Full-Time Faculty Salary Study

December 2018

Purpose of this Study

- To learn the current faculty salary trends of comparable institutions that offer similar programs of studies to the ones offered at Northern.

- The intend of this study is to GUIDE future salary negotiations for full-time faculty. However, it does not substitute negotiation on how to implement salary increases.

- This study fulfills the commitment of NNMC administration to identify the faculty salaries discrepancies with the market, according to the CBA.

Methodology

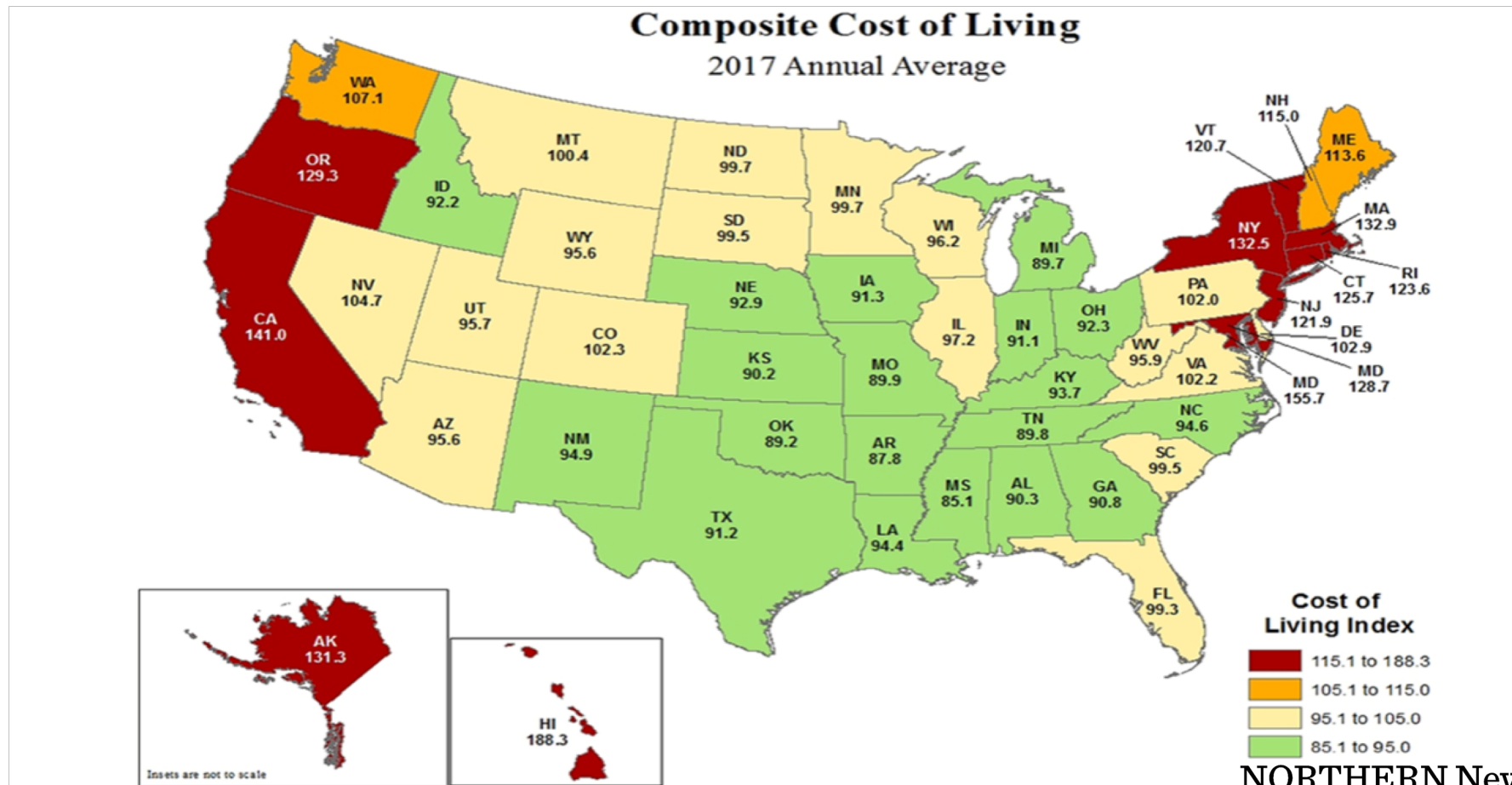- What institutions are comparable/similar to NNMC?

