

University of Minnesota Supplemental Benefits Plan

**Actuarial Valuation Report as of July 1, 2009
for Fiscal Year July 1, 2009 to June 30, 2010**

February 2010

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PURPOSE AND SUMMARY

The purpose of this report is to set forth the results of our actuarial valuation of the University of Minnesota Supplemental Benefits Plan as of July 1, 2009, in accordance with Chapter 356 of the Minnesota Statutes. The valuation establishes a cost provision of \$319,400 for the year ending June 30, 2010.

The valuation was based on employee census data as of July 1, 2009 and plan provisions as amended through July 1, 2009. The plan is composed of two distinct groups:

- Employees who began participation in the Faculty Retirement Plan prior to 1963. This is a closed group of participants; namely, existing retirees and a diminishing group of active participants soon to retire.
- Female participants in the Faculty Retirement Plan for whom contributions to the Faculty Retirement Plan were made at any time prior to July 1, 1982. (The Faculty Retirement Plan had used separate male and female factors prior to July 1, 1982. This plan equalizes those pre-July 1, 1982 amounts.) This is also a closed group.

In summary, the valuation shows a Chapter 356 requirement of \$319,400. Contributions to the plan are made from central resources and from self-supporting departments. In order to satisfy Chapter 356, the total contribution from all sources, plus interest at 5% to June 30, 2010, must be at least \$319,400.

EMPLOYEE AND FINANCIAL DATA

Table 2 summarizes the data used for the valuation. Data covering 11 active pre-1963 participants under the Faculty Retirement Plan was provided to us. Based on current account balances and the actuarial assumptions set forth below, it is projected that no member of this group will receive benefits from the Supplemental Benefits Plan. In addition, we were furnished a listing for the 226 retirees and survivors presently receiving benefits under the plan. We also received a summary by age grouping of account balances under the Faculty Retirement Plan for female participants at June 30, 2009.

The University reported assets with a market value of \$2,979,796 as of July 1, 2009. For valuation purposes, Chapter 356 specifies the use of an Actuarial Value of Assets that smoothes gains and losses over a five-year period.

As set forth in Table 5, the Actuarial Value of Assets is \$3,251,472 as of June 30, 2009.

PLAN VALUED

Tables 3(a) and 3(b) summarize the pertinent provisions of the Supplemental Benefits Plan for retirements before and after June 30, 1977, respectively. Table 3(c) summarizes the benefit increases that have been granted to pensioners. Since benefits under this program are directly dependent on the level of benefits payable under the University's Faculty Retirement Plan, we have set forth a complete description of the principal provisions of the Faculty Retirement Plan in Table 3(d).

There were no changes in the Supplemental Benefit Plan provisions being valued since the prior valuation.

We project that no active employee will receive a supplemental benefit from this plan. Therefore, the liabilities reflected in this report are for inactive participants and female participants subject to unisex adjustment.

ACTUARIAL ASSUMPTIONS AND METHODS

Table 4 is a summary of the actuarial assumptions and methods used in this valuation. These assumptions and methods conform to the provisions of Chapter 356 of the Minnesota Statutes.

The actuarial method used is the entry-age-normal cost method as prescribed by Statutes. Under this method, the normal cost is determined as the level percentage of future covered payroll that is required to be paid from each member's date of employment to retirement in order to provide the benefits under the plan. The accrued liability under this method is equal to the present value of all benefits payable under the plan less the present value of future normal costs. The unfunded accrued liability is then determined by subtracting the assets on the valuation date from the accrued liability.

Originally, Minnesota Statutes required funding the annual normal cost plus the amortization of the unfunded accrued liability for the first valuation completed after June 1, 1979 by the end of the fiscal year occurring in 2009. The amortization of any additional unfunded accrued liability generated by benefit improvements is determined by first computing the amortization over 30 years. The amount of this amortization is added to the remaining amortization of the June 1, 1979 amount and a determination is made as to the fiscal year when this combined payment fully funds the total unfunded accrued liability. Due to the increases in benefits which have occurred since 1979, all unfunded accrued liabilities are being amortized by the end of the fiscal year occurring in 2021.

