

Public Report of the Working Group on Salary Structure

January 2019

Executive Summary

The Memorandum of Settlement between the University of Waterloo and the Faculty Association of the University of Waterloo, signed on Jan 29, 2018, mandated the establishment of a Working Group on Salary Structure (WGSS) with the following mandate:

The Vice President Academic and Provost (VPAP) and the President of the Faculty Association of the University of Waterloo (PFAUW) will together establish a working group that will investigate the existing salary structure (floors and thresholds) and recommend adjustments to the structure to promote equitable influence of the selective increase system on relative career salary progression of lecturers. The working group will start their work by 1 March 2018, report to VPAP and PFAUW by 1 November 2018, with the recommended changes implemented retroactive to 1 May 2018.

The WGSS was established by the VPAP and PFAUW comprising two co-chairs and four faculty members selected by the co-chairs and approved by the VPAP and PFAUW. The members are listed in Appendix A. The WGSS met 13 times between April and December 2018, totalling over 23 hours. In addition, the Co-Chairs met more frequently and substantive time was spent in the drafting of models, the running of simulations and the preparation and review of documents. This report provides the recommendation of the Group.

Recommendation

The WGSS recommends that the thresholds effective 1 May 2018 be adjusted as follows.

Rank	Floor	T_1	T_2
Lecturer	No change	\$148,290	\$184,909
Clinical Lecturer	No change	\$164,800	\$201,419
Professorial ranks	No change	\$175,779 (no change)	\$212,398 (no change)

Rationale

Annual increases are based on two factors: scale and performance. Scale is a mechanism that protects salaries from inflation. It is negotiated and applies to everyone. Performance-based increases (that is, selective increases) are determined individually. Scale has a multiplicative effect (it is a percentage) and performance has an additive effect (it is a dollar amount). Because scale is multiplicative, the scale effect results in larger dollar amounts later in a faculty member's career when salary levels are higher, whereas the magnitude of the performance-based increase does not depend on the precise salary level, but rather depends on thresholds

that typically correspond to stages in one’s career. The performance based increase will have a larger proportional effect early in one’s career.

The value of the faculty member’s performance-based increase depends on several factors: the individual’s merit score, their current salary relative to two thresholds, T_1 and T_2 , which differ for lecturers and professors, and a formula that is based on the collection of merit scores within a faculty. The magnitude of a performance-based increase is reduced when a faculty member crosses their rank’s T_1 and again when the faculty member crosses their rank’s T_2 .

Crossing thresholds has a significant impact on a faculty member’s performance-based increase. For faculty members hired since 2008 up to the age 32, the time from hire to T_1 with the current threshold system is 9.5 years for Lecturers and 15.1 years for Professors. The net effect is that lecturers and professors who have comparable performance evaluations and who work within the same salary structure have very different earnings profiles. The increases in a typical lecturer’s salary are reduced for 5.6 years more than in a typical professor’s career.

To redress this inequity, a Working Group on Salary Structure (WGSS) was created as part of the 2018 salary settlement. The goal of the Committee’s recommendation is to ensure that lecturers and professors who start at the same point in their careers and who perform comparably will have comparable opportunities for salary increases. After careful consideration of various measures of inequity and mechanisms for resolution, the Committee provided the unanimous recommendation above. The recommendation ensures the same time between thresholds for comparable performance.

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Improving Equity

In seeking an “equitable influence of the selective increase system on relative career salary progression of lecturers” the committee first clarified

1. what adjustments were within the scope of the mandate, and
2. what measures of equity should be considered.

A summary of the deliberations on these two elements of the mandate is described here.

1. The committee discussed what should be viewed as allowable *adjustments to the structure*. The existing salary structure was negotiated (UW/FAUW) as part of the MoA, and the WGSS is only mandated to “recommend adjustments to the structure.” Substantial changes to the structure would be a material change to the MoA, and would imply renegotiation of its terms; this would exceed the mandate of the WGSS. Thus, the WGSS agreed that its mandate should be viewed as restrictive and technical, meaning that only adjustments to the values of the thresholds and floors could be considered within the mandate.

