UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Actuarial Valuation as of June 30, 1977

November 30, 1977

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December 16, 1977

Mr. Harold Bernard
Director of Insurance & Retirement
University of Minnesota
2642 University Avenue
St. Paul, Minnesota 55114

Re: University of Minnesota
Supplemental Benefits Plan

Dear Harold:

Enclosed herewith are ten copies of our June 30, 1977 actuarial report reflecting those changes that we discussed on Thursday, December 15.

In addition, you asked for a breakdown of the $8,699,400 liability for retirees, survivors and widows. This breakdown is set forth below and will be included in our cover letter accompanying actuarial reports in the future.

Type	Number Covered	Annual Benefit	Accrued Liability on June 30, 1977
1. Widows	44	$109,781	$ 681,800
2. Survivors	12	31,163	321,400
3. Retirees	298	912,943	7,214,500
4. Early Retirees (Temporary Benefits)	N/A	43,350	65,800
5. Early Retirees (Deferred Benefits)	12	35,975	415,900
Total	366	$1,133,212	$8,699,400

Very truly yours,

Allan J. Grosh

Allan J. Grosh
Actuary and Manager

AJG:lp
Encls.

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UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Actuarial Valuation as of June 30, 1977

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 June 30, 1977 in accordance with Chapter 356 of the Minnesota Statutes (including 1975 revisions). The valuation has been based on the most recent revision to the plan, effective for retirements on or after June 30, 1977, and takes into account increases granted to those who retired prior to 1968 (including widows of pre-1956 retirees).

In summary, our valuation reveals a Chapter 356 requirement of $828,800, well short of the annualized benefits payable to retirees as of the valuation date ($1,097,200).

The plan is essentially one for a "closed group" of participants; namely, existing retirees and a diminishing group of active participants soon to retire (although this group has almost doubled on account of the most recent liberalization of the benefit formula). Since appropriate projections would substantiate the diminishing nature of benefits payable under this program, any attempt to fund it strictly in accordance with the Statutes would prove to be meaningless.

In last year's report we pointed out that absent further modification to the plan, normal anticipated attrition of the covered group would indirectly fund the unfunded accrued liability at a rate more rapid than that prescribed under the Statutes. Given the substantive revision to the plan effective for retirements on or after June 30, 1977, this would still be the case, although extended somewhat because of the increased potential for benefit payments.

Thus, for the present plan, a funding posture following that of current disbursement (meeting current disbursements as they become due) would continue to be indicated.

EMPLOYEE DATA

We received complete data covering 705 active pre-1963 participants under the Faculty Retirement Plan. It is interesting to note that under the revised retirement age assumption (66), 194 members of this group would be eligible for benefits. In addition, we were furnished a listing for the 366 retirees, survivors and widows presently receiving or eligible to receive benefits under the plan. The data utilized for purposes of this valuation is summarized in Table 2 of this report.

PLAN VALUED

Since in fact benefits under this program are directly dependent on the level of benefits payable under the University's Faculty Retirement Plan, in addition to summarizing the pertinent provisions of the Supplemental Benefits Plan (pre-June 30, 1977 and post-June 30, 1977 in Tables 3(a) and 3(b) respectively) in Table 3(a) of this report, we have set forth a complete description of the principal provisions of the FRP plan in Table 3(c).

In brief, effective for retirements on or after June 30, 1977, the University adopted the revised "50%" formula as the target for supplemental benefits (as outlined in Table 3(b)) while at the same time retaining the prior formula as a "minimum" measure of benefits payable. In addition, in line with prior practice, certain increases were granted to those who retired prior to 1968 as follows:

(i)	Retired prior to 1968	\$394/annum
(ii)	Widows of pre-1956 retirees	\$125/annum

ACTUARIAL ASSUMPTIONS, METHODS, ASSETS

The actuarial assumptions and methods employed in this valuation are outlined in Table 4 of this report. These assumptions and methods are identical to those used in last year's valuation with the exception of the assumed retirement age and conform to those provisions of Chapter 356 of Minnesota Statutes.

Due to the continuing trend towards earlier retirement as evidenced in the last section of our 1976 report, we have revised the average retirement age assumption from 68 to 66 this year.

Costs of the plan have been computed according to the entry-age-normal cost method (as prescribed by Statutes). Under this method, the normal cost is determined as the level dollar amount which would be 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 the method is equal to the present value of all benefits payable under the plan less the present value of future normal costs calculated in accordance with the actuarial cost method.

Since funding for this plan commenced during the past plan year assets of $270,400 were reported to us as of the valuation date. Thus, by deducting assets on hand from the accrued liability, we would arrive at the unfunded accrued liability.

The Statutes call for annual normal costs (under the entry-age-normal cost method) to be provided in addition to the amortization of unfunded accrued liabilities by the end of the fiscal year occurring in 1997.

As indicated, the amount of benefits under this plan are directly dependent on those benefits provided under the FRP plan. Thus, in order to appropriately determine projected benefits payable, advance assumptions were made in regard to future projections under the FRP itself; namely, that contribution levels would continue at the same percentage of increasing covered payroll in accordance with the salary scale assumption set forth in item 5 of Table 4. For this purpose, fund balances were projected assuming a return of 5% per annum with accumulated values converted to annuity benefits on the basis of a continuation of purchase rates utilized in 1975.

It should be noted that the combined salary/investment return assumptions of 3½%/5% are prescribed by Statute and do not anticipate future increases of an inflationary nature. In fact, to the extent that salaries increase more than 3½% and basic FRP accumulations take place at a rate in excess of 5%, the increased level of FRP benefits would serve to diminish supplemental benefits payable from the plan. This in fact has generally been the case in the past thus reducing substantially the number of active participants actually eligible for supplemental benefits hereunder.

VALUATION RESULTS

The results of our valuation are set forth in Table 1. Section A of the table sets forth basic data items relative to active and retired (including survivors and widows) 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 June 30, 1977, with the provision amounting to $828,800.

In Section C of the table, we have again set forth the determination of a funding requirement on two alternative bases corresponding to suggested alternatives offered by the University's prior actuary. These requirements have been set forth for illustrative purposes only.

In Table 6, we have set forth an analysis of the increase in the accrued liability since our last actuarial valuation as of June 30, 1976. As indicated in the table, the substantive increase has been experienced for the most part as a result of benefit revisions and actuarial assumption changes.

COMPARISON OF 1977 and 1976 VALUATION RESULTS

In Table 5, we set forth a comparison of the principal values underlying the 1977 and 1976 valuations. Item 1(c)(i) is of interest in that it notes the changes in the "eligible" active group. Absent the revision to the plan and the change in the average retirement age assumption from 68 to 66, the active "eligible" group would have decreased from 72 to 40 members, indicative of retirements during the year (24) and additional "ineligibilities" on account of increasing FRP projections. Although the adoption of the new "50%" plan coupled with the retirement age assumption revision has resulted in 194 "eligibles", we would anticipate a rapid reduction of this group in the near future.

The progression of the accrued liability (item 3(c)) is of interest, and is documented in detail in Table 5 of this report.