CHANGES IN ASSUMPTIONS AND METHODS SINCE THE PRIOR VALUATION

There were no changes in assumptions or methods since the prior year.

VALUATION RESULTS

Table 1 sets forth the results of our valuation. Section A of the table sets forth basic data items for active and retired participants.

Section B sets forth the determination of accrued liability, unfunded accrued liability, annual normal cost, and annual cost provision all in accordance with Chapter 356. As of July 1, 2009, the annual cost provision is \$304,200. Interest accrues at 5% until date of payment. As of June 30, 2010, the annual cost provision is \$319,400.

Section C sets forth the administrative expenses of the plan.

GAIN AND LOSS ANALYSIS

Table 6 reconciles the unfunded accrued liability over the past year and summarizes the gain and loss analysis. There was a decrease of \$98,600 in the July 1, 2009 unfunded accrued liability when compared to that expected. This gain is the result of fewer unisex annuity conversions than expected and other actuarial gains (not related to mortality), and was partially offset by a loss on plan assets and lower than expected mortality during 2009.

COMPARISON OF 2008 AND 2009 VALUATION RESULTS

Table 7 sets forth a comparison of the principal values underlying the 2008 and 2009 valuations. The unfunded accrued liability decreased from \$3,184,300 to \$2,831,400.

In preparing this valuation, we have relied upon information and data provided to us by the University of Minnesota. An audit of the financial and participant data provided was not performed, but we have checked the data for reasonableness as appropriate based on the purpose of the valuation. We have relied on all the information provided, including plan provisions and asset information, as complete and accurate.

The valuation summarized in this report involves actuarial calculations that require assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used.

The undersigned consultants of Watson Wyatt Worldwide with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the University of Minnesota and Watson Wyatt Worldwide that impacts our objectivity.

If in connection with this report, any further investigations are indicated, we will be happy to proceed as directed.

Respectfully submitted,

Watson Wyatt & Company, a Towers Watson company



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February 2010

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Table 1

Actuarial Valuation Results

Valuation determinations rounded to nearest \$100

A. BASIC DATA

1.	Active Pre-1963 Participants	
(a)	Total active pre-1963 participants under Faculty Retirement Plan (FRP)	11
(b)	Total projected to receive supplemental benefits	
(i)	Number	0
(ii)	Average annual projected supplement ¹	0
(c)	Covered Payroll	1,344,737
2.	Estimated Account Balance for Female Participants at July 1, 2009	25,393,389
3.	Retirees, Survivors and Widows	
(a)	Number receiving or entitled to receive benefits	226
(b)	Average annual benefit being paid	4,161
(c)	Annual Rate of Benefit Payment	940,300

B. DETERMINATION OF ANNUAL REQUIREMENTS IN ACCORDANCE WITH CHAPTER 356 (MINNESOTA STATUTES)

1.	Accrued Liability as of July 1, 2009	
(a)	Actives	0
(b)	Retirees	1,852,200
(c)	Widows	0
(d)	Survivors	2,525,100
(e)	Female unisex increase 7/1/1982	<u>1,705,600</u>
(f)	Total	6,082,900
2.	Actuarial Value of Assets as of July 1, 2009	3,251,500
3.	Unfunded Accrued Liability as of July 1, 2009 (1(f) less 2)	2,831,400
4.	Annual Normal Cost	0
5.	Annual Requirement to Fund Normal Cost and Amortize the Unfunded Accrued Liability by June 30, 2021	
(a)	Amortization of Unfunded Accrued Liability by June 30, 2021	304,200
(b)	Normal cost	0
(c)	Total as of July 1, 2009	304,200
(d)	Total as of June 30, 2010	319,400

¹ Per investment earnings, salary scale, and Social Security assumptions summarized in Table 4.