2. The WGSS noted that the measure of equity that is used would influence which solution it deems best for equitable progression within the salary structure. Three distinct measures of equity formed the principles behind any proposed solutions. These are: Equal Time to Thresholds (Parallel Lines), Equal Thresholds (Uniform Threshold), and Equal Threshold Proportions.

The committee established the following criteria to be met by any resolution proposed to address the inequity regardless of measure. The resolution must:

- have a statement of the inequity to be remedied,
- explicitly identify principles that address the inequity,
- provide explanations that are accessible to all interested parties,
- comply with the terms of reference of the committee,
- be consistent with the existing salary structure,
- have a net cost that is not an onerous burden on the University,
- be seen to improve equity for lecturers and not reduce equity among any employee group, and
- be politically and financially acceptable to FAUW and the Provost.

The Committee recognizes that lecturers and professors have different career paths and expectations. Therefore, when the Committee evaluated potential solutions, it did so on the understanding that equity does not mean everyone must be treated identically. However, if a specific principle regarding equity is to be applied, it should be applied consistently over the entire employee group unless there is a meaningful basis for differentiation.

In the next subsection we describe three potential measures of equity and for each measure outline corresponding solutions and provide an illustrative case. Subsequently we highlight the merits and drawbacks for each of these potential solutions, checking consistency with our established criteria.

Three Measures

1. **Equal Time to Threshold** (Parallel Lines model): The equity concern is that lecturers have fewer years before hitting thresholds and thus, fewer years before reduced merit increases take effect. The solution is to adjust T_1 and T_2 for lecturers such that the typical time to threshold is the same as in the professorial ranks (all else being equal). This model is called the Parallel Lines model because the earnings profile of a representative lecturer will now be parallel to, instead of flattening or diverging from, that of a representative professor.

Illustrative Case: If Professor A and Lecturer B start at the same time, at the average junior starting salary for their rank, and have identical performance evaluations, then they will reach their respective thresholds at the same time. An alternative would be to compare the time to threshold from the Floor salary for their rank, but hires are rarely made at Floor.

2. **Equal Thresholds:** The equity concern is that faculty sharing the same selective increase pool should not be treated arbitrarily differently within the same salary structure. The solution is to use the same thresholds (T_1 and T_2) for all faculty. Arbitrary is defined here as differential treatment that is not premised on market-based or other formal valuation of work. In such cases, differential treatment may be viewed as a discriminatory wage setting practice unrelated to productivity or value to the firm/industry.

Illustrative Case: If Professor A and Lecturer B start at the same time, at the same salary, and have identical performance evaluations, then they will reach their respective thresholds at the same time.

3. **Equal Threshold Proportions:** The equity concern is that the ratio of terminal salary to starting salary is lower for lecturers than professorial appointments. The solution is to set T_1 and T_2 such that the ratio of terminal salary to either the average starting salary or the floor is the same for lecturers and professors.

Illustrative Case: If Professor A and Lecturer B start at the same time, at their respective floors, then the salaries of A and B when they are at their respective T_1 and T_2 should yield the same ratios of T_1/Floor and T_2/Floor . As an alternative to floor, an average starting salary for the respective employee groups can be used. There is no unique solution to this problem.

Considerations

1. A major benefit of the parallel lines measure is that it directly addresses concerns raised during the 2018 bargaining round: that the time to threshold is significantly shorter for lecturers. Lecturers perceive that in addition to the lower starting salaries (on average), the current structure imposes an increasing salary gap over time.

It is important to observe that in practice floors are no longer accurate measures of starting salaries. An evidence-based approach would be to use an estimated average starting salary for Lecturers and the Professorial stream (in place of floors) to calculate the T_1 and T_2 that generate equal time to thresholds.