* * * * * * * * * *

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

Respectfully submitted,

THE WYATT COMPANY

Allan J. Grosh, F.S.A.
Member, American Academy of Actuaries

Kent P. Howe, A.S.A.
Member, American Academy of Actuaries

Minneapolis/St. Paul
November 30, 1977
lp

Table 1

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Actuarial Valuation as of June 30, 1977
(Valuation determinations rounded to nearest $100)

A.	BASIC DATA	
	1. Active Participants	
	(a) Total active pre-1963 participants under Faculty Retirement Plan (FRP)	705
	(b) Ineligible for supplemental benefits	511
	(c) Eligible for supplement	
	(i) Number	194
	(ii) Average annual projected Supplement 1/	1,420
	2. Retirees, Survivors and Widows	
	(a) Number receiving or entitled to receive benefits	366
	(b) Average annual benefit being paid or payable 2/	3,036
B.	DETERMINATION OF ANNUAL REQUIREMENT IN ACCORDANCE WITH CHAPTER 356 (MINNESOTA STATUTES)	
	1. Accrued Liability as of June 30, 1977	
	(a) Active participants	2,416,100
	(b) Retirees, survivors and widows 2/	8,699,400
	(c) Total	11,115,500
	2. Assets as of June 30, 1977 3/	270,400
	3. Unfunded Accrued Liability as of June 30, 1977 [1(c) less 2]	10,845,100
	4. Annual Normal Cost	29,800
	5. Annual Requirement to Fund Normal Cost and Amortize the Accrued Liability by July 1, 1997	828,800
C.	DETERMINATION OF ALTERNATE PROVISIONS	
	1. Current Disbursement Requirement	1,097,200
	2. Normal Cost Plus Amortization to the Year in which Youngest Active Participant Presently Eligible will Retire (June 30, 1990)	1,129,300

1/ Per salary scale and Social Security assumption of Table 4.
2/ Including adjustment for future early retirement adjustments at age 65.
3/ Supplemental contribution of $250,000 for plan year ending June 30, 1977 plus interest of $20,441.

Table 2

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Distribution of Participants as of June 30, 1977

A. ACTIVE PARTICIPANTS (Pre-1963 FRP Participants)

Age Group Last Birthday	Male	Female	Total
40 - 44	10	2	12
45 - 49	99	2	101
50 - 54	147	15	162
55 - 59	203	11	214
60 - 64	153	21	174
65 & Over	39	3	42
Total	651	54	705

B. WIDOWS OF PRE-1956 RETIREES

Age Group Last Birthday	Number (All Females)	Annual Benefit Being Paid
67 - 69	3	$ 8,920
70 - 74	5	12,585
75 - 79	5	10,249
80 - 84	8	20,136
85 - 89	17	42,789
90 - 94	6	15,102
Total	44	$109,781

C. SURVIVORS

Age Group Last Birthday	Number (All Females)	Annual Benefit Being Paid
50 - 54	1	$ 3,907
55 - 50	-	-
60 - 64	3	7,646
65 - 69	1	1,452
70 - 74	3	6,308
75 - 79	3	7,633
80 - 84	1	4,217
Total	12	$31,163

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D. RETIREES

Age Group Last Birthday	Male	Female	Total	Annual Benefit Being Paid
65 - 69	62	13	75	$187,653
70 - 74	76	11	87	207,342
75 - 79	42	13	55	161,152
80 - 84	30	14	44	169,336
85 - 89	18	8	26	121,594
90 - 94	6	2	8	48,077
95 - 99	3	-	3	17,789
Total	237	60	298	$912,943

E. RETIREES WITH DEFERRED BENEFITS

Age Group Last Birthday	Male	Female	Total	Annual Benefit Payable at 65
60 - 64	7	5	12	$ 35,975
65 - 69	-	-	-	-
Total	7	5	12	$ 35,975*

* In addition, benefits are currently being paid to six of these individuals at an annual rate of $43,350 (early retirement under pre-June 30, 1977 plan formula).

F. RECONCILIATION OF RETIREES/WIDOWS/SURVIVORS

		Number
(a)	Number receiving benefits last year	362
(b)	Deaths during year where no continuing benefits payable	18
(c)	Duplicate records last year	1
(d)	New retirees this year (including deferred)	24
(e)	Inconsistent records	1
(f)	Number receiving or entitled to receive benefits this year [(a) - (b) - (c) + (d) - (e)]	366*

*as follows:

Widows	44
Survivors	12
Retirees	310
Total	366

Table 3(a)

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN (PRE-JUNE 30, 1977)

Summary of Principal Provisions of 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 Provision: (NOTE: that any reference to age 65 in this description implies the June 30 next following the 65th birthday, including references to Social Security benefits payable at age 65).

As early as age 62, although total funding is continued by the University to age 65 (i.e., University funds member contribution as well) member would receive a benefit for life (supplement and annuity) which in total would be level during both the pre-65 and post-65 periods. The determination, however, recognizes effective replacement of annuity (at age 65 assuming continuation of funding to that date) and Social Security benefit differential (age 65 vs. age 62) based on 1972 law. Simplification of computation is as follows:

(a) Increase maximum limitation in 2(a) above (i.e., $8,500, $8,000, $7,500) by difference between (i) projected Social Security benefit at age 65 (assuming continuation of present salary level to such age) under 1971 amendments to Social Security law, and (ii) $1,524.

(b) Using estimate of actual Social Security benefit payable commencing on early retirement date under 1972 law, determine total benefit payable to age 65 [equal to (a) less (b)], representing supplement from early retirement age to age 65.

(c) By deducting fixed income benefit (as in 2(b) above) based on continued funding to age 65, difference would represent supplement payable after age 65.

(NOTE: In fact, it is contemplated that in practice, should the computation in (c) above yield a projected annuity at 65, which when combined with the $1,524 Social Security estimate would exceed the limitation prior to 65 for an early retirement, Faculty Retirement Plan would commence earlier than age 65.

Table 3(b)

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN (JUNE 30, 1977)

Summary or Principal Provisions of 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 Supplement: Supplement (annual) is computed as follows:

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

Year	Amount	Year	Amount
1976-77	$37,200	1981-82	$45,300
1977-78	38,700	1982-83	47,100
1978-79	40,300	1983-84	49,000
1979-80	41,900	1984-85	51,000
1980-81	43,600	1985-86	53,000

(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) Deduct from (c) 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 as equal to (b) less (c) after adjustment for (d).

3. <u>Early Retirement Provision</u>: (NOTE: that any reference to age 65 in this description implies the June 30 next following the 65th birthday, including references to Social Security benefits payable at age 65).

As early as age 62, although total funding is continued by the University to age 65 (i.e., University funds member contributions as well), member would receive a benefit payable at age 65 determined as follows (benefits prior to age 65 would be paid from general funds):

(a) Determine 1-2/3% benefit based on continued funding to age 65 (item 2(b)).

(b) Determine primary Social Security benefit payable at actual retirement date.

(c) Convert FRP net accumulations on basis of continued funding to age 65 to fixed dollar life annuities at age 65.

(d) Determine supplement at age 65 as (a) less (b) less (c).