C. ADMINISTRATIVE EXPENSES

1.	Administrative Expense	29,467
2.	Percentage of Covered Payroll	2.2%

Table 2

Distribution of Participants as of July 1, 2009

A. ACTIVE PARTICIPANTS (Pre-1963 FRP Participants)

Age Group Last Birthday	Males	Females	Total
60 - 64	0	0	0
65 & Over	<u>11</u>	<u>0</u>	<u>11</u>
Total	11	0	11

B. SURVIVORS

Age Group Last Birthday	Males	Females	Total	Annual Benefit Being Paid
60 - 64	0	1	1	1,203
65 - 69	0	2	2	5,917
70 - 74	0	2	2	18,451
75 - 79	0	2	2	1,600
80 - 84	0	19	19	86,589
85 - 89	0	35	35	137,762
90 & Over	<u>0</u>	<u>35</u>	<u>35</u>	<u>304,635</u>
Total	0	96	96	\$556,157

C. RETIREES

Age Group Last Birthday	Males	Females	Total	Annual Benefit Being Paid
60 - 64	0	0	0	0
65 - 69	0	0	0	0
70 - 74	0	3	3	1,292
75 - 79	0	6	6	4,218
80 - 84	3	20	23	10,937
85 - 89	30	21	51	103,956
90 & Over	<u>32</u>	<u>15</u>	<u>47</u>	<u>263,765</u>
Total	65	65	130	\$384,168

D. RECONCILIATION OF RETIREES AND SURVIVORS

		Number
1.	Number receiving benefits last year	240
2.	Deaths during year with no continuing benefits payable	14
3.	Certain period expired	0
4.	New retirees this year	0
5.	Data correction	0
6.	Number receiving or entitled to receive benefits this year (1 - 2 - 3 + 4 - 5)	226

E. ESTIMATED FACULTY RETIREMENT PLAN ACCOUNT BALANCES FOR FEMALE PARTICIPANTS AS OF JUNE 30, 2009 ATTRIBUTABLE TO CONTRIBUTIONS MADE PRIOR TO JULY 1, 1982

Age	Number of Participants	Total
53	1	31,492
55	6	69,278
56	4	87,797
57	7	303,462
58	7	189,639
59	10	410,646
60	11	467,487
61	11	780,580
62	19	1,195,604
63	9	652,143
64	9	777,351
65	16	1,241,632
66	12	891,464
67	17	2,128,856
68	18	1,545,054
69	10	1,652,411
70	8	1,386,907
71	8	776,895
72	10	1,530,013
73	10	1,615,467
74	12	1,393,487
75	8	1,323,942
76	3	703,780
77	2	129,747
78	3	186,355
79	5	997,652
80	2	150,247
81	5	495,784
82	2	370,467
83	2	588,263
84	4	549,120
85	1	107,883
86	2	108,623
87	3	368,360
88	1	94,904
<u>89</u>	<u>1</u>	<u>90,597</u>
	259	25,393,389

Table 3(a)

Summary of Principal Provisions of the Supplemental Plan (Provisions in effect for pre-June 30, 1977 retirees)

1. Eligibility: Generally applicable to employees who first began participation in the Faculty Retirement Plan prior to 1963, and who retire on or after the June 30, next following the 65th birthday. Special early retirement provisions are available (see below).

2. Amount of Supplement: Supplement (annual) is computed as follows:
 - (a) Determine 2% of final five year average salary for each year of actual service (maximum 30), but not to exceed the following:

(i)	Professor	\$8,500
(ii)	Associate Professor	\$8,000
(iii)	Assistant Professor or Instructor	\$7,500

 - (b) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities using fixed annuity factors under FRP. Note that variable accumulations are converted on fixed basis for this purpose. Prior endowment accumulations are treated as annuity in this computation.

 - (c) Deduct \$1,524 (estimate of 1963 Social Security level) from (a).

 - (d) Determine supplement as equal to (a) less (b) after adjustment for (c).

(Note: Dividends payable for coverage prior to 1963 are not included in (b) above. 1963 and later coverage dividends are included by direct reflection in interest credited on accumulations).

3. Early Retirement:

(Note: Any reference to age 65 in this description means the June 30th next following the 65th birthday.)

A member may retire as early as age 62 in which case his FRP accounts are used to purchase an annuity commencing immediately. Supplemental benefits payable are determined as follows:

- (a) Determine 2% of final five year average salary for each year of service (projected to age 65 but subject to a maximum of 30) not to exceed the following:
 - (i) Professor \$8,500
 - (ii) Associate Professor \$8,000
 - (iii) Assistant Professor or Instructor \$7,500
- (b) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities payable at early retirement using annuity factors under FRP. Note that variable accumulations are converted on a fixed basis for this purpose.
- (c) Deduct \$1,524 (estimate of 1963 Social Security level) from (a).
- (d) Determine supplemental benefit as equal to (a) less (b) after adjustment for (c).