This version of the equal time to thresholds model is the one that the WGSS recommends. The WGSS, however, cautions that average starting salaries for Lecturers and Professorial ranks may increase at different rates as market forces shift. Because the time to threshold solution was introduced as threshold numbers, as opposed to threshold formulas, the thresholds will need to be eventually revisited and possibly readjusted.

2. The Equal Thresholds measure ensures that equally recognized work (that is, identical merit scores) have equal effect within the salary structure. In other words, people within the same salary structure should not be treated arbitrarily differently. This measure also has the benefit of being the simplest solution.

One implication of Equal Thresholds is that, on average, Lecturers would then have more years before they hit thresholds than those in the Professorial ranks. This is a consequence of the lower average starting salary for Lecturers. However, the same is true for Professors with lower starting salaries: they would also have more years before they hit thresholds than those who started at higher salaries. Given the different nature of two roles, it was unclear to the committee if such a measure is equitable.

3. The Proportional Thresholds measure corrects toward proportional equality. This equality is present, by design or by happenstance, in the current threshold structure. Because selective increases are additive rather than proportional to salary, income differences become proportionally smaller over time. Therefore, depending on threshold values, a Lecturer with a lower starting salary would have a substantially higher terminal-to-starting salary ratio than a Professor with a larger starting salary. The Proportional Thresholds solution corrects (in part) for the difference in terminal-to-start ratios.

A concern with the Proportional Thresholds measure is that it applies the corrective measure to Lecturers alone, and not to Professorial track faculty. If we want to reintroduce proportionality into an additive system, we should apply the measure within all classes of faculty, not just one class of hire. This seems beyond the mandate of the committee.

In addition to variations on the three classes outlined above, the Committee also considered blending solutions. The reasoning underlying a blend is that there is more than one way to measure equity, so a fair solution might be to take the thresholds generated by these models and choose a reasonable value in between. An advantage is that it takes into account multiple equity concepts. A drawback is that any combination of additive and proportional structures will not scale over time. As such, the exercise would need to be repeated, and an algorithm employed each time to maintain the equity principles therein.

One particular blending solution was considered in some depth. This was to minimize the combined time-to-threshold inequity (Approach 1, Parallel Lines) and terminal-to-starting-ratio inequity (Approach 3, Proportional Thresholds).

Several additional solutions were considered, but these typically were a poorer match to our established criteria. The other candidate solutions are itemized in Appendix D.

After many long and animated discussions, and with careful scrutiny of models, the unanimous decision of the committee is to recognize the Equal Time to Threshold (Parallel Lines) as the measure to address.

Calculating T_0 , T_1 , and T_2

For those unfamiliar with how the salary system works, details are provided in Appendix B.

As previously discussed, the Committee agreed that average starting salary for junior faculty is preferred to the floor for the purposes of setting equal time to thresholds. We call this average starting salary T_0 and established criteria for its calculation.

The WGSS asked IAP to compute the average starting salary for three groups (clinical lecturers, lecturers, professorial ranks), subject to the following criteria.

- Use only the population that has been continuously employed as professor or lecturer and are still employed today (2018).
- Use 2018 dollars. That is, adjust older salaries by an approximate annual inflation rate of 2%.
- Use starting nominal salaries to normalize the salaries of fractional load faculty.
- For people hired multiple times, use only their first appearance in the data set for that period.
- Use an age at hire of less than 32. This is a proxy for early career, since a small number of senior hires could significantly affect the average starting salary.