4. <u>Minimum Benefit</u>:

In no event shall any retiring employee receive less than would have been payable under the plan provisions in effect for retirements prior to June 30, 1977.

Table 3(c)

UNIVERSITY OF MINNESOTA
FACULTY RETIREMENT PLAN

Summary of Principal Provisions of Plan
(based on plan in effect in December 1975)

1. Eligibility:

All full time academic staff members (including certain civil service staff members) participating in $20,000 Group Life program, eligible to participate as follows:

Classification	Date of Participation
(a) Associate professor or higher	(i) If hired between October 1 and April 2, on date of hire. (ii) If hired between April 2 and September 30, on October 1 next following date of hire.
(b) Assistant professor or research associate	On October 1 following two years of service. If hired between October 2 and March 1, service is credited back to prior October 1.
(c) Instructor or research fellow	On October 1 following three years of service. If hired between October 2 and March 1, service is credited back to prior October 1.
(d) Eligible civil service member	(i) If salary less than $20,300, same as (c). (ii) If salary greater or equal to $20,300 but less than $24,500, same as (b). (iii) If salary greater than or equal to $24,500, same as (a).

2. Financing:

Staff member contributes 2½% of gross annual salary, with University making indirect contributions of 2½% of the first $5,000 of gross annual salary, plus 13% of such gross annual salary in excess of $5,000. Effective in 1973, summer research and training grants have been included for nine-month appointees for purposes of determining compensation for contributions.

3. Mandatory Retirement Age:

June 30 following 68th birthday.

4. <u>Date to Which University Contributions are Made</u>

For staff member beginning participation on October 2, 1974 and later, contributions are continued until the June 30 next following the 65th birthday; otherwise continued during eligible employment until June 30 next following 68th birthday.

5. <u>Investment Medium (Pre-Retirement)</u>:

Net contributions (gross less front end load) are accumulated through the medium of insured funding contracts as follows:

(i) <u>Fixed dollar</u>: accumulate at rate of interest declared by insurers, but never less than minimum stipulated. Only future accumulations transferable to variable in pre-retirement period.

(ii) <u>Variable Income</u>: Net contributions are immediately converted to accumulation units which are valued each month. 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.

(<u>NOTE</u>: Variable contributions cannot exceed 50%, or alternatively 75% of <u>total</u> contributions, including employees' contributions).

6. <u>Types of Annuities Available at Retirement (Post-Retirement)</u>

Either guaranteed fixed retirement annuities or non-guaranteed variable annuities are provided (see (7) for conversion). Fixed funds cannot be converted to variable annuity basis at retirement although variable fund conversion to fixed annuity is allowed in which case, accumulation units would be cancelled and transferred to the general assets of the insurer to be applied to provide guaranteed retirement annuity coverage.

7. <u>Amount of Benefits</u>:

At retirement, cash value (representing accumulation of contributions under insured funding contracts, net of front end load - presently 2%), or value of accumulation units under variable, is applied to provide retirement income on "life only" basis in accordance with stipulated income conversion factors as follows:

6/30/77 Conversion Basis	Monthly Income for Each $1,000 of Proceeds			
	Fixed Income (7¼% interest net)		Variable Annuity (4% interest net)	
	Age 65	Age 68	Age 65	Age 68
Male	9.03	9.78	7.18	7.95
Female	8.10	8.62	6.37	6.95

(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).

8. Vesting (termination value):

Immediate 100% vested right in accumulations to date of termination. Disposition is as follows:

(i) If initial participation is December 15, 1972 or earlier, or after December 15, 1972 and has less than five years of participation, entitled to receive total net accumulation to date of termination.

(ii) If initial participation is after December 15, 1972 and has more than five years participation, entitled to sum of:

(a) His own contributions plus interest, and

(b) Paid-up annuity for remainder of total net accumulation, providing for death benefits prior to income commencement of remaining paid-up values.

(NOTE: Variable portion of net accumulation, if $2,000 or more, may be applied to provide variable retirement annuity, or alternatively placed in paid-up status to provide variable retirement annuity at later date. In addition, terminating member can continue retirement annuity accumulations by paying total premiums directly to the insurer).

9. Death Benefits:

(a) Pre-retirement:

Named beneficiary would receive total termination value of retirement annuity is in (8). 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 survivor annuity payable until the death of the last survivor of the annuitant and his designated beneficiary, with 120 monthly payments guaranteed payable in any event.

10. Disability: In the event of total and continuous disability for a period of at least four 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

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Summary of Actuarial Assumptions and Methods

1.	Mortality:	Progressive Annuity Mortality Table set back six years for males and 4.6 years for females.
2.	Turnover:	None assumed.
3.	Expenses:	None assumed. To be met directly. 2% front-end load utilized for purposes of converting FRP accumulations.
4.	Interest Rate:	5% per annum.
5.	Salary Scale:	3½% per annum.
6.	Assumed Retirement Age:	June 30th following 66th birthday.
7.	Actuarial Cost Method:	Individual entry-age-normal cost method.
8.	Amortization of Unfunded accrued liability:	As a level dollar amount by July 1, 1997.
9.	Faculty Retirement Plan Accumulations:	Accumulated at 5% per annum assuming a 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) after 2% front-end load adjustment. Male 8.65 Female 7.64
10.	Social Security:	Based on present law (2nd phase 1977) and 3½% salary scale applicable to current salaries. No future increases to PIA assumed on account of wage base or cost of living increases.

Table 5

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Comparison of 1977 and 1976 Valuation Results

	1977 (Retirement Age 66) 2/	1976 (Retirement Age 68)
1. Active Participants		
(a) Total active pre-1963 participants under FRP	705	N/A
(b) Ineligible for supplemental benefits	511	N/A
(c) Eligible for supplemental benefits		
(i) Number	194	72
(ii) Average annual supplement 1/	1,420	1,278
2. Retirees, Survivors and Widows		
(a) Number - Retirees (including deferred)	310	310
- Survivors	12	11
- Widows	44	41
- Total	366	362
(b) Average annual benefit being paid or payable	3,036	3,043
3. Accrued Liability on Valuation Date		
(a) Active participants	2,416,100	690,800
(b) Retirees, survivors and widows	8,699,400	8,179,100
(c) Total	11,115,500	8,869,000
4. Assets on Valuation Date	270,400	--
5. Unfunded Accrued Liability	10,845,100	8,869,000
6. Annual Normal Cost	29,800	13,100
7. Chapter 356 Minimum Provision (Normal Cost Plus Amortization by 1997)	828,800	674,000
8. Alternate Provisions		
(a) Current disbursement	1,097,200	1,101,600
(b) Normal cost plus amortization to year in which youngest active participant presently eligible will retire (1985 in 1976, 1990 in 1977)	1,129,300	1,205,200

1/ Per salary scale assumption of Table 4.

2/ Reflecting all revisions to the plan effective for retirements on or after June 30, 1977.

