15	2.42	2.41	3.27
1.56	1.43	1.27	1.66	1.86	2.40
2.21	2.06	1.95	2.13	2.74	2.90
3.36	3.40	3.21	3.44	3.49	3.96
2.85	2.79	2.33	2.67	3.66	4.68
1.58	2.06	1.29	1.22	1.93	1.93
2.28	2.82	2.31	1.94	2.11	1.08

19 years - Average from 1985	3.06	3.30	2.81	2.90	3.21	3.12
14 years - Average from 1990	2.87	2.96	2.67	2.78	3.01	3.48
10 year - Average from 1992 - 2001	2.66	2.61	2.47	2.70	2.82	3.74

Note: Numbers in bold are higher than Denver

Source: U.S. Department of Labor, Bureau of Labor Statistics
 not seasonally adjusted
 All Urban Consumers
 All Items
 1982-84 = 100

Table 3: Annual Percent Change in CPI for Selected Comparative Institution Cities vs. Denver

Year	Competitive			Compatible						Top-Ranked		Denver	% DU Merit Increase
	Boston	Portland	San Diego	Cleveland	Dallas	Los Angeles	Miami	New York	Pittsburgh	Atlanta	St. Louis		
1990	5.79	5.81	5.97	5.13	4.69	5.92	5.35	6.05	5.08	4.44	5.17	4.40	4.00
91	4.39	5.10	3.61	4.03	4.56	4.05	3.36	4.55	4.04	3.19	3.12	3.89	4.50
92	2.48	4.41	3.38	1.94	2.37	3.61	1.66	3.59	3.58	1.91	1.97	3.74	5.50
93	2.89	3.51	2.17	2.56	2.54	2.59	3.42	3.00	2.87	3.47	2.08	4.22	4.50
94	1.31	2.90	2.59	2.92	2.84	1.33	3.24	2.39	3.36	2.30	2.76	4.42	4.40
95	2.00	2.89	1.49	2.42	2.62	1.51	3.69	2.53	3.18	2.86	2.76	4.30	4.00
96	2.96	3.52	2.24	2.77	2.69	1.88	3.22	2.90	2.68	3.38	3.03	3.52	4.00
97	2.82	3.40	1.74	2.70	1.74	1.59	3.06	2.34	2.48	1.86	2.21	3.27	3.70
98	2.26	1.89	1.95	2.37	1.45	1.44	1.33	1.64	1.40	1.45	1.05	2.40	3.80
99	2.50	3.29	3.54	1.69	3.27	2.34	1.18	1.96	2.07	2.23	2.01	2.90	3.10
2000	4.32	3.13	5.79	3.38	4.24	3.31	3.33	3.11	3.38	3.52	3.49	3.96	3.90
01	4.79	2.47	4.60	2.92	3.46	3.32	3.10	2.52	2.68	3.28	2.58	4.68	4.25
02	2.61	0.77	3.50	0.23	1.35	2.76	1.45	2.57	0.87	1.14	1.08	1.93	3.50
03	3.77	1.36	3.74	1.67	2.03	2.63	2.91	3.07	2.01	1.46	2.54	1.08	4.00
Yearly Average	3.21	3.18	3.31	2.62	2.85	2.73	2.88	3.02	2.83	2.61	2.56	3.48	4.08

Note: Numbers in bold are higher than Denver

Source: U.S. Department of Labor, Bureau of Labor Statistics
 not seasonally adjusted
 All Urban Consumers
 All Items
 1982-84 = 100
 Merit salary increases provide by the Office of the Provost

the merit-raise pool has exceeded the inflation rate over the time period shown. However, the mean difference of .60 or 6/10ths of 1 percent is relatively small.

This result provides some insight as to whether the faculty is keeping up with the cost of living in Denver. The merit-pay raise as announced by the Provost's Office allows for slightly more than the increase in cost of living. If this raise simply flowed to the faculty unadjusted, then annual raises have more than kept up with the cost of living.

However, given the hold-backs by both the Provost's Office and the various Deans, it becomes problematic whether the 'general faculty member' has indeed kept up with the cost of living – though there is some room for the hold-back process before it begins to cut into the cost of living for the faculty.