Methodology

- College and University Professional Association for Human Resources (CUPA-HR) reports were the main source of the analysis. For obvious reasons, only institutions that report data to CUPA-HR were included.

- "Similar" was defined as:
  - Baccalaureate Institutions (same Carnegie Classification)
  - Similar Annual Expenses (Budget)
  - Similar Enrollment (FTE)
  - Location (Similar Cost of Living)

- The study is based on terminal degrees and faculty rank (Assistant Professor, Associate Professor, and Professor)

- Salaries reported are based on 9-month contract.

Assumptions

- CUPA-HR defines institutional groups by their annual expenses range and by their FTE range.

  ➤ NNMC belongs to the group of institutions with annual expenses less than $46,756,246 (NNMC's annual expense are around $24M)

  ➤ NNMC belongs to the group of institutions with FTE less than 1789 (NNMC FTE is around 800)

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Assumptions

- Location: Institutions in the group were located in States within a +/- 2.5 points range of the Cost of Living Index of NM (Council for Community & Economic Research)

Composite Cost of Living
2017 Annual Average

Cost of Living Index

- 115.1 to 188.3
- 105.1 to 115.0
- 95.1 to 105.0
- 85.1 to 95.0

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Assumptions

- From the previous map, institutions from the following States were selected:

State	Cost of Living Index
ID	92.2
OH	92.3
NE	92.9
KY	93.7
LA	94.4
NC	94.6
NM	94.9
AZ	95.6
WY	95.6
UT	95.7
WV	95.9
WI	96.2
IL	97.2

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Comparison Group

The following institutions are the ones included in the Comparison Group.

Note: there may be other institutions

with the same characteristics but

they do not report data to CUPA.

In this group, all but one are private

institutions.

In general, private vs public institutions

Salaries are comparable when we

control size, budget, and Carnegie

Classification,.

Barton College (Wilson, NC)
Bluefield State College (Bluefield, WV)
Centenary College of Louisiana (Shreveport, LA)
Doane University (Crete, NE)
Eureka College (Eureka, IL)
Georgetown College (Georgetown, KY)
Hastings College (Hastings, NE)
Kentucky Christian University (Grayson, KY)
Kentucky Wesleyan College (Owensboro, KY)
Lees-McRae College (Banner Elk, NC)
MacMurray College (Jacksonville, IL)
Marietta College (Marietta, OH)
Midland University (Fremont, NE)
Principia College (Elsah, IL)
Salem Academy and College (Winston-Salem, NC)
The Defiance College (Defiance, OH)
Transylvania University (Lexington, KY)
Trinity Christian College (Palos Heights, IL)

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Important Observation

When ALL participant CUPA institutions (including all sizes, public, private, research institutions, comprehensive, community colleges, all states, etc.) are included in the analysis.

How does a salary in OUR Comparison Group compared to a national average for ALL CUPA institutions?

The Average Factor is 0.77

In other words, the salaries in our Comparison Group are 77% of the National Average salary for ALL CUPA-HR institutions. This average factor is very important in this analysis for certain fields as it will be explained later.

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Academic Fields identified in the Group

Unfortunately, the institutions in our Comparison Group do not offer the same exact programs. Within this Group most of NNMC academic fields were identified. Those are the following:

Biology

Business Administration

Chemistry

Education

Journalism

Language & Letters

Math

Physics

Psychology

Sociology

Statistics

The salary study include the different academic fields offered at NNMC.

The statistical indicators included are: Median, Mean (average), Standard Deviation, 5 Percentile, and 95 Percentile.

Salary Factor: According to CUPA-HR,   it is the ratio, for a given academic rank and discipline, of the average salary to the average salary across all disciplines. It estimates a relative "market value" for each discipline. Disciplines/ranks with salary factors greater than 1.00 pay more than average. Those with salary factors less than 1.00 pay less than average.

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PhD vs Master's Degree/non-terminal degree

The CUPA-HR reports are based on terminal degrees, actually tenured and tenure-track positions require terminal degrees, non- terminal degrees qualify for "non-tenured instructor" positions. Therefore, to determine the salary difference between Master's degrees holders and PhD degree holders was calculated using another report.

The report was the 2017-2018 Salaries of Instructional and Administrative Nursing Faculty in Baccalaureate and Graduate Programs in Nursing.