Table 3(b)

Summary of Principal Provisions of the Supplemental Plan (Provisions in effect for June 30, 1977 and later retirees)

1. Eligibility: Generally applicable to employees who first began participation in the Faculty Retirement Plan prior to 1963, and who retire on or after the June 30, next following the 65th birthday. Special early retirement provisions are available (see below).
2. Amount of Supplemental: Greater of benefit as determined under Supplemental Benefits Plan (Pre-June 30, 1977) or benefit computed as follows:

- (a) Determine final five year average salary subject to following maximums for indicated retirement years:

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
1976-77	\$37,200	1988-89	59,600	1999-00	91,700
1977-78	38,700	1989-90	62,000	2000-01	95,400
1978-79	40,300	1990-91	64,500	2001-02	99,200
1979-80	41,900	1991-92	67,000	2002-03	103,200
1980-81	43,600	1992-93	69,700	2003-04	107,300
1981-82	45,300	1993-94	72,500	2004-05	111,600
1982-83	47,100	1994-95	75,400	2005-06	116,100
1983-84	49,000	1995-96	78,400	2006-07	120,700
1984-85	51,000	1996-97	81,600	2007-08	125,500
1985-86	53,000	1997-98	84,800	2008-09	130,500
1986-87	55,100	1998-99	88,200	2009-10	135,800
1987-88	57,300				

- (b) Determine 1-2/3% of final five year average salary for each year of actual service (maximum 30).
- (c) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities using fixed annuity factors under FRP. Note that variable accumulations are converted on fixed basis for this purpose.
- (d) Determine 100% of estimated primary Social Security benefit payable based on continuous coverage from date of University hire (or January 1, 1955, if later), to the date of retirement.
- (e) Determine supplement equal to the excess of (b) over the sum of (c) plus (d).

3. Early Retirement:

(Note: Any reference to age 65 in this description means the June 30th next following the 65th birthday.)

A member may retire as early as age 62 in which case his FRP accounts are used to purchase an annuity commencing immediately. Supplemental benefits payable are determined as follows:

- (a) Determine final five year average salary subject to the following maximums based on the year of early retirement:

Year	Amount	Year	Amount	Year	Amount
1978-79	\$40,300	1989-90	62,000	2000-01	95,400
1979-80	41,900	1990-91	64,500	2001-02	99,200
1980-81	43,600	1991-92	67,000	2002-03	103,200
1981-82	45,300	1992-93	69,700	2003-04	107,300
1982-83	47,100	1993-94	72,500	2004-05	111,600
1983-84	49,000	1994-95	75,400	2005-06	116,100
1984-85	51,000	1995-96	78,400	2006-07	120,700
1985-86	53,000	1996-97	81,600	2007-08	125,500
1986-87	55,100	1997-98	84,800	2008-09	130,500
1987-88	57,300	1998-99	88,200	2009-10	135,800
1988-89	59,600	1999-00	91,700		

- (b) Determine 1-2/3% of final five year average salary for each year of actual service, including projected service to age 65 (maximum 30).
- (c) Convert Faculty Retirement Plan net accumulation to fixed dollar annuities using fixed annuity factors under FRP and reflecting early retirement. Note that variable accumulations are converted to the fixed basis for this purpose.
- (d) Determine 100% of estimated primary Social Security benefit payable at early retirement based on continuous coverage from date of University hire (or January 1, 1955 if later) to the date of retirement.
- (e) Determine supplement equal to the excess of (b) over the sum of (c) plus (d).

4. Unisex Adjustment Policy
Established July 1, 1982

Periodic retirement benefits paid pursuant to the Faculty Retirement Plan shall be equalized for similarly situated males and females effective July 1, 1982. To the extent that benefits in addition to those which are available from the annuity contracts shall be required, such amounts shall be paid through the University of Minnesota Supplemental Benefits Plan.