But hidden within the CPI values is a specific cost-of-living issue that needs to be considered, the price of housing in Denver. From 1990 to the present, while the Denver CPI values increased by about 50 percent, the median price of a single family home went up by more than 150 percent. Housing may still cost more in a few places around the country but the rate of increase in Denver has been one of the highest in the U.S. since 1990. This is having a growing impact on DU's ability to attract, hire, and retain good new faculty, especially younger faculty at the assistant professor level. Other universities in large urban areas have instituted various housing/mortgage assistance programs for new faculty. It might be a good time for the university to give serious consideration to some sort of housing assistance initiative at DU too.

Average Salary Analysis

Table 4 provides data on average salaries by comparative group, and the nature of the gap between DU salaries and the average for the comparative group. Also shown is the dollar increase in average salaries over the time period and the change in the gap over time along with the average annual percent change in salaries.

Competitive: While remaining near but below this group average over time, DU has not made much progress during this period. In 1995 the gap was 1.66 percent of the DU average salary and was still 1.65 percent in 2003. In fact DU was actually slipping slowly behind beginning in 1997 until the downturn in the economy took hold. The slippage appears to coincide with the point in time when DU merit-salary pools began to drop below four percent (see Table 3).

Compatible: There is a more significant gap in average salaries between DU and this group. In 1995 the gap was about \$9,000 or 17.5 percent, by 2003 the gap was some \$11,000 representing 16.4 percent. Because DU had a slightly higher yearly average percent increase, it was able to reduce the percentage gap a bit but not the dollar amount. One implication of moving into competition with this Compatible group will be the substantial impact on the university's budget due the necessary adjustments in faculty salaries.

Table 4: Longitudinal Comparative Group Average Salary Summary in (\$000's) vs. DU

Peer Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	Increase	Yearly Avg % Increase
DU	51.9	53.7	55.3	57.0	58.7	59.9	62.2	64.5	67.8	15.9	3.40
Competitive	52.76	53.97	55.85	57.63	59.77	62.01	64.28	66.49	68.92	16.16	3.40
DU Gap	0.86	0.27	0.55	0.63	1.07	2.11	2.08	1.99	1.12	0.26	
Compatible	60.98	62.77	65.55	67.62	69.78	71.72	73.73	75.59	78.97	17.99	3.29
DU Gap	9.08	9.07	10.25	10.62	11.08	11.82	11.53	11.09	11.17	2.09	
Top-Ranked	62.54	65.03	67.67	70.86	74.96	78.70	83.13	87.51	89.36	26.82	4.57
DU Gap	10.64	11.33	12.37	13.86	16.26	18.80	20.93	23.01	21.56	10.92	

Source: NEA Almanac of Higher Education

Top-Ranked: With regard to this group, the gap of some \$10,000 in 1995 more than doubled by 2003. The percentage gap also grew from 20.5 percent to 31.8 percent. It would appear that the economic downturn has had relatively little impact on this group.

Table 5 shows more detailed information for individual institutions in each of the three comparative groupings. When DU is included in the Competitive grouping, it ranks eight out of the eleven institutions in 1995 and is still eighth in 2003 further demonstrating its unchanged position in this grouping over the study period. DU is clearly at the bottom of the rankings when incorporated within each of the other two peer groupings.

Average Benefits Analysis

Benefits vary greatly across educational institutions and tend to incorporate a diverse variety of programs making this a much fuzzier basis of comparison. However, benefits are an integral part of an institution's compensation package and average benefits value does serve as a reasonable comparative indicator between institutions.

An analysis of average benefits in Table 6 shows patterns quite similar to those of the average salary analysis for each of the comparative groupings suggesting that there may be a strong positive correlation between the two measures of salary and benefits. In part this stems from the fact that retirement contributions based on larger salaries will result in larger contributions to the benefits package. While this certainly accounts for a portion of the higher benefits figures for institutions with higher salaries, it is highly unlikely that all of the differences can be attributed to this factor.

DU is very close to the Competitive group average and has experienced a slight improvement through time, even rising above the group average in some years. In comparison with the Compatible peer group, DU starts out well behind, makes some gains for several years and then drops back again for a slight loss over the time period. In looking at the Top-Ranked group the DU gap steadily expands through time.