This report distinguishes between the two categories. The average difference is a **factor of 0.85**. In other words, the salary for a Master degree holder is 85% of the salary for a PhD holder. Therefore, this factor will be used to calculate the salary range for our faculty with Master's degrees.

Academic Fields identified in the Group

BIOLOGY	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	68416	69168	11336	1.02	53720	87119
Associate Professor	58861	58294	6679	1	49484	68535
Assistant Professor	51000	51259	4259	0.96	45172	58390

BUSINESS ADMINISTRATION	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	NA	NA	NA	NA	NA	NA
Associate Professor	NA	NA	NA	NA	NA	NA
Assistant Professor	66300	68472	13964	1.29	52309	85360

Academic Fields identified in the Group

CHEMISTRY	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	67517	68817	10375	1.02	56009	86482
Associate Professor	NA	NA	NA	NA	NA	NA
Assistant Professor	53919	51699	5498	0.97	43450	58368

EDUCATION	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	79065	77559	8165	1.15	67920	88475
Associate Professor	NA	NA	NA	NA	NA	NA
Assistant Professor	56805	55930	4300	1.05	49751	60900

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Academic Fields identified in the Group

ENGLISH LANGUAGE AND LETTERS	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	65688	65502	13058	0.97	48848	86206
Associate Professor	55492	56276	10158	0.96	44592	73680
Assistant Professor	50375	49667	5416	0.93	41940	56721

MATHEMATICS	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	72860	70938	10444	1.05	54910	85074
Associate Professor	57593	60039	8602	1.03	51738	75172
Assistant Professor	50500	51182	4060	0.96	46176	58017

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Academic Fields identified in the Group

PHYSICS	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	NA	NA	NA	NA	NA	NA
Associate Professor	60085	61085	4144	1.05	56126	66649
Assistant Professor	NA	NA	NA	NA	NA	NA

PSYCHOLOGY	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	70563	71115	9,242	1.05	60737	85694
Associate Professor	55000	57051	7,951	0.98	48069	69923
Assistant Professor	48702	50380	5,897	0.95	44196	59195

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Academic Fields identified in the Group

SOCIOLOGY	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	65648	67636	9,302	1	59079	82019
Associate Professor	NA	NA	NA	NA	NA	NA
Assistant Professor	47904	44915	6642	0.84	34693	50093

RELIGIOUS STUDIES	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	68,416	72,535	18,209	1.07	53,507	99,834
Associate Professor	55,880	62,015	9,511	1.06	53,361	75,331
Assistant Professor	NA	NA	NA	NA	NA	NA

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Academic Fields NOT identified in the Group

The following NNMC academic fields were NOT identified in the Group:

Electrical Engineering
Environmental Sciences
Film and Digital Media
Foreign Language
Information Technology
Mechanical Engineering
Nursing[1]
Pueblo Indian Studies (Ethnic Cultural)
Cosmetology[2]
Office Administration[3]

[1]Nursing report came from the report "Salaries of Instructional and Administrative Nursing Faculty in Baccalaureate and Graduate Programs in Nursing".

[2]Cosmetology report came from PayScale and compared with San Juan College

[3]Office administration report came from the ACBSP salary report.

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Academic Fields not identified in the Group

For these academic fields, the methodology was to collect the national average salaries for all institutions that participated in CUPA-HR and multiply them them by the average factor, mentioned before, equal to 0.77

All statistical indicators (median, mean, etc.) in the following tables were adjusted (multiplied) by 0.77.

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Academic Fields not identified in the Group

ELECTRICAL ENGINEERING	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	100410	101088	18498	1.04	72480	132751
Associate Professor	77929	78091	10578	1.08	59990	96195
Assistant Professor	68512	68207	7896	1.08	54772	80516

MECHANICAL ENGINEERING	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	98766	100336	20155	1.11	69619	134349
Associate Professor	77432	77132	10854	1.08	59459	93747
Assistant Professor	66490	66895	7009	1.09	55358	78717

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Academic Fields not identified in the Group

FDMA	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	74,099	74,580	16,382	0.98	48,640	106,242
Associate Professor	57,159	58,272	11,078	0.97	42,901	76,611
Assistant Professor	47,683	48,504	8,180	0.91	37,825	65,456