The equalization shall be accomplished in the following manner:

For Individuals Not Yet Retired:

1. All contributions to the faculty retirement plan after the effective date shall be applied to purchase annuities under sex-neutral (unisex) rates.
2. Total benefits (annuities plus supplement) from contributions to the faculty retirement plan which are made prior to the effective date shall be determined by using male mortality rates for all University employees and female mortality rates for all joint annuitants under the joint and survivor option.

For Individuals Already Retired:

The amount of the total periodic benefit (annuity plus supplement) being paid shall be recalculated using male mortality rates for all University employees and female mortality rates for all joint annuitants under the joint and survivor option. In those instances where the application of such mortality rates provides for increased benefits, such increased benefits shall be paid through the University supplement on a retroactive and prospective basis.

Table 3(c)

Summary of Supplemental Plan Benefit Increases

1. Post-Retirement Benefit
Increases Established July 1,
1981 and July 1, 1984:

Increases granted to certain retired faculty in the amount of \$600 for a full share and \$480 for an 80% share with full shares being paid to those retirees who are receiving single life annuities and 80% shares paid to retirees, or surviving spouses of retirees, who elected the survivorship option. Those retired faculty eligible to receive the increase shall be determined as follows:

1. Exclude Vice Presidents, widows of Vice Presidents, and those with Dean status for retirement purposes.
2. Include only pre-1963 participants, who retired on or before June 30, 1980 (June 30, 1983 for July 1, 1984 increase) and who are not specifically excluded, whether or not they are currently receiving a Supplement payment. 1969 and later surviving spouses currently receiving a Supplement are considered participants.

2. Post-Retirement Benefit
Increase Established July 1,
1986:

Benefit increases were granted to pre-1963 participants who retired not later than July 1, 1985, excluding those Vice Presidents and Deans who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was \$13.00 (single life annuities) or \$10.40 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 1-1/2 points were awarded for each year since retirement. The value of a point was determined by the amount of funds available in the department budget for increases.

3. Cost of Living Increases
Granted to Widows of
Pre-1956 Retirees:

<u>Effective Date</u>	<u>Revised Annual Benefit</u>
July 1, 1981	\$4,020 (formerly \$3,330)
July 1, 1984	4,176
January 1, 1986	4,464
January 1, 1988	4,704

4. Post-Retirement Benefit
Increase Established
July 1, 1988

- (a) Benefit increases were granted to pre-1963 participants who retired not later than July 1, 1987, excluding those Vice Presidents and Deans who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was \$8.00 (single life annuities) or \$6.40 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 1½ points were awarded for each year since retirement. The value of a point was determined by the amount of funds available in the department budget for increases.
- (b) A supplemental benefit increase was granted to certain retired faculty in the amount of \$600 annually. Those retired faculty eligible to receive the increase were determined as follows:
 - 1. Exclude Vice Presidents, Widows of Vice Presidents, and those with Dean status for retirement purposes.
 - 2. Include only pre-1963 participants, who retired on or before June 30, 1987 and who are not specifically excluded, whether or not they are currently receiving a Supplement payment. 1969 and later surviving spouses currently receiving a Supplement are considered participants.

5. Post-Retirement Benefit
Increase Established
January 1, 1990

Benefit increases were granted to pre-1963 participants who retired not later than June 30, 1988, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was \$20.00 (single life annuities) or \$16.00 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 3 points were awarded for each year since retirement. The amount of increase was limited such that the combination of available Faculty Retirement Plan annuities plus primary Social Security plus the supplement would not exceed \$30,000.

6. Post-Retirement Benefit
Increase Established
July 1, 1993

Benefit increases were granted to pre-10/1/1963 participants who retired not later than June 30, 1992, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of the increase was the greater of \$400 or 5% of the initial base. The initial base was the sum of the annual amounts of the Faculty Retirement Plan Fixed Annuity (not including the Additional Annuity), the University Supplements and the Unisex Supplements. The amount of increase was limited such that the combination of available Faculty Retirement Plan annuities plus primary Social Security plus the supplement would not exceed \$20,000 times years of service (limited to 30) divided by 30.