Table 7 also provides more detailed information for individual institutions in each of the three comparative groupings. This time when DU is included as a member of the Competitive group it ranks only ninth out of eleven institutions in 1995 but moves up to eighth place by 2003 – its same position in the average salary rankings. Once again, with the exception of Tulane University in the Compatible peer group, DU is well below all of the institutions in the other two peer groups. This issue too will have a substantial budget impact in the process of moving DU into membership within the Compatible grouping.

Table 5: Comparative Group Average Salary in (\$000's) by Institution

		1995	1996	1997	1998	1999	2000	*2001	2002	2003
University of Denver		51.9	53.7	55.3	57.0	58.7	59.9	62.2	64.5	67.8
Competitive	University of Colorado - Boulder	56.8	58.2	59.0	61.1	63.4	64.9	67.5	70.1	74.6
	Colorado State University	53.0	53.0	57.7	59.3	61.4	63.2	66.3	69.4	72.7
	Colorado College	55.7	57.8	61.4	61.6	63.1	66.0	66.7	67.3	69.4
	University of Northern Colorado	41.7	42.8	44.2	45.4	45.1	48.1	51.3	54.4	56.2
	University of Colorado - Denver	48.7	50.4	52.3	53.0	55.3	55.1	56.6	58.0	58.8
	University of Arizona	56.6	58.9	59.8	62.2	64.9	67.9	70.1	72.2	74.8
	Boston University	56.6	58.4	59.9	62.6	65.7	68.9	71.5	74.0	76.7
	Arizona State University	52.3	52.4	55.2	58.2	60.4	63.8	65.8	67.8	69.5
	University of San Diego	59.3	60.3	61.7	62.2	65.6	68.6	71.3	74.0	76.4
	University of Oregon	46.9	47.5	47.3	50.7	52.8	53.6	55.7	57.7	60.1
Compatible	Carnegie Mellon University	69.3	72.8	75.4	78.4	81.1	84.4	88.1	91.8	87.4
	Wake Forest University	57.8	60.3	59.8	61.7	65.5	67.9	71.8	75.6	76.8
	University of Southern California	67.7	68.7	71.3	74.0	76.7	78.4	80.7	82.9	86.9
	Case Western Reserve	62.4	64.9	67.5	69.9	72.2	74.8	77.9	80.9	84.2
	Tulane University of Louisiana	58.1	55.7	61.8	63.9	66.3	64.8	66.2	67.5	70.9
	Pepperdine University	68.3	72.7	79.7	81.2	81.4	82.4	78.9	75.3	89.9
	Southern Methodist University	55.7	57.4	59.7	61.1	63.7	66.1	68.9	71.7	72.8
	Syracuse University	54.1	55.2	56.5	57.6	59.2	62.0	64.5	67.0	69.6
	University of Miami (Florida)	55.5	57.4	59.2	61.7	63.5	64.6	66.2	67.8	71.2
	Fordham University	60.9	62.6	64.6	66.7	68.2	71.8	74.1	76.4	79.8
Top-Ranked	Duke University	63.1	68.4	73.7	79.0	84.3	87.3	92.3	97.3	96.8
	Dartmouth College	62.7	64.9	67.8	71.0	75.1	75.6	81.9	88.2	81.8
	Cornell University	64.2	65.8	68.4	71.5	74.6	78.8	83.7	88.5	94.9
	Washington University St. Louis	60.4	62.5	65.3	67.8	75.4	80.5	84.9	89.2	92.6
	Emory University	65.2	67.9	69.7	73.0	75.9	81.1	85.4	89.7	93.5
	Vanderbilt University	64.1	66.1	67.8	70.2	72.5	76.5	78.1	79.6	84.9
	University of Virginia	58.1	59.6	61.0	63.5	66.9	71.1	75.6	80.1	81.1