INFORMATION TECHNOLOGY	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	90007	92612	17200	1.21	73694	120266
Associate Professor	NA	NA	NA	NA	NA	NA
Assistant Professor	66564	69890	15426	1.30	50153	94705

Academic Fields not identified in the Group

PUEBLO INDIAN STUDIES	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	79616	84961	20460	1.11	59988	118781
Associate Professor	60179	61731	10534	1.03	46614	78938
Assistant Professor	50050	50907	7077	0.95	40138	62508

ENVIRONMENTAL SCIENCES	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	77210	80833	20371	1.06	52415	121627
Associate Professor	61779	62496	11158	1.04	43906	80082
Assistant Professor	52130	53099	8424	0.99	40316	65596

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Academic Fields not identified in the Group

FOREIGN LANGUAGE	Median	Average	Std. Dev.	Salary Factor	5 Percentile	95 Percentile
Professor	70704	72693	14700	0.92	50391	95285
Associate Professor	56025	56560	9358	0.9	41158	68960
Assistant Professor	47548	47971	6443	0.86	36138	57514

Academic Fields not identified in CUPA Report

NURSING	Median	Average	Std. Dev.	Salary Factor	25 Percentile	100 Percentile
Professor	85109	86,576	25151	1.08	71500	98816
Associate Professor	75954	76977	13314	1.08	67670	85285
Assistant Professor	69878	70017	10222	1.04	63609	75842
Instructor	61385	61524	10791	NA	54444	69513

OFFICE ADMINISTRATION	Median	Average
Professor	80,000	80126
Associate Professor	65000	65349
Assistant Professor	49800	48543

COSMETOLOGY	Average
Instructor	41692

How were the missing ranks calculated?

In some of the previous tables, data was not available for some ranks within the same field. In those cases, estimation (interpolation/extrapolation) was used to calculate for the missing ranks, i.e., we used *known data* to estimate the missing data.

The way to do it was based on the average ratio between Associate and Assistant Professor (and Professor and Associate) for those academic fields that were available.

Interpolation used for the Ranks not found

Analysis					
9-month contract	**Assistant**	**Associate**	**Professor**	**Associate/Assistant**	**Professor/Associate**
Field	**Initial**	**Initial**	**Initial**	**Ratio**	**Ratio**
Biology	51000	58861	68416	1.15	1.16
Language & Letters	50375	55492	65688	1.10	1.18
Mathematics	50500	57593	72860	1.14	1.27
Psychology	48702	55000	70563	1.13	1.28
Foreign Language	47548	56025	70704	1.18	1.26
Nursing	69878	75954	85109	1.09	1.12
Pueblo Indian Studies	50050	60179	79616	1.20	1.32
Electrical Engineering	68512	77929	100410	1.14	1.29
Mechanical Engineering	66490	77432	98766	1.16	1.28
FDMA	47683	57159	74099	1.20	1.30
Environmental Science	52130	61779	77210	1.19	1.25
Office Administration	49800	65000	80000	1.31	1.23
Average				**1.17**	**1.24**

Missing Ranks

Field	Missing Rank	Initial Salary
Business Administration	Associate	77262
Business Administration	Professor	96072
Chemistry	Associate	62834
Education	Associate	66198
Information Technology	Associate	77570
Physics	Assistant	51560
Physics	Professor	74713
Religious Studies	Associate	47951
Sociology	Associate	55825

Salary Matrix Considerations

- To build a Salary Matrix for faculty the idea is to create one that determines **minimum salaries** for each field and rank.

- This minimum salaries will take into account years of service in increments of 5 years.

How to account for years of service

Salary ranges for years of service were determined for each rank:

- For Assistant Professor: a) 1- 5 Years; b) More than 5 Years.
  - ❖ The difference between (a) & (b) is 5.1%

- For Associate Professor: a) 1- 5 Years; b) 5-10 Years; c) More than 10 years.
  - ❖ The difference between (a) & (b) is 5.1%, the difference between (b) and (c) is 5.1%

- For Full Professor: a) 1- 5 Years; b) 5-10 Years; c) More than 10 years.
  - ❖ The difference between (a) & (b) is 5.1%, the difference between (b) and (c) is 5.1%

- For Instructors: a) 1- 5 Years; b) 5-10 Years; c) More than 10 years; d) More than 15 years; e) More than 20 years; f) More than 25 years
  - ❖ The difference between (a) & (b) is 5.1%, the difference between (b) and (c) is 5.1%