7. Post-Retirement Benefit
Increase Established
July 1, 1994

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1993, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of the increase was the amount needed to bring the participant's initial base (which includes University Supplement, Unisex Supplement, Estimated Social Security based upon the Primary Insurance Amount (PIA) and a life annuity calculated from the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement) up to a minimum annual amount. The minimum annual amount is based on a floor level, which was \$20,500 for the July 1, 1994 increase. For participants with at least 30 years of service, the minimum annual amount is equal to the floor level. For participants that have less than 30 years of service, the minimum annual amount is calculated by subtracting the participant's estimated Social Security (PIA) from the floor level, dividing the balance by 30 and multiplying it by years of service (up to 30), then adding back the estimated Social Security (PIA). The floor level will be adjusted annually to reflect the cost-of-living increase applied to Social Security the previous January. However, the floor level will not be increased beyond \$30,000.

8. Post-Retirement Benefit
Increase Established
July 1, 1995

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1994, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the lesser of the following amounts:

- (a) The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
- (b) \$30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced 20%.

9. Post-Retirement Benefit
Increase Established
July 1, 1996

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1995, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. \$30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and 1½ points is awarded for each year since retirement.
2. \$30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced by 20%.

10. Post-Retirement Benefit
Increase Established
July 1, 1999

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1998, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. \$32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and 1½ points is awarded for each year since retirement.
2. \$32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced by 20%.

11. Post-Retirement Benefit
Increase Established
July 1, 2000

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1999, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

- (a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
 2. \$32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

- (b) The lesser of:
1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two points are awarded for each year since retirement.
 2. \$32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

12. Post-Retirement Benefit
Increase Established
July 1, 2001

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2000, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

- (a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
 2. \$34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

- (b) The lesser of:
1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two points are awarded for each year since retirement.
 2. \$34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

13. Post-Retirement Benefit
Increase Established
July 1, 2002

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2001, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. \$34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two and one-half points are awarded for each year since retirement.
2. \$34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

14. Post-Retirement Benefit
Increase Established
July 1, 2005

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2004, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. \$35,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and three points are awarded for each year since retirement.
2. \$35,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

15. Post-Retirement Benefit
Increase Established
July 1, 2007

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2006, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

- (a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at \$20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
 2. \$36,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

- (b) The lesser of:
1. The amount of \$8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and three points are awarded for each year since retirement.
 2. \$36,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

Table 3(d)

Summary of Principal Provisions of the Faculty Retirement Plan

1. Eligibility: All full time academic staff members (including certain civil service staff members) participating in Faculty Group Life program, eligible to participate as follows:

<u>Classification</u>	<u>Date of Participation</u>
(a) Associate professor or higher	Date of hire.
(b) Assistant professor	Date of hire.
(c) Instructor	Date of hire.
(d) Professional, Administrative, and MES Academic staff	(i) If salary less than \$45,863 on a 12-month appointment, immediately following three years of service. (ii) If salary greater or equal to \$45,863 but less than \$54,135 on a 12-month appointment, immediately following two years of service. (iii) If salary greater than or equal to \$54,135 on a 12-month appointment, date of hire.
2. Financing: Staff member contributes 2½% of covered salary, with University making contributions of 13% of such covered salary.
3. Date to Which University Contributions are Made: Contributions are continued until date of retirement or separation from service.

4. Investment Vehicles (Pre-Retirement):

Contributions are accumulated through insured annuity contracts and/or mutual funds, as follows:

- (a) Annuity contracts
 - (i) Fixed dollar: accumulate at rate of interest declared by insurers, but never less than minimum stipulated.
 - (ii) Variable Income: Net contributions are immediately converted to accumulation units which are valued daily. Unit values reflect earnings of separate account less the fixed investment charge stipulated (subject to guaranteed maximum charges). Past and future accumulations are transferable to fixed in pre-retirement period.
- (b) Mutual funds: Participants may invest in one or more of a variety of mutual funds offered by the Vanguard Group or Fidelity Investments.