Source: NEA Almanac of Higher Education

* Estimated

Table 6: Longitudinal Comparative Group Average Benefits in (\$000's) vs. DU

Peer Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	Increase	Yearly Avg % Increase
DU	10.9	11.7	12.5	12.8	12.6	13.1	14.1	15.0	14.9	4.00	4.04
Competitive	12.10	11.52	12.23	12.66	13.10	13.55	14.21	14.83	15.91	3.81	3.54
DU Gap	1.20	-0.18	-0.27	-0.14	0.50	0.45	0.11	-0.17	1.01	-0.19	
Compatible	15.92	15.38	15.51	16.11	16.45	17.86	18.65	19.40	20.78	4.86	3.45
DU Gap	5.02	3.68	3.01	3.31	3.85	4.76	4.55	4.40	5.88	0.86	
Top-Ranked	15.47	16.11	16.81	17.81	18.91	19.97	21.23	22.43	22.24	6.77	4.67
DU Gap	4.57	4.41	4.31	5.01	6.31	6.87	7.13	7.43	7.34	2.77	

Source: NEA Almanac of Higher Education

Table 7: Comparative Group Average Benefits in (\$000's) by Institution

		1995	1996	1997	1998	1999	*2000	2001	2002	2003
University of Denver		10.9	11.7	12.5	12.8	12.6	13.1	14.1	15.0	14.9
Competitive	University of Colorado - Boulder	12.8	13.4	13.1	13.9	13.9	13.8	14.0	14.2	16.0
	Colorado State University	9.8	10.2	10.3	11.0	11.1	11.2	12.2	13.2	14.2
	Colorado College	15.4	15.3	15.1	14.6	15.1	15.8	16.6	17.3	18.8
	University of Northern Colorado	8.0	8.3	8.3	8.3	8.6	8.9	9.3	9.7	9.6
	University of Colorado - Denver	11.6	11.7	11.6	12.1	15.4	13.6	13.7	13.8	14.8
	University of Arizona	11.1	11.6	11.8	12.0	12.4	13.6	14.4	15.2	16.7
	Boston University	12.1	12.2	12.7	13.9	13.5	13.2	13.9	14.5	15.4
	Arizona State University	11.0	11.2	11.5	11.9	12.4	13.0	13.7	14.3	15.5
	University of San Diego	15.4	15.4	15.4	15.7	15.7	15.9	17.2	18.5	18.3
	University of Oregon	13.8	13.1	12.5	13.2	12.9	16.5	17.1	17.6	19.8
Compatible	Carnegie Mellon University	13.1	14.5	13.8	15.7	16.3	20.9	22.3	23.7	18.9
	Wake Forest University	12.7	12.6	11.2	12.5	13.2	13.9	14.8	15.6	17.9
	University of Southern California	20.6	22.4	22.7	22.8	22.9	23.4	25.2	26.9	30.5
	Case Western Reserve	14.9	14.8	15.4	16.1	16.5	17.3	18.7	20.0	20.5
	Tulane University of Louisiana	6.5	6.5	7.3	7.5	6.8	9.6	9.8	10.0	10.5
	Pepperdine University	19.4	19.4	20.8	21.4	20.9	23.8	22.9	21.9	25.7
	Southern Methodist University	13.8	13.5	14.5	14.3	15.0	14.9	16.1	17.3	18.3
	Syracuse University	17.9	18.2	18.5	18.8	19.3	20.0	20.8	21.6	22.4
	University of Miami (Florida)	17.0	14.8	14.5	15.6	16.7	16.6	17.1	17.6	19.6
	Fordham University	17.0	17.1	16.4	16.4	16.9	18.2	18.8	19.4	23.5
Top-Ranked	Duke University	16.6	17.5	18.3	19.2	20.0	20.7	21.2	21.6	23.4
	Dartmouth College	16.2	16.9	17.8	18.5	19.4	19.5	21.6	23.6	22.7
	Cornell University	16.7	16.9	18.2	21.2	22.3	23.7	25.4	27.1	28.2
	Washington University St. Louis	13.4	13.6	13.8	14.2	15.7	16.6	17.7	18.7	16.7
	Emory University	16.4	18.3	19.3	20.4	22.0	24.2	26.4	28.6	25.5
	Vanderbilt University	14.8	15.5	16.2	16.1	16.8	18.2	18.9	19.5	21.1
	University of Virginia	14.2	14.1	14.1	15.1	16.2	16.9	17.4	17.9	18.1

Source: NEA Almanac of Higher Education

* Estimated

Comparison of Average Salaries by Professorial Rank

Salary information by tenure-track professorial rank was also collected. Table 8 provides averaged summaries of this data. This information gives some additional insight to salary performance at DU relative to its comparable groups.