These calculations were performed over two types of timeframes, a longer window (2008 to 2018), and a sequence of five-year windows (2008-2012 to 2014-2018). The WGSS decided to average over all time periods. This average is

$$\begin{aligned} T_0 &= \$79,401 \text{ for lecturers,} \\ T_0 &= \$106,890 \text{ for professors.} \end{aligned}$$

Given these data, we computed a new value of T_1 for lecturers in the following manner:

- The thresholds for professorial ranks were left unchanged.
- The distance $D_1 = T_1 - T_0$ was computed for professorial ranks using T_0 as above. Given that the 2018 T_1 for professors is \$175,779, then $D_1 = \$68,889$.
- This distance was used to compute $T_1 = T_0 + D_1$ for lecturers, hence
$$T_1 = \$79,401 + \$68,889 = \$148,290.$$

For clinical lecturers, the population is so small that no comparable data was available to IAP. The committee then settled on the information available, that using old thresholds, T_1 for clinical lecturers is 60% of the way from T_1 for lecturers to T_1 for professors. The same formula is applied to the new T_1 , hence

$$T_{1,CL} = T_{1,Lect} + 60\% (T_{1,Prof} - T_{1,Lect}) = \$164,800$$

Similarly, we computed a new value of T_2 for lecturers and clinical lecturers in the following manner:

- The distance $D_2 = T_2 - T_1 = \$36,619$ was computed for professorial ranks
- This distance was used to compute $T_2 = T_1 + D_2$ for lecturers and clinical lecturers, using T_1 determined as described above.

So we obtain

$$T_{2,Lect} = T_{1,Lect} + D_2 = \$148,290 + \$36,619 = \$184,909, \text{ and}$$

$$T_{2,CL} = T_{1,CL} + D_2 = \$164,800 + \$36,619 = \$201,419.$$

Note that T_0 is not intended to become part of the MoA with this recommendation. Rather, it is a number created to assist in the computation of T_1 and T_2 . We provide our calculations here for transparency and to provide a basis for future calculations, should a similar foundation be desirable.

This solution complies with the terms of reference of the WGSS, is consistent with the existing salary structure, has explicitly identified principles and accessible explanations, improves equity for lecturers without reducing equity for others, and is both politically and financially viable.

Impact: Cost to the Institution

To provide an idea of cost to the institution, we studied two scenarios:

- the recommended model (where the ranges $[T_0, T_1]$ and $[T_1, T_2]$ are of the same length for professors and lecturers), labeled in this section RM, and,
- the uniform threshold model (where the current T_1 and T_2 for professors apply to all members of faculty), labeled in this section UTM.

Both models are compared to current practice. The Uniform Threshold Model is the most costly of all the options considered; hence, it provides a clear upper bound for any other system where the thresholds of professors are fixed.

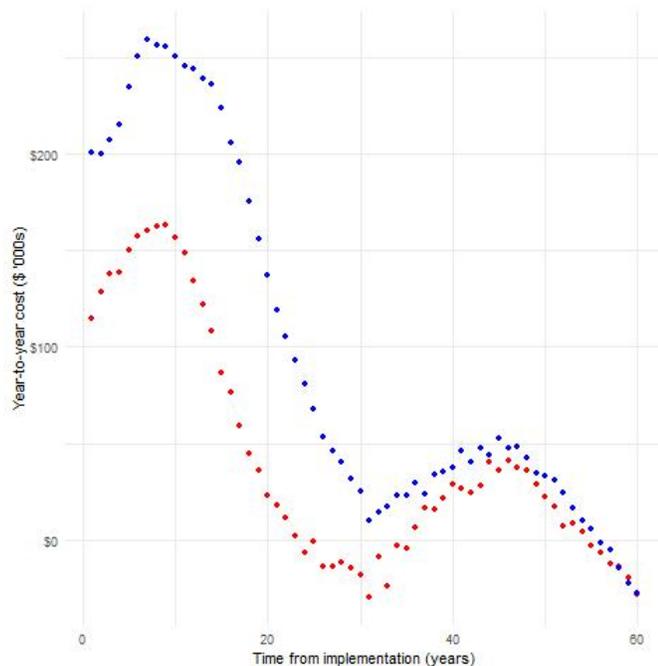
For a first approximation of an upper bound to cost, imagine that all lecturers currently in the system are continuing lecturers, that no one plans to retire in the next 10 years, and that the UTM is used. Of that population, 49 currently have a salary between T_1 and T_2 , with a contribution to the SIPs of 0.5SIU, and 17 currently have a salary above T_2 , with a contribution of 0.25SIU. Under the UTM, all but one are below T_1 , and thus each contribute a full SIU to the SIPs, adding an additional $36.75\text{SIU} = \$147,147$ to the annual budget. This is equivalent to an increase in 0.07% in year one for the salary mass of the whole population (\$197,605,693 in 2018), or an increase in 0.6% in year one for the salary mass of the lecturer population (\$23,646,174 in 2018).