5. Forms of Payment Available at Retirement:

Various forms of payment are available:

- (a) Non-systematic withdrawal: Non-systematic withdrawals of a specific dollar amount or a percentage of the account balance may be made at any time.
- (b) Systematic withdrawal: Systematic withdrawals of a flat dollar amount, a percentage of the account balance, a specific number of accumulated units/shares or interest only may be made monthly, quarterly, semi-annually or annually.
- (c) Annuities: Either fixed annuities, or a combination of fixed and variable annuities may be purchased. Joint and survivor or certain and life options are available.
- (d) Rollover: Rollover into an Individual Retirement Account.

6. Amount of Annuity Benefits:

At retirement, the cash value (representing accumulation of contributions under fixed dollar contracts or value of accumulation units under variable contracts) is applied to provide "life only" retirement income on the basis of stipulated income conversion factors as listed below. Account balances resulting from contributions made prior to July 1, 1982 will be applied on a male employee and female joint annuitant basis. Account balances resulting from contributions made subsequent to July 1, 1982 will be applied on a unisex basis.

<u>7/1/2009 Conversion Basis</u>	<u>Monthly Income for Each \$1,000 of Proceeds</u>			
	<u>Fixed Income</u>		<u>Variable Annuity</u>	
<u>Pre-7/1/1982 contributions:</u>	<u>Age 65</u>	<u>Age 68</u>	<u>Age 65</u>	<u>Age 68</u>
Male	6.98	7.54	7.08	7.83
Female	6.45	6.91	6.13	6.66
<u>Contributions 7/1/1982 and later:</u>				
Unisex:	6.56	7.03	6.30	6.86

(NOTE: In the past when fixed income conversion factors proved to be too conservative, excess interest credits were being accorded to benefits in payment status via year-end dividends. Certain prior retirees are still being credited with excess interest dividend increases).

7. Early Retirement:

Participants may retire early, with annuity equivalents payable immediately.

8. Vesting (termination value):

Immediate 100% vested right in accumulations to date of termination.

9. Death Benefits:(a) Pre-retirement:

Named beneficiary would receive total termination value of retirement annuity as in (6).

Optional forms of payment as may be elected by beneficiary must be approved by the

University.

(b) Post-retirement:

In accordance with optional form of payment elected, as follows:

- (i) life annuity with no post-retirement death benefit.
- (ii) life annuity with 60, 120, 180, or 240 monthly payments guaranteed in any event.
- (iii) joint and 100% survivor annuity with 120 monthly payments guaranteed payable in any event.
- (iv) joint and 66-2/3% to survivor annuity with 120 monthly payments guaranteed payable in any event.

10. Disability:

After a period of total and continuous disability lasting for at least three months, all contributions are waived with future credits being accorded on the basis of a continuation of contribution levels in effect at time of disability.

Table 4

Summary of actuarial assumptions and methods

1.	Mortality	1983 Group Annuity Mortality Table
2.	Turnover:	None assumed.
3.	Expenses:	None assumed. To be met directly.
4.	Interest Rate:	5% per annum.
5.	Salary Scale:	3½% per annum.
6.	Cost of Living Adjustments:	The floor benefit and PIA amount are assumed to increase at 2½% per annum.
7.	Assumed Retirement Age:	Greater of age 66 or current age.
8.	Actuarial Cost Method:	Individual entry-age-normal cost method, with normal cost determined as a level percentage of future covered payroll.
9.	Amortization of Unfunded Accrued Liability:	As a level dollar amount by June 30, 2021.
10.	Faculty Retirement Plan Accumulations:	Accumulated at 5% per annum assuming continuation of present contribution percentages on increasing covered payroll (per salary scale assumption). Net accumulations converted to fixed dollar life annuities using following 6¼% factors (monthly income for each \$1,000 of proceeds).
		Male 8.65
		Female 7.64
		Unisex 8.55
11.	Social Security Benefit:	Based on present law and 3½% salary scale applicable to current salaries.
12.	Unisex Benefits – Percentage Electing Annuities:	35%

Table 5

Actuarial value of assets under the adjusted market value method

A. Expected Return on Market Value of Assets for Prior Year

1. Assets and actual contributions and distributions in prior year weighted for timing

Item	Amount	Weight for Timing	Weighted Amount
(i)	(ii)	(iii)	(iv)=(ii) × (iii)
a. Market value of assets	3,546,755	100.000%	\$ 3,546,755
b. Contributions	394,000	99.444%	391,809
c. Benefit payments	(1,087,916)	50.000%	(543,958)
d. Total			\$ 3,394,606
2. Assumed rate of return on plan assets for the year			5%
3. Expected return (1d. × 2.)			\$ 169,730