Professor: It is at the full Professor level that the greatest salary gaps appear. This could be a reflection of the low salaries that faculty started with who have been here for a long time. Or it could be that faculty leave DU at some point in their careers for greater salary opportunities and there may be a smaller number of faculty that remain during their higher salaried years.

Keeping good faculty at DU who can command higher salaries is a problem that has begun to surface over the past few years. This is not a good trend if DU is to implement its goal of moving into the Compatible group.

In any case, DU Salaries at this level have consistently lost ground in all three comparative groupings over the study period until a belated effect of the economic downturn broke this trend in the Competitive and Compatible groups in 2004. Thus while the dollar amount of the DU gap increased for these two groups, the gap as a percentage of DU salaries remained about the same. Compared to the Top-Ranked group the percentage grew through time from 24.0 percent to 36.4 percent representing a near doubling of the dollar amount difference.

Associate: This rank has fared well in keeping up with the average Competitive group salary. In fact DU started the period above the group average and actually improved its position by 2004. However the same is not true for the other two peer groupings. The percentage gap between Compatible institutions increased from 12.0 to 13.6 percent almost doubling the dollar amount and increased from 10.0 to 21.1 percent nearly tripling the dollar amount for the Top-Ranked group.

Assistant: In 1995, DU actually started quite close to the averages for all three comparative groups but unfortunately had lost ground at this level against all three groups by 2004. Against the Competitive group, the average salary for Assistant Professors at DU begins well above the Competitive group average but has since fallen to nearly even. While the remaining gap is not very significant, the trend is disturbing because it means that in the group representing 'new hires', the effort to increase the reputation of the institution is lagging behind its closest current competitors. The reduced effect of the economic downturn at this level would also suggest that existing faculty may not be receiving much in the way of pay raises at the moment but new hires are still being brought in at higher salaries.

With respect to the other two peer groupings, the impact is even more striking. In comparison to the Compatible group, the gap for Assistant Professors begins at 4.2 percent and ends at 15.4 percent. For the Top-Ranked group the gap begins at 3.5 percent and leaps to 25.6 percent.

Table 8: Comparative Group Average Salary Summary by Rank vs. DU (\$000's)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	*2004
Professor										
DU	64.1	67.2	69.4	72.1	74.6	75.9	78.9	81.8	85.2	89.2
Competitive	65.18	67.32	69.63	72.14	74.99	78.23	81.92	85.58	89.09	91.12
DU Gap	1.08	0.12	0.23	0.04	0.39	2.33	3.02	3.78	3.89	1.92
Compatible	75.89	78.49	81.57	84.28	87.41	90.43	94.48	98.48	102.28	105.64
DU Gap	11.79	11.29	12.17	12.18	12.81	14.53	15.58	16.68	17.08	16.44
Top-Ranked	80.00	83.23	86.69	90.91	95.13	99.91	105.43	110.87	114.93	121.63
DU Gap	15.90	16.03	17.29	18.81	20.53	24.01	26.53	29.07	29.73	32.43
Associate										
DU	49.2	50.9	52.6	54.5	57.1	58.6	60.9	63.2	65.5	67.3
Competitive	48.14	49.52	50.93	52.48	54.41	56.93	59.25	61.50	64.16	64.99
DU Gap	-1.06	-1.38	-1.67	-2.02	-2.69	-1.67	-1.65	-1.70	-1.34	-2.31
Compatible	55.12	57.30	59.00	61.14	62.80	64.82	67.62	70.37	72.94	76.47
DU Gap	5.92	6.40	6.40	6.64	5.70	6.22	6.72	7.17	7.44	9.17
Top-Ranked	54.34	56.59	58.56	61.20	64.21	67.60	71.49	75.34	78.00	81.53
DU Gap	5.14	5.69	5.96	6.70	7.11	9.00	10.59	12.14	12.50	14.23
Assistant										
DU	44.4	44.9	45.5	45.5	45.2	47.4	49.2	51.0	54.0	55.8
Competitive	41.23	42.15	43.03	44.19	45.92	47.10	49.62	51.84	54.36	55.60
DU Gap	-3.17	-2.75	-2.47	-1.31	0.72	-0.30	0.42	0.84	0.36	-0.20
Compatible	46.27	47.85	48.93	51.36	53.29	54.14	57.41	59.62	62.49	64.39
DU Gap	1.87	2.95	3.43	5.86	8.09	6.74	8.21	8.62	8.49	8.59
Top-Ranked	45.99	47.26	49.47	52.87	54.76	57.69	61.09	64.44	67.47	70.09
DU Gap	1.59	2.36	3.97	7.37	9.56	10.29	11.89	13.44	13.47	14.29