The WGSS has performed simulations using the following assumptions.

- The starting population is the 1 May 2018 population.
- The 7 Clinical Lecturers are treated as Lecturers.
- All Lecturers are treated as Continuing Lecturers.
- Individuals do not leave the University before age 63, and their probability of retirement every year is determined using Ontario-wide statistics obtained from IAP.
- The population is stable. That is, every retiree is replaced immediately by a new hire of the same rank and in the same faculty with random age, salary, and merit.
- Feathering is not implemented.
- OPA and anomaly corrections are not implemented.

Under this simulation scheme, the table below shows the yearly additional cost to the salary mass of the Recommended Model. The graph next to it represents the same information (in red, lower curve), and provides for comparison the upper bound on cost given by the Uniform Threshold Model (in blue, upper curve).

Year after implementation	Additional cost that year
1	\$115,149
2	\$128,387
3	\$137,579
4	\$139,060
5	\$150,250
6	\$156,928
7	\$160,416
8	\$164,221
9	\$162,135
10	\$158,377
15	\$90,924
20	\$21,486
25	-\$1,049
30	-\$16,644

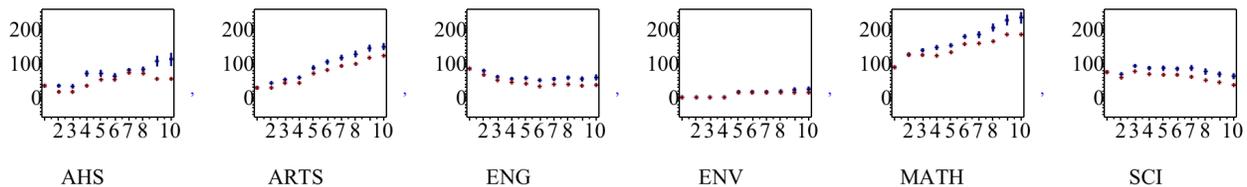


By way of comparison, the Salary Anomaly exercise of 2016 injected, in its first year, an additional \$2,905 to the salary of 344 women, resulting in an addition of \$999,320 to the salary mass on 1 May 2016. The WGSS recommendation takes six years to add a similar amount.

Avoiding Harm

Any change in thresholds has the potential to alter the various Faculties' SIPs. When it does, this change also affects the individual adjusted-R scores. For a given Faculty, the SIP and the sum of the individual adjusted-R scores are the numerator and denominator in the dollar value M_{fac} of an increase corresponding to a merit score of adjusted-R = 1. Because both the numerator and denominator are affected differently, the value M_{fac} could in theory vary substantially. In practice, the change is predicted to be immaterial, in the range \$0 to \$150 depending on the faculty. Since M_{fac} values vary between \$2300 and \$2600, this represents a change of the order of 0% to 5% .

If one considers the impact long term, one natural question is whether the evolution of that value M_{fac} , could be detrimental to individuals. The graphs below show the difference between this quantity obtained under the RM and the current threshold practice obtained in simulation (the y-axis is the simulated change, in dollars, and the x axis represents years). The red dots represent the minimal value obtained over all simulation runs, while the blue dots represent the average, with error bars signaling the standard deviations. The difference is immaterial.