Table 6

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN

Analysis of Change in Accrued Liability

1.	Accrued Liability as of June 30, 1976	8,869,900
2.	Expected Accrued Liability as of June 30, 1977	8,591,000
3.	Actual Accrued Liability as of June 30, 1977	11,115,500
4.	Increase During Year [(3) - (2)]	2,524,500
5.	Analysis of Increase:	
	(i) Change in actuarial assumptions (revised retirement age from 68 to 66)	815,100
	(ii) Change in benefits	
	(a) Actives	1,225,900
	(b) Retirees	456,700
	(iii) Actuarial loss during year	26,800
	(iv) Total increase	2,524,500

GVS Minnesota Memorandum No. 7-11
January 12, 1978

THE UNIVERSITY OF MINNESOTA FACULTY SUPPLEMENTAL PLAN

VALUATION AS OF JUNE 30, 1977

The purpose of this memorandum is to discuss the valuation report of the University of Minnesota Faculty Supplemental Plan as of June 30, 1977. The 1977 valuation was prepared by Allan J. Grosh of The Wyatt Company. Allan Grosh also prepared the 1976 valuation.

This memorandum contains the following:

1. Statistical and Valuation Data
2. Discussion of Valuation Results
3. Conclusion

1. Statistical and Valuation Data

	As of June 30, 1976	As of June 30, 1977
Active Participants Eligible for Supplement	72	194
Retired Participants	310	298
Widows	41	44
Survivors	11	12
Annual Benefits	$ 1,101,600	$ 1,097,200
Reserve for Annuitants	$ 8,179,100	$ 8,283,500
Reserve for Deferreds	N.A.	415,900
Accrued Liability for Actives	690,800	2,416,100
Total Accrued Liability	$ 8,869,900	$11,115,500
Assets	0	270,400
Unfunded Accrued Liability	$ 8,869,900	$10,845,100
Normal Cost	$ 13,100	$ 29,800
Amortization by 1997	660,900	799,000
Total	$ 674,000	$ 828,800

2. Discussion of Valuation Results

The results for the two years are not comparable since a change has been made in the benefit formula. The approach of both benefit formulas is to provide a minimum level of total retirement income (Basic Plan + Social Security + Supplemental Plan), but the new formula provides a higher minimum and a larger number of faculty members are expected to qualify for a supplemental benefit (194 in 1977 versus 72 in 1976).

Prior to the last year, the benefits were funded on a pay-as-you-go basis, that is, benefit payments were made each month as they came due but no advance funding was done. In preparation for the new plan, the University contributed $250,000 in excess of benefit payments during the past year. This accounts for the increase in assets from $0 to $270,400 shown above.

Thus, the total support during the past year amounted to about $1,347,200 (benefit payments + $250,000). A continuation of support at this amount should fully fund this plan by 1987. This early date for full funding is appropriate because the last retirements of persons eligible for a supplemental benefit will occur prior to 1997.

The unfunded liability increased by $1,976,100 during the year. An analysis of this increase follows:

Increases:		
Changes in Benefits	$1,682,600	
Changes in Assumptions	815,100	
Corrections in Data	354,100	
Net Actuarial Losses	22,800	
Total Increases		$2,874,600
Decreases:		
Amortization Contribution		898,500
Net Increase		$1,976,100

3. Conclusion

The 1977 report on the University Faculty Supplemental plan complies with the requirements of Chapter 356 insofar as they apply to a plan of this type.

Franklin C. Smith
Associate, Society of Actuaries
STENNES & ASSOCIATES, INC.
Commission Actuaries

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN (PRE-JUNE 30, 1977)

Summary of Principal Provisions of 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. <u>Early Retirement Provision</u>: (NOTE: that any reference to age 65 in this description implies the June 30 next following the 65th birthday, including references to Social Security benefits payable at age 65).	As early as age 62, although total funding is continued by the University to age 65 (i.e., University funds member contribution as well) member would receive a benefit for life (supplement and annuity) which in total would be level during both the pre-65 and post-65 periods. The determination, however, recognizes effective replacement of annuity (at age 65 assuming continuation of funding to that date) and Social Security benefit differential (age 65 vs. age 62) based on 1972 law. Simplification of computation is as follows: (a) Increase maximum limitation in 2(a) above (i.e., $8,500, $8,000, $7,500) by difference between (i) projected Social Security benefit at age 65 (assuming continuation of present salary level to such age) under 1971 amendments to Social Security law, and (ii) $1,524. (b) Using estimate of actual Social Security benefit payable commencing on early retirement date under 1972 law, determine total benefit payable to age 65 [equal to (a) less (b)], representing supplement from early retirement age to age 65. (c) By deducting fixed income benefit (as in 2(b) above) based on continued funding to age 65, difference would represent supplement payable after age 65. (NOTE: In fact, it is contemplated that in practice, should the computation in (c) above yield a projected annuity at 65, which when combined with the $1,524 Social Security estimate would exceed the limitation prior to 65 for an early retirement, Faculty Retirement Plan would commence earlier than age 65.

UNIVERSITY OF MINNESOTA
SUPPLEMENTAL BENEFITS PLAN (JUNE 30, 1977)

Summary or Principal Provisions of 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 Supplement: Supplement (annual) is computed as follows:

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

Year	Amount	Year	Amount
1976-77	$37,200	1981-82	$45,300
1977-78	38,700	1982-83	47,100
1978-79	40,300	1983-84	49,000
1979-80	41,900	1984-85	51,000
1980-81	43,600	1985-86	53,000

(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) Deduct from (c) 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 as equal to (b) less (c) after adjustment for (d).

3. Early Retirement Provision: (NOTE: that any reference to age 65 in this description implies the June 30 next following the 65th birthday, including references to Social Security benefits payable at age 65).

As early as age 62, although total funding is continued by the University to age 65 (i.e., University funds member contributions as well), member would receive a benefit payable at age 65 determined as follows (benefits prior to age 65 would be paid from general funds):

(a) Determine 1-2/3% benefit based on continued funding to age 65 (item 2(b)).

(b) Determine primary Social Security benefit payable at actual retirement date.

(c) Convert FRP net accumulations on basis of continued funding to age 65 to fixed dollar life annuities at age 65.

(d) Determine supplement at age 65 as (a) less (b) less (c).

4. Minimum Benefit:

In no event shall any retiring employee receive less than would have been payable under the plan provisions in effect for retirements prior to June 30, 1977.

UNIVERSITY OF MINNESOTA
FACULTY RETIREMENT PLAN

Summary of Principal Provisions of Plan
(based on plan in effect in December 1975)

1. Eligibility:

All full time academic staff members (including certain civil service staff members) participating in $20,000 Group Life program, eligible to participate as follows:

Classification	Date of Participation
(a) Associate professor or higher	(i) If hired between October 1 and April 2, on date of hire. (ii) If hired between April 2 and September 30, on October 1 next following date of hire.
(b) Assistant professor or research associate	On October 1 following two years of service. If hired between October 2 and March 1, service is credited back to prior October 1.
(c) Instructor or research fellow	On October 1 following three years of service. If hired between October 2 and March 1, service is credited back to prior October 1.
(d) Eligible civil service member	(i) If salary less than $20,300, same as (c). (ii) If salary greater or equal to $20,300 but less than $24,500, same as (b). (iii) If salary greater than or equal to $24,500, same as (a).