Source: NEA Almanac of Higher Education

* AAUP data

Summary of Findings

- Merit-salary increases over the study period have exceeded the level of inflation for the Denver Metropolitan Area (DMA).
- While the Consumer Price Index (CPI) for the DMA increased by about 50% since 1990, the median price of a single family home increased by more than 150%.
- DU salaries appear to be slightly but consistently below the average salaries of institutions in the Competitive group.
- The gap between average DU salaries and those for the Compatible peer group is significantly larger and has been growing through time averaging now about \$11,000.
- For the Top-Ranked peer group the DU average salary gap was about \$10,000 in 1995 and has more than doubled since that time.
- DU's average Benefits package appears to compare reasonably well with Competitive institutions fluctuating just a bit above or below the group average through time.
- There is a substantial gap of about \$5,000 between DU and average Benefits for Compatible institutions that has remained relatively constant.
- There was a similar \$5,000 Benefits gap between DU and the Top-Ranked peer group that has enlarged some during the study period.
- The greatest salary gaps occur at the Professor rank and have been growing since 1995 for all three comparative groups with DU currently below the Competitive average by 2%, Compatible 20%, and Top-Ranked 36%.
- Interestingly, Associate Professor average salaries at DU have and continue to be slightly above the Competitive group average and are now 4% above that average but lag well behind the Compatible and Top-Ranked peer groups at 14% and 21% below these respective averages.
- DU Assistant Professor average salaries that began the ten year period of data well above the Competitive group have been losing ground and are now only 0.4% above average, but once again DU trails the Compatible and Top-Ranked group averages by 16 and 26 percent respectively.

Conclusions

Analyses in this report provide some insight into potential budget impacts associated with growing the reputation of the University of Denver. Given the implicit relationship between the quality of education provided and the quality of faculty, the goal of moving DU in line with the Compatible peer group of institutions will require significant resources in the future. Currently these average salary and benefits gaps are approximately \$11,000 and \$5,000 respectively.

Depending upon how one views the Provost's and Deans' holdbacks, DU merit-pay raises have been sufficient to maintain faculty standards of living. The exception to this involves the cost of new housing. This is most likely to affect new hires, so further study

by the university into housing assistance for new faculty is warranted. The rate of growth in salaries at DU in the aggregate have kept pace with the Competitive group, but the DU average began and ended the study period slightly below the average salary for this group.

Given these findings, growth in faculty salaries will need to be at a much higher rate than has been the case over the past 14 years. This will be necessary to: 1) keep pace with the Compatible and Top-Ranked peer groups; and 2) close the gap between the average salary at DU and these groups. Each year that salary growth is similar to that characterizing recent history, the greater the gap will become making it that much harder to close the gap in the future.

It is clear from this salary analysis that a substantial amount of financial resources are needed to achieve even the average position in the Compatible peer grouping with regard to the total compensation package. It is also clear that the administration will not be able to find the kind of money needed to do this within the current operating budget in the near term. It is going to take some of the “new revenue streams” that the administration has been talking about to address the identified salary issues in a meaningful way. Thus, it is encouraging to hear that the Chancellor has made increasing the endowment a high priority goal on his active agenda as this is the most likely source of new revenue that can be used to make the required compensation adjustments in the shorter rather than the longer term.