Appendix A: Working Group Membership

In alphabetical order by last name:

Co-Chairs

Benoit Charbonneau (Associate Professor, Faculty of Mathematics) representing FAUW
Stephen Watt (Dean, Faculty of Mathematics) representing the UW administration

Members

Laura Deakin (Lecturer, Faculty of Sciences)
Jason Grove (Lecturer, Faculty of Engineering)
Steven Furino (Lecturer, Faculty of Mathematics)
Kate Rybczynski (Associate Professor, Faculty of Arts)

Appendix B: Salary Increase Mechanism at Waterloo

Annual increases are based on two factors: scale and performance. Scale is a mechanism that protects salaries from inflation. It is negotiated and applies to everyone. Performance-based increases (that is, selective increases) are determined individually. Scale has a multiplicative effect (it is a percentage) and performance has an additive effect (it is a dollar amount). Because scale is multiplicative, the scale effect results in larger dollar amounts later in a faculty member's career when salary levels are higher, whereas the magnitude of the performance-

based increase does not depend on the precise salary level, but rather depends on thresholds that typically correspond to stages in one's career.

The value of the faculty member's performance-based increase depends on several factors: the individual's merit score, their current salary relative to two thresholds, T_1 and T_2 , which differ for lecturers and professors, and a formula that is based on the collection of merit scores within a faculty. The magnitude of a performance-based increase is reduced when a faculty member crosses their rank's T_1 and again when the faculty member crosses their rank's T_2 .

For clarity, we outline below how the performance-based increase is calculated and how it is affected by thresholds.

First, a selective increase pool (SIP) is determined for each of the six faculties at the University of Waterloo. The SIP is based on the University-wide Selective Increase Unit (SIU) multiplied by the number of faculty members adjusted according to their position relative to the thresholds. Letting n_0 , n_1 , and n_2 be the number of faculty members with salary below T_1 , between T_1 and T_2 , and above T_2 , respectively, then the SIP is calculated for each faculty (SIP_{fac}) by

$$SIP_{fac} = (1.0n_0 + 0.5n_1 + 0.25n_2) \times SIU.$$

The SIP_{fac} is then distributed as salary increases based on performance. First, adjusted performance ratings R_{adj} are computed for each faculty member based on their actual performance rating and modified depending on their salary (S) relative to the thresholds T_1 and T_2 . The formula for R_{adj} is provided below.

$$R_{adj} = \max(0, R - A) \quad \text{where} \quad \begin{cases} A = 0.0, & \text{if } S < T_1, \\ A = 0.75, & \text{if } T_1 < S < T_2, \\ A = 1.25, & \text{if } S > T_2. \end{cases}$$

Then a value of M_{fac} (the Selective Increase for $R_{adj} = 1.0$) is computed for each faculty. It is the selective increase pool divided by the sum of adjusted performance ratings for all faculty members. That is,

$$M_{fac} = \frac{SIP_{fac}}{\sum_{fac} R_{adj}}.$$

Lastly, the calculation for an individual faculty member of their new salary S_1 on 1 May based on their old salary S_0 on 30 April is influenced by the scale increase for the year, their own R_{adj} and their faculty's M_{fac} .

$$S_1 = S_0 \times (1 + I) + R_{adj} \times M_{fac}$$

An exception to this formula, called feathering, is used when the passage from the previous year's salary to the next year's salary crosses thresholds. For all simulations used in this report, this feathering is ignored.

An additional 15% of each SIP is available to each Faculty in two parts: 10% goes as Outstanding Performance Awards, and 5% as anomaly corrections.

Details of the process can be found in Article 13 of the [Memorandum of Agreement](https://uwaterloo.ca/secretariat/documents-potential-interest/memorandum-agreement-uw-fauw) between the Faculty Association of the University of Waterloo and the University of Waterloo (available at: <https://uwaterloo.ca/secretariat/documents-potential-interest/memorandum-agreement-uw-fauw>). FAUW has also produced a primer explaining the [structure of the salary system](https://uwaterloo.ca/faculty-association/information-faculty/faculty-guide-working-waterloo/faculty-salaries-waterloo) and the periodic negotiating process (available at: <https://uwaterloo.ca/faculty-association/information-faculty/faculty-guide-working-waterloo/faculty-salaries-waterloo>).