Salary Matrix								
9-month contract	**Assistant**		**Associate**			**Full Professor**		
Academic Field	0 to 5 years	> 5 years	0 to 5 years	> 5 years	> 10 years	0 to 5 years	> 5 years	> 10 years
Electrical Engineering	68512	72007	77929	81904	86082	100410	105532	110915
Information Technology	66564	69959	77570	81527	85686	90007	94598	99424
Mechanical Engineering	66490	69882	77432	81382	85533	98766	103804	109099
Business Administration	66300	69682	77262	81204	85346	96072	100973	106124
Nursing	69878	73442	75954	79828	83900	85109	89450	94013
Education	56805	59703	66198	69574	73123	79065	83098	87337
Office Administration	49800	52340	65000	68316	71800	80000	84081	88370
Chemistry	53919	56669	62834	66040	69408	67517	70961	74581
Environmental Science	52130	54789	61779	64930	68242	77210	81149	85288
Pueblo Indian Studies	50050	52603	60179	63249	66475	79616	83677	87946
Physics	51560	54190	60085	63150	66371	74713	78524	82530
Biology	51000	53602	58861	61864	65019	68416	71906	75574
Mathematics	50500	53076	57593	60531	63619	72860	76577	80483
FDMA	47683	50115	57159	60075	63139	74099	77879	81851
Foreign Language	47548	49973	56025	58883	61886	70704	74311	78101
Religious Studies	47951	50397	55880	58730	61726	68416	71906	75574
Language & Letters	50375	52945	55492	58323	61298	65688	69039	72560
Psychology	48702	51186	55000	57806	60754	70563	74162	77945
Instructors	0 to 5 years	> 5 years	> 10 years	> 15 years	> 20 years			
Cosmetology	41692	43819	46054	48403	50872			
Nursing	61385	64516	67807	71266	74901			

Lessons learned

- It is not uncommon that some faculty members, in other institutions, have higher earnings than chairs, or even administrators like deans, provosts, or presidents.

- Salaries for different academic fields are different. This is a reflection of the market trends (supply and demand). This is the norm in all academic institutions.

Lessons learned

The cost to fully implement the matrix for all full-time faculty members is approximately $429K (including compensation adjustments and benefits for members in the union and outside the union).

- Distribution of faculty (43 members): female faculty (60% female and 40% male)

- 35 full-time faculty members are currently UNDER paid (60% female and 40% male)

- 8 full-time faculty members are OVER paid (63% female and 37% male)

- Therefore, we do NOT have a GENDER GAP.

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Lessons learned

- The highest INDIVIDUAL *relative* discrepancies with the market (defined as those where the current salary is less than 25% -or higher- compared to the market) are in the following fields: Barbering and Cosmetology, Language and Letters, Mathematics, Nursing, Physics, Pueblo Indian Studies, and Teacher Education.

    - 12 faculty members are affected by the highest *relative* differences with the market (more than 25%). The cost to fix the worst cases will be approximately $195K (including benefits)

- The highest INDIVIDUAL *absolute* discrepancies with the market (defined as those where the current salary is less than $11K -or higher- compared to the market) are in the following fields: Barbering and Cosmetology, Information Technology, Language and Letters, Mathematics, Mechanical Engineering, Nursing, Physics, Pueblo Indian Studies, and Teacher Education.

    - 15 faculty members are affected by the highest *absolute* differences with the market salaries (more than 11K). The cost to fix the worst cases will be approximately $246K (including benefits)

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Considerations for the future

College administration will negotiate a one-step-at-a-time approach since it is impossible to increase all salaries in one year. The approach could be done by increasing the salaries proportionally to the current discrepancies in the proposed matrix. Another approach is to address the discrepancies by rank (start first associate professors and then assistant professors). Any approach will have to be negotiated.

Any approach that College administration takes will mean that some faculty members will not get similar increases until the largest discrepancies (which are the most costly) are addressed first.

The College is still operating with a very high deficit (approx. $800K) and there is too much uncertainty today in terms of the I&G allocation that will be assigned to NNMC in FY 20. This may slow down the ability to address these salary discrepancies, but at least we have defined a goal.

Adjunct faculty members have not received a raise in at least 11 eleven years. Even a 10% increase to adjuncts will represent $150K in new money that the college needs to find. This is another competing priority that needs to be considered.

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