2. Financing:

Staff member contributes 2½% of gross annual salary, with University making indirect contributions of 2½% of the first $5,000 of gross annual salary, plus 13% of such gross annual salary in excess of $5,000. Effective in 1973, summer research and training grants have been included for nine-month appointees for purposes of determining compensation for contributions.

3. Mandatory Retirement Age:

June 30 following 68th birthday.

4.	Date to Which University Contributions are Made	For staff member beginning participation on October 2, 1974 and later, contributions are continued until the June 30 next following the 65th birthday; otherwise continued during eligible employment until June 30 next following 68th birthday.
5.	Investment Medium (Pre-Retirement):	Net contributions (gross less front end load) are accumulated through the medium of insured funding contracts as follows: (i) Fixed dollar: accumulate at rate of interest declared by insurers, but never less than minimum stipulated. Only future accumulations transferable to variable in pre-retirement period. (ii) Variable Income: Net contributions are immediately converted to accumulation units which are valued each month. 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. (NOTE: Variable contributions cannot exceed 50%, or alternatively 75% of total contributions, including employees' contributions).
6.	Types of Annuities Available at Retirement (Post-Retirement)	Either guaranteed fixed retirement annuities or non-guaranteed variable annuities are provided (see (7) for conversion). Fixed funds cannot be converted to variable annuity basis at retirement although variable fund conversion to fixed annuity is allowed in which case, accumulation units would be cancelled and transferred to the general assets of the insurer to be applied to provide guaranteed retirement annuity coverage.
7.	Amount of Benefits:	At retirement, cash value (representing accumulation of contributions under insured funding contracts, net of front end load - presently 2%), or value of accumulation units under variable, is applied to provide retirement income on "life only" basis in accordance with stipulated income conversion factors as follows:

6/30/77 Conversion Basis	Monthly Income for Each $1,000 of Proceeds			
	Fixed Income (7¼% interest net)		Variable Annuity (4% interest net)	
	Age 65	Age 68	Age 65	Age 68
Male	9.03	9.78	7.18	7.95
Female	8.10	8.62	6.37	6.95

(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).

8. Vesting (termination value):

Immediate 100% vested right in accumulations to date of termination. Disposition is as follows:

(i) If initial participation is December 15, 1972 or earlier, or after December 15, 1972 and has less than five years of participation, entitled to receive total net accumulation to date of termination.

(ii) If initial participation is after December 15, 1972 and has more than five years participation, entitled to sum of:

(a) His own contributions plus interest, and

(b) Paid-up annuity for remainder of total net accumulation, providing for death benefits prior to income commencement of remaining paid-up values.

(NOTE: Variable portion of net accumulation, if $2,000 or more, may be applied to provide variable retirement annuity, or alternatively placed in paid-up status to provide variable retirement annuity at later date. In addition, terminating member can continue retirement annuity accumulations by paying total premiums directly to the insurer).

9. Death Benefits:

(a) Pre-retirement:

Named beneficiary would receive total termination value of retirement annuity is in (8). 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 survivor annuity payable until the death of the last survivor of the annuitant and his designated beneficiary, with 120 monthly payments guaranteed payable in any event.

10. Disability:

In the event of total and continuous disability for a period of at least four 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.

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

PROSPECTUS

MINNESOTA SUPPLEMENTAL RETIREMENT FUND

MAY 1, 1977

Office of the Executive Secretary
State Board of Investment
105 MEA Building, 55 Sherburne Avenue
Saint Paul, Minnesota 55155

To: Participants in the Minnesota Supplemental Retirement Fund

From: The Executive Secretary of the Minnesota State Board of Investment

Subject: Investment Provisions and Policies Applicable to the Minnesota Supplemental Retirement Fund

The Minnesota Legislature has established the Minnesota Supplemental Retirement Fund – comprised of three separate investment accounts – for use in various retirement programs, supplemental benefit arrangements, and in deferred income plans. The original program provided certain additional benefits to employees of the State College Board and the Junior College Board. From 1969 through 1976, the possible participants were increased to include several employee groups. Among the programs thus implemented are those applying to the employees of Hennepin County, certain unclassified employees of the State, police and fire fighter organizations throughout Minnesota, and employees wishing to participate in a deferred income program.

The Minnesota Supplemental Retirement Fund consists of three accounts, the "Income Share Account", the "Growth Share Account" and the "Fixed-Return Account". The use of the "Growth Share Account" – which may consist entirely of common stocks – is limited to those individuals who may choose such an investment program under specific statutory provisions and may be chosen by police and firemen's relief associations as an investment medium for 20% of their total investment in the Supplemental Retirement Fund. The basic "Income Share Account" – consisting of a balanced portfolio of stocks and bonds – is applicable, on an individual basis, to those employees of colleges and certain other governmental units who do not specifically choose the "Growth Share Account" or the "Fixed-Return Account" and is the major investment medium for the police and fire fighter relief associations which select the State's investment program. The "Fixed-Return Account" will be used according to two separate procedures now being developed for different participants. The program took effect on July 1, 1974; it is used as an investment medium by various police and fire fighter groups, and, for such organizations, will provide a set income for specific contributions over a definite period of years. Individuals, on the other hand, may choose this account as a "savings" program through which their total balance will be invested at a comparatively high rate of return, as determined each year.

For college teachers, the plan is separate and apart from all other retirement funds to which the individual participant may belong. An additional 5% of the amount earned by each teacher from $6,000 to $15,000 per year is deducted from such employee's salary and is matched by a 5% contribution from the employer. In the case of Hennepin County employees, a contribution of 1% of salary is matched by an additional 1% from the employer. This money may be invested in any account. Certain unclassified State employees may choose to transfer their participation from the Minnesota State Retirement System to an unclassified employees retirement plan established by the 1971 Legislature. These employees may choose among various percentages of their contribution which may be placed in the three accounts. These three investment portfolios provide for the differing investment needs and requirements of the participants who, due to personal beliefs, preferences, and circumstances, may be concerned with protecting themselves from certain types of risks in arranging their retirement benefits.

In late 1972, the Internal Revenue Service approved a modification of the deferred income plan adopted by the Minnesota Legislature during the extra session in October 1971. Under the terms of Minnesota Statutes 1976, Section 352.96, any officer or employee of the State or any political subdivision thereof, may request that a portion of his compensation be invested in the shares of the Minnesota Supplemental Retirement Fund. In accordance with the provisions of the law and administrative rules, a minimum deduction of $10.00 per pay period is permitted for each participating employee. The Minnesota State Retirement System withholds 2% of the funds at the time of initial investment to cover the cost of administration.

* * * * * * * * * *

THE INCOME SHARE ACCOUNT

The investment provisions applicable to this account, in Minnesota Statutes 1976, Section 11.18, Subdivision 2 provide:

"Subd. 2. There shall be an income account which shall be invested in securities which are legal investments for the state employees retirement fund, except that commercial paper may constitute 15 percent of the assets in the account, with the face amount of notes of any one corporation limited to five percent of the assets in the account."

(Note: Up to 60% of the State Employees Retirement Fund may be invested in corporate bonds, and up to 50% in common stocks. Bonds of the U.S. Government and its agencies may be used without limitation.)