B. Actual Return on Assets for Prior Year

1. Market value at July 1, 2008	\$ 3,546,755
2. Contributions for prior plan year	394,000
3. Benefits payments	1,087,916
4. Market value at June 30, 2009	2,979,796
5. Actual return (4. + 3. - 2. - 1.)	126,957

C. Investment Gain/(Loss) for Prior Year (B.5. - A.3.) \$ (42,773)

D. Actuarial Value of Assets as of July 1, 2009

1. Market value of assets at July 1, 2009 \$ 2,979,796
2. Deferred investment gains and (losses) for last 4 years

Plan Year Ending	Gain/(Loss)	Percent Recognized	Percent Deferred	Deferred Amount
(i)	(ii)	(iii)	(iv)	(v)=(ii) × (iv)
a. 06/30/2009	\$ (42,773)	20%	80%	(34,218)
b. 06/30/2008	(127,237)	40%	60%	(76,342)
c. 06/30/2007	(241,780)	60%	40%	(96,712)
d. 06/30/2006	(322,021)	80%	20%	(64,404)
e. 06/30/2005	162,078	100%	0%	0
Total				\$ (271,676)

3. Asset value adjusted for deferred gains and (losses) (1. - 2(v). Total) \$ 3,251,472

Table 6

Gain and loss analysis

1.	Unfunded Accrued Liability as of July 1, 2008	\$3,184,300
2.	Normal Cost	0
3.	Interest at Valuation Rate (5%) on (1) and (2)	159,200
4.	Contributions During Year	394,000
5.	Interest at Valuation Rate (5%) on (4)	19,500
6.	Increase in Unfunded Accrued Liability due to Benefit Improvements	0
7.	Increase in Unfunded Accrued Liability due to Changes in Actuarial Assumptions	0
8.	Expected Unfunded Accrued Liability as of July 1, 2009 (1 + 2 + 3 – 4 – 5 + 6 + 7)	2,930,000
9.	Actual Unfunded Accrued Liability as of July 1, 2009	2,831,400
10.	Actuarial Gain/(Loss) During Year (8 – 9)	98,600
11.	Gain and Loss Analysis	
(a)	Gain/(loss) due to supplemental plan asset earnings other than 5%	(131,500)
(b)	Gain/(loss) due to actual post-retirement mortality	(129,400)
(c)	Gain/(loss) due to actual salary increases	0
(d)	Gain/(loss) due to other actuarial gains and losses	<u>359,500</u>
(e)	Net actuarial gain/(loss) ((a) + (b) + (c) + (d))	98,600

Table 7

Comparison of 2008 and 2009 valuation reports

	2008	2009
1. Active Pre-1963 Participants		
(a) Total active pre-1963 participants under FRP	11	11
(b) Total projected to receive supplemental benefits	0	0
2. Estimated account balance for female participants with account balance prior to July 1, 1982	30,838,927	25,393,389
3. Retirees, Survivors and Widows		
(a) Number		
- Retirees	146	130
- Survivors	<u>94</u>	<u>96</u>
- Total	240	226
(b) Average annual benefit being paid or payable	4,301	4,161
4. Accrued Liability on Valuation Date		
(a) Active participants	0	0
(b) Retirees, survivors and widows	5,039,100	4,377,300
(c) Female participants with account balances prior to July 1, 1982	<u>2,035,200</u>	<u>1,705,600</u>
(d) Total (a) + (b) + (c)	7,074,300	6,082,900
5. Actuarial Value of Assets on Valuation Date	3,890,000	3,251,500
6. Unfunded Accrued Liability (4) – (5)	3,184,300	2,831,400
7. Annual Normal Cost	0	0
8. Chapter 356 Minimum Provision		
(a) Beginning of year	322,800	304,200
(b) End of year	338,900	319,400
9. Estimated Benefit Payments	1,032,200	940,300