I don't understand the math. Can you provide a simple example of how our salary increases work, and how thresholds affect salaries for lecturer and professorial rank faculty members in our current system?

To understand how scale, merit-based increase, and thresholds affect earnings, consider two hypothetical people, Professor A and Lecturer B, who have just begun their careers in the same faculty at Waterloo. Professor A's starting salary is \$100,000 and Lecturer B's starting salary is \$80,000. After their first year suppose they both receive the same performance evaluation of 1 (for simplicity) and this score results in a merit-based increase of \$4,000 each (since their merit is the same). Assuming a negotiated scale increase of 2%, the scale increase is \$2,000 for Professor A and \$1,600 for Lecturer B. Their salaries after the first year are \$106,000 and \$85,600, representing increases of 6% and 7% respectively. The reason that the annual percentage increases are not identical is that the merit-based increase, \$4,000, is a greater proportion of Lecturer B's salary than of Professor A's salary. This system generates accelerated proportional growth for early career faculty members has been a deliberate effect of the negotiated salaries at Waterloo for decades.

Now consider Professor A and Lecturer B after 9 years. Again, suppose that they have had identical performance evaluations of 1 over their entire career and that the expected increment for performance is now \$6,000. The thresholds for lecturers and professors, which are not the same, now come into obvious effect for these individuals. Lecturer B will have crossed threshold 1 for lecturers and Professor A will not have crossed threshold 1 for professors. Lecturer B will only receive \$1,500 of the selective increase while Professor A will continue to receive the full value of \$6,000. In fact, using the existing pool of employees, this difference in reward for identical performance will continue until year 16 when Professor B crosses threshold 1 for professors.

Appendix C: Background

History of Thresholds

While floors have existed in the salary structure since at least 1962, thresholds were introduced in 2001 with the negotiation of Article 13 of the Memorandum of Settlement. Prior to 2001, salary increases were based on a progress-through-the-ranks scheme governed by Policy 11. The following context and rationale for creating the threshold system were provided by members of the 2001 MoA Article 13 joint drafting committee.

In the 1980s and mid-1990s, hiring was only at the floor (F). Faculty members had their salary move up by scale and a selective increment depending on their performance. Once their salary reached $2.2F$, their salary was increased by scale and half the selective increment, and then at $2.5F$ their salary was increased only by scale, that is their performance no longer influenced their salary.

In the 1990s, it became customary to hire at 1.75 to 1.8 times the floor (F). Professors would then get to $2.2F$ within a few years. The new threshold model was introduced with the intention of giving a continuing incentive to senior people. The original values of T_1 and T_2 were set at $2.2F$ and $2.5F$. It was the intention that T_1 should be reached mid-career, and T_2 closer to the end of one's career.

Continuing lecturers were not very common at the time nor were they expected to become common. Consequently, not much time was spent considering the consequences of the separate thresholds set for lecturers. There was historical precedent to set the Lecturer floor as a fraction of the Assistant Professor floor (roughly 78%), and thresholds were created at the same fraction.

All thresholds were adjusted significantly upwards in 2004 in recognition that starting salaries were higher in some faculties than others and therefore T_1 and T_2 were reached much faster in those faculties with higher average starting salaries. The increase in thresholds also addressed some retention issues. The 2004 change was not formulaic, and conformity to what was in place was deemed important, so the changes to F , T_1 , and T_2 were done using the same ratio for all ranks.

Another significant change to thresholds was signed into effect with the 2015–2018 MOS, which boosted the progression of the thresholds from scale to scale + 2%. The table below shows all changes to floor and thresholds, with any change not equal to scale coloured.