The Income Share Account was established for those who prefer an investment based on dollar values, but with some possible increment due to equity participation. Income accrues primarily as yield on the amount invested. The retirement benefits grow through the principle of compound interest and as added contributions, along with income, are placed in the individual participant's account. During the early 1960's, high-quality fixed-income securities would have provided a yield of approximately 4½ to 4¾%. During 1966 through early 1977, however, interest rates from 5% to over 10% have been obtainable on securities of the desired quality.

The Income Share Account is governed by the same restrictions applicable to other basic public retirement funds in Minnesota. The Board will concentrate the investments in this portfolio in high-quality bonds and those stocks showing a moderate income. Because the Income Share Account was established at a time when interest rates on long-term corporate debt securities were comparatively high, the initial investments purchased and committed from late 1967 through early 1977 provided an average yield approximating 6.91%. This current return, which is compounded, may be expected to vary along with changes in interest rates and dividends on stocks. Historical precedence indicates that it may not be possible to maintain such a high yield on newly invested moneys over an extended period of time.

The unit valuation of the Income Share Account depends on fluctuations in both the bond and stock markets as well as the steady flow of income to the fund. The original unit valuation was $10.00 on October 1, 1967; this was split on a two-for-one basis as of June 30, 1973. After allowance for this split, the valuations have ranged from $4.81 to $8.84 since the fund's inception. Although both bond and stock prices declined during the first two and one-half years of the fund's existence, as interest rates reached the highest levels in a century and stock market averages touched an eight years' low, the income accruing to the fund resulted in a reasonable stability of over-all unit value. During the period from mid-1970 through early 1973, there was a marked increase in common stock prices and a slight decline in bond yields. From January 1973 through late 1974, lower stock prices, combined with significant increases in interest rates, resulted in lower market values. Higher stock and bond prices since early 1975 resulted in a valuation of the Income Share Account units at $8.62, including reinvested income, on April 29, 1977.

THE GROWTH SHARE ACCOUNT

The investment provisions applicable to this account, in Minnesota Statutes 1976, Section 11.18, Subdivision 3 provide:

"Subd. 3. There shall be a growth share account which shall be invested in securities which are legal investments for the state employees retirement fund, except that: 100 percent of the assets in the account may be invested in corporate stocks; up to six percent of the assets in the account or $15,000 in cost, whichever is greater, may be invested in the stock of any one corporation; and commercial paper may constitute 15 percent of the assets in the account, with the face amount of notes of any one corporation limited to five percent of the assets in the account or $25,000, whichever is greater. Not to exceed ten percent of the assets in the account may be invested in corporate stocks which do not conform with the dividend and earnings standards provided for investments of the state employees retirement fund. In addition to the investment standards indicated for the state employees retirement fund, the state board of investment shall consider possible growth potential and probable earnings gains of the companies in making commitments for this account."

(Note: The dividends and earnings limitations applicable to equity investments in the State Employees Retirement Fund are stated as, "No investment shall be made in a common stock unless the latter shall have paid cash dividends for at least five years immediately prior to purchase nor unless the aggregate earnings of such corporation available for payment of dividends on the common stock during the last five years has been at least equal to the aggregate of such cash dividends." The applicable investment standards indicated for the State Employees Retirement Fund are stated as, " . . . any investments shall be made with the exercise of that degree of judgment and care, under circumstances then prevailing, which men of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation but for investment, considering the probable safety of their capital as well as the probable income to be derived.")

The second account, the Growth Share Account, was established for those individuals who are concerned about the purchasing power risk and about the long-term declining value of the dollar. Although there is no guaranteed way of hedging against continued erosion of dollar investments, it is possible that, over the long-term, direct ownership of American business may provide the participant with an investment more nearly comparable to future price levels and valuations. This account may consist entirely of common stocks, with up to 10% of the assets in stocks of companies which do not pay current dividends. In such instances, the individual corporations use earnings for reinvestment in plant and equipment so as to increase future income. It may be presumed that the investment philosophy followed in handling this account will be guided to a greater extent by possible future earnings potential and by indicated growth rates of the various companies and industries. In recent years, stocks offering substantial earnings growth potential, along with possible market appreciation, have often sold at a very low current yield. It must be emphasized that such stocks tend to fluctuate in a wider range than do securities valued primarily on the basis of interest or dividend payments. During the market decline in stock prices from January 1973 through late 1974, the yield on these stocks increased simply because the dividends remained stable or increased even though the market valuations were significantly lower. Over a period of time, the Growth Share Account is likely to provide a current yield of from 2.5% to 3.5% and may be expected to fluctuate in value to a somewhat greater extent than the popular stock averages. The initial investments purchased from late 1967 through early 1977 provided an average yield, based on existing dividend rates, of 3.14%.

The changes in unit valuations have been far greater in the Growth Share Account than in the Income Account. The original $10.00 units, which were split on a two-for-one basis on June 30, 1973, have shown significant fluctuations from this adjusted $5.00 original price. There was an initial decline to $4.52 in February 1968, a subsequent increase to $5.44 in November 1968 and a decline to $4.89 in February 1969. After reaching $5.18 in November 1969, the units declined to a market value of $3.73 in June 1970. During the period of stock price increases from mid-summer 1970 through December 1972, the valuations increased to a high of $7.92 in December 1972. There were significant variations in valuations during the turbulent market of 1973 and 1974. After reaching a low market valuation of $3.21 on September 30, 1974, the units increased in worth throughout 1975 and 1976. After another minor market decline, the units had a value of $5.12 on April 29, 1977.

It has been the policy of the State Board of Investment to avoid extreme "buy" or "sell" programs, which could result in a high cash position for a brief period of time. Such activity can be very successful if timed correctly, but may be disastrous if the market makes unanticipated moves. It is expected that the Board will maintain a reasonably fully-invested position at all times, although moderate reserves in the form of short-term debt investments will be held, particularly when stock prices appear inordinately high. Market valuations will continue to be subject to significant changes, even though long-term results, based on the historical precedence of the past decades, are expected to be satisfactory to the fund participants.

THE FIXED-RETURN ACCOUNT

The investment provisions applicable to this account, in Minnesota Statutes 1976, Section 11.18, Subdivision 3a provide:

"Subd. 3a. There shall be a fixed-return account which shall be invested in debt securities which are legal investments for the state employees retirement fund. At the beginning of each fiscal year, the state board of investment shall set an assumed interest rate for moneys invested in such account during that year, with the rate applicable to all sums invested during the 12 month period. At the end of the 12 months, the board may determine the period of time over which such an assumed rate is to apply to funds so invested, depending upon the average yield and maturity of the securities purchased. Any earnings accrued to the account above the rate earlier indicated may be distributed among participants at fiscal year-end, except that appropriate reserves may first be established from the income of the fund in order to assure such a future rate of return. The account shall be established on July 1, 1974, with the initial unit valuations set at $5 per unit. The income from earnings on shares in this account shall be used to purchase additional units as such income is available."

(Note: Debt securities which are legal investments for the State Employees Retirement Fund are described in Minnesota Statutes 1976, Section 11.16, Subdivision 2 through 12. These provisions, in general, authorize the use of a wide range of bonds and other fixed-income securities of the United States and Canada, governmental subdivisions, agencies of the United States government and corporations. Section 11.16, Subdivision 12 states, "All such corporate bond investments shall be rated among the top third of the quality categories, not applicable to defaulted bonds, used by a nationally recognized rating agency for rating the quality of the same." Under existing rating standards, such a provision limits corporate bond investments to those carrying a rating, at time of purchase, of "A" or above by at least one investment service.)

This third account, the Fixed-Return Account, was established for those organizations and individuals who prefer to have income accrue to their investments each year, rather than to be dependent upon the long-term changes in unit valuations and indications of investment results. This account evidences a marked difference from the other two accounts of the Supplemental Retirement Fund because the units have a continuing uniform value — $5 per unit — with annual income being used toward the purchase of additional units rather than being applied as an increment to the unit value.

From a theoretical standpoint, it may appear that such a unit would be impractical in that it could not show a loss or gain in securities values, which would be inherent in any portfolio of long-term debt instruments. Actually, this variance is evidenced through the changing interest rates which will be assumed by the Investment Board as applicable to contributions each year. Therefore, at times, these units may pay an annual rate of 8% or more to those contributing toward their purchase. During other years, the income may be 5% or less. Likewise, there will be changes in the period of time over which this assumed rate will be paid to the retirement account participants. As indicated by statute, "At the end of the 12 months, the board may determine the period of time over which such an assumed rate is to apply to funds so invested . . . "

This account was established and made available to Minnesota's police and fire fighter accounts on July 1, 1974. Individuals participating in Minnesota's Supplemental Retirement Fund were permitted to purchase shares on July 1, 1975. The program pertaining to individuals differs from that established for the retirement associatons in that the current interest rate is applied to personal accounts for only one year. Therefore, the income received by individual participants tends to vary as do interest rates received on savings accounts in banks and other thrift institutions.

It must be emphasized that there is no "state guarantee" as to any intended interest rate which may be paid on moneys certified into this fund during any fiscal year. It appears, at the time of this writing in early May 1977, however, that an interest rate approximating 8% to 8½% may be appropriate to be paid as income on contributions made during the fiscal year from July 1, 1976 through June 30, 1977. A rate of 9.1% was paid on retirement fund contributions made during the 1975 fiscal year and 8.8% on such contributions during fiscal 1976. The rate will continue on such investments for an additional nine years after the fiscal year of contribution.

During fiscal 1976, an interest rate of 8.9% was paid to all individual participants in this Fixed-Return Account through the "unclassified service" or "deferred income" programs.

Because of somewhat lower interest rates in effect during the early months of calendar 1977, it is probable that a somewhat lesser rate of return — perhaps 7% — will be tentatively applicable to contributions made during the fiscal year from July 1, 1977 through June 30, 1978. The actual interest earned by the participants will depend upon the yield received on fixed-income securities purchased during fiscal 1978.

After the interest rate for fiscal 1977 contributions is determined in July 1977, the earnings will be credited toward the purchase of additional units in the Fixed-Return Account. These sums, as applicable in both pension funds and individual accounts, will be reinvested at the yield applicable to the 1978 fiscal year. Therefore, the earnings from each fiscal year will apply toward the purchase of additional units at the beginning of the next year and will earn whatever rate is appropriate at that time.

Although economic conditions and fluctuations in interest rates may necessitate the application of the assumed rate for a comparatively short period of time, it is hoped that — through the use of long-term bonds and other fixed-income securities — the period of time over which the assumed interest rate may apply could approximate eight to ten years.

* * * * * * * *

During the hearings and discussions concerning the original formation and implementation of the Minnesota Supplemental Retirement Fund and in subsequent years during which the program has been in operation, numerous questions have been asked concerning the investment management of these funds and the methods of participation. The following paragraphs may answer these questions:

<u>INVESTMENT MANAGEMENT</u> — The Minnesota Constitution provides that the State Board of Investment — comprised of five elected officials, the Governor, the State Auditor, the State Treasurer, the Secretary of State and the Attorney General — shall be responsible for the investment of all State funds. In 1959, the Minnesota Legislature established an investment department to recommend policies to the State Board of Investment and to handle the actual transactions. In 1961, the Board appointed ten leading investment experts, who manage the portfolios of major financial institutions within the State, to guide the investment department in

selecting stocks for the various State funds. Its purpose has somewhat changed in that the committee is now more concerned with overall policy rather than individual securities selection. The members of the State Board of Investment, the Advisory Committee on State Trust Funds, and the departmental personnel are listed on page 17 of this booklet.

PARTICIPATION IN ACCOUNTS BY INDIVIDUALS AND ORGANIZATIONS – Various statutes passed in recent years have made these accounts available to an ever-increasing group of individuals and retirement funds. Participation is evidenced through the purchase of "shares" in the overall list of securities. The individual or group participant shares directly from the income of the investments through additions to market value – in the instance of the Income Share Account and the Growth Share Account – and through credit toward the purchase of additional units in the case of the Fixed-Return Account. Because it is necessary for certain retirement account managers to know what segment of the unit's market value represents accumulated income, participating retirement funds are informed of income received on a monthly basis.

Individual participants may select the accounts to be used once each year. Such a choice is in effect until a different written indication is made by the participant. If no choice is made, shares in the Income Share Account are purchased for the participant. Organizations investing money in these accounts may designate how each individual contribution is to be allocated for investment purposes.

ACCOUNTING PROCEDURES – Theoretically, the units change in value each moment of the business day along with the market quotations of the various securities. The units of the Income Share Account and the Growth Share Account are valued only once each month, however, as of the close of the last business day of each month. The valuation of a unit in the Fixed-Return Account is set at $5.00 per unit; these units have a continuing uniform value. Income is applied toward the purchase of additional units.

Although money is received only at the beginning of each month, the accounts are under constant investment supervision. Securities transactions are completed throughout the month – not necessarily at the time of receipt from various participants.

Minnesota Statutes 1976, Section 11.20 provides: "Once on or before July 1, 1968, and annually thereafter, the board shall prepare and issue . . . a prospectus for each of the accounts . . . ". This prospectus lists the assets of the accounts along with the purchase price, the current market value, the current dividend or income rate, and the Standard & Poor's, Moody's or Fitch's rating of each debt issue. A copy of the prospectus is distributed to each participant in the fund.

TYPES OF SECURITIES USED IN ACCOUNTS – Because the individual equities purchased for the Growth Share Account tend to represent corporations which may have unusual growth potential, the account is expected to fluctuate in market value to a greater extent than the other two accounts. The Income Share Account provides a higher current income and a diversification of investments with approximately 50% in stocks and 50% in bonds. The Fixed-Return Account is given an arbitrary established set value of $5.00 per unit. No "growth" is possible, but it is expected that current income will accrue at a faster rate than in either of the other two accounts.