Year	scale	change to floor					change to T1			change to T2		
		Lecturer	Clinical Lecturer	Assistant	Associate	Prof	Lecturer	Clinical Lecturer	Prof ranks	Lecturer	Clinical Lecturer	Prof ranks
2018	2	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2017	1.5	1.50%	1.50%	1.50%	1.50%	1.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2016	1.95	1.95%	1.95%	1.95%	1.95%	1.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
2015	1.95	1.95%	1.95%	1.95%	1.95%	1.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
2014	3	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2013	3	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2012	3	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2011	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	3.35	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
2008	3.35	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%	3.35%
2007	3.2	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%
2006	3.2	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%
2005	3.3	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%
2004	3.3	16.20%	16.49%	16.49%	16.77%	15.93%	20.55%	20.54%	20.50%	13.99%	13.97%	13.95%
2003	2.2	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%
2002	2.6	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Lecturers at the University of Waterloo

The University of Waterloo has five ranks for Faculty Members under the purview of its faculty association, FAUW. They are: Lecturer, Clinical Lecturer, Assistant Professor, Associate Professor, and Professor.

The years 2000 and 2001 saw both the adoption of Article 13 of the MoA and of Policy 76. At that time, lecturers were uncommon. In fact, regarding the Continuing Lecturer Appointment type (an ongoing and permanent appointment type), Policy 76 then stated and still states through its multiple revisions: “These positions are understood to be unusual and offered only in special circumstances.” Policy 76 is currently under revision, in part to account for the fact that lecturers and continuing lecturers are no longer rare. In fact, as of November 2018, 7% of faculty members are continuing lecturers, and an additional 10% are lecturers on definite-term contracts.

The population of lecturers amongst faculty members has grown from 8% in 2009 to now 17% in 2018.

May 1st of year	# Lecturers	# Faculty members	%
2009	74	979	8%
[...]			
2013	129	1108	12%
2014	132	1123	12%
2015	150	1171	13%
2016	167	1213	14%
2017	172	1215	14%
2018	200	1256	16%
2018 (November)	224	1321	17%

Faculty-specific demographics as of 1 May 2018 are provided below.

	AHS	ARTS	ENG	ENV	MATH	SCI	Total
# Lecturer	11	61	36	5	61	26	200
# Professors	66	257	282	81	193	177	1,056
Total	77	318	318	86	254	203	1,256
% of Lecturer	14%	19%	11%	6%	24%	15%	16%

Start of Career Comparison

Faculty members at the start of their careers as Associate Professors and Lecturers share teaching and service duties. Both ranks also pass through a vetting process before an individual attains permanent employment. Their average merit score for the evaluation year 2017 are respectively 1.60 and 1.59. By comparison, full professors have an average merit score for the same period of 1.69. Yet their salaries' relation to their respective thresholds T_1 and T_2 are very different, as seen in the following table. We observe that no associate professor has their salary above T_2 while many lecturers do. In other words, few professors, but many lecturers are experiencing reduced salary progression.

	Lecturers	Assistants/Associates	Associates only
% below T1	67%	91%	86%
% between T1 and T2	24%	9%	14%
% above T2	9%	none	none
Average Age	46	44	48

Appendix D: Alternatives Considered

The committee considered a number of alternative scenarios. These alternatives are listed below. All were ruled out because they did not satisfy one or more of the criteria listed in the Improving Equity section or were deemed impractical in implementation.

1. No change in the salary structure.
2. No thresholds.
3. A change to the floor.
4. Change only the distance from T_1 to T_2 .
5. Use of a continuous rather than discrete SIU weight.
6. Separate salary pools.
7. Different SIU vales based on rank.
8. Use individual times to thresholds rather than common thresholds.
9. All salary increases constructed as a percentage of existing salary.
10. All salary increases constructed as additive to the existing salary.
11. Eliminate merit based increases.
12. Eliminate scale.