It must be emphasized that the Growth Share Account, as named, refers to the long-term earnings potential of American business. The portfolio of the Growth Share Account, listed on pages 7, 8 and 9, indicates that the stocks owned are concentrated in those industries which appear to offer greater than usual long-term growth possibilities, or to evidence an extended period of earnings improvement. These stocks are often characterized by substantial fluctuations in market price, however, and are more likely to show short-term losses, as well as gains, than are most of the stocks purchased for the Income Share Account. The current yield will be comparatively low in that the stocks are likely to sell at a high relationship to earnings and dividends.

The present portfolios of the Income Share Account, listed on pages 10, 11, 12, and 13, and of the Fixed-Return Account, listed on pages 14 and 15, include bonds which are rated "A" or better by one of the leading services. Most of the stocks purchased for the Income Share Account will provide a moderate current income.

A summary of the market valuations experienced by the Income Share Account and the Growth Share Account since the inception of the program in 1967 is as follows:

SHARE VALUATIONS:

	Income Share Account		Growth Share Account	
	High	Low	High	Low
Oct. '67—Dec. '68	$5.52 (Nov. '68)	$4.98 (Oct. 67)	$5.44 (Nov. '68)	$4.52 (Feb. '68)
1969	5.40 (Jan.)	4.99 (Dec.)	5.32 (Oct.)	4.71 (Jul.)
1970	5.69 (Dec.)	4.81 (Jan.)	4.94 (Feb.)	3.73 (June)
1971	6.30 (Dec.)	5.86 (Jan.)	6.21 (Dec.)	5.09 (Jan.)
1972	7.11 (Dec.)	6.36 (Jan.)	7.92 (Dec.)	6.47 (Jan.)
1973	7.15 (Sept.)	6.69 (Nov.)	7.53 (Jan.)	5.29 (Dec.)
1974	6.80 (Feb.)	5.31 (Sept.)	5.35 (Jan.)	3.21 (Sept.)
1975	7.12 (Dec.)	6.26 (Jan.)	5.17 (June)	3.95 (Jan.)
1976	8.84 (Dec.)	7.58 (Jan.)	5.72 (Dec.)	5.28 (May)
Jan.—Apr. '77	8.62 (Apr.)	8.51 (Mar.)	5.35 (Jan.)	5.12 (Apr.)

(The share valuations listed above have been adjusted for the two-for-one stock split on June 30, 1973. These valuations include accumulated income. Computations regarding that portion of each monthly figure which consists of principal or income in the two accounts are provided to all institutional and police and fire fund participants.)

EACH OF THE THREE ACCOUNTS HAS INDIVIDUAL ADVANTAGES, POTENTIAL PROBLEMS, AND RISKS. THE PERFORMANCE OF EACH OF THE FUNDS WILL DIFFER ACCORDING TO BUSINESS AND ECONOMIC CONDITIONS AS WELL AS CHANGES IN INTEREST RATES. IT IS NOT THE INTENT OF THE INVESTMENT DEPARTMENT TO ADVISE ANY PARTICIPANT REGARDING THE CHOICE TO BE MADE. THIS INFORMATION IS BEING PROVIDED SOLELY AS AN AID TO THE PARTICIPANT IN MAKING HIS DECISION REGARDING THE TYPES OF INVESTMENTS TO BE USED IN PLANNING FOR FUTURE RETIREMENT NEEDS.

* * * * * * * * *

It is suggested that any questions applicable to the operation of the Minnesota Supplemental Retirement Fund be addressed to the administrative organization handling the retirement program for each participant. The office of the Executive Secretary of the State Board of Investment welcomes inquiries regarding investment policies and procedures.

Respectfully submitted,
THE MINNESOTA STATE BOARD OF INVESTMENT

Robert E. Blixt

by: Robert E. Blixt, C.F.A.
Executive Secretary

STATE OF MINNESOTA – STATE BOARD OF INVESTMENT

GROWTH SHARE ACCOUNT – MINNESOTA SUPPLEMENTAL RETIREMENT FUND – APRIL 29, 1977

DEBT OBLIGATIONS	Face Value	Amortized Cost	Price April 29, 1977	Market Value	Coupon	Annual Income	Yield at Cost to Maturity
Short-Term Debt Obligation:							
U.S. Government Repurchase Agreement due, 5-5-77	$427,000.00	$427,000.00		427,053.97*			4.55%

*Includes interest from date of purchase to April 29, 1977

COMMON STOCKS	Number of Shares	Cost	Price April 29, 1977	Market Value	Indicated Dividend	Annual Income	Yield at Cost
I. UTILITIES							
American Telephone & Telegraph Company	4,800	$ 289,812.80	63	$ 302,400.00	$ 4.20	$ 20,160.00	6.96%
Florida Power & Light Company	17,000	463,552.47	24 7/8	422,875.00	1.56	26,520.00	5.72
Houston Natural Gas Corporation	7,000	228,835.13	28 3/4	201,250.00	0.70	4,900.00	2.14
Texas Utilities Company	17,000	333,994.77	19 1/4	327,250.00	1.40	23,800.00	7.13
United Telecommunications, Inc.	17,800	320,478.12	18 1/2	329,300.00	1.20	21,360.00	6.67
Total Utilities		$ 1,636,673.29		$ 1,583,075.00		$ 96,740.00	5.91%
II. FINANCIAL SERVICES							
BANKS							
BankAmerica Corporation	5,000	$ 99,843.75	24 1/2	$ 122,500.00	$ 0.80	$ 4,000.00	4.01%
First Bank System, Incorporated	6,000	259,605.00	38 1/2	228,750.00	1.60	9,600.00	3.70
Valley National Bank of Arizona	6,500	176,315.00	16 3/16	105,222.00	0.85	5,525.00	3.13
Total Banks		$ 535,763.75		$ 456,472.00		$ 19,125.00	3.57%
FINANCE							
Household Finance Corporation	10,000	$ 237,858.27	20 1/8	$ 201,250.00	$ 1.20	$ 12,000.00	5.05%
MGIC Investment Corporation	6,000	253,881.03	14 3/4	88,500.00	0.20	1,200.00	0.47
Total Finance		$ 491,739.30		$ 289,750.00		$ 13,200.00	2.68%
INSURANCE							
INA Corporation	6,000	$ 269,343.97	43 7/8	$ 263,250.00	$ 2.30	$ 13,800.00	5.12%
NLT Corporation	10,400	250,560.43	22 1/8	230,100.00	0.76	7,904.00	3.16
SAFECO Corporation	3,400	158,760.00	41 1/2	141,100.00	1.25	4,250.00	2.68
Total Insurance		$ 678,664.40		$ 634,450.00		$ 25,954.00	3.82%
Total Financial Services		$ 1,706,167.45		$ 1,380,672.00		$ 58,279.00	3.42%
III. CONSUMER-ORIENTED							
AUTOMOTIVE PARTS							
Genuine Parts Company	19,000	$ 670,236.32	30 1/2	$ 579,500.00	$ 0.90	$ 17,100.00	2.55%
CONSUMER–DURABLES & NONDURABLES							
Avon Products, Inc.	5,000	$ 273,724.14	45 1/2	$ 227,500.00	$ 2.00	$ 10,000.00	3.65%
Clorox Company (The)	6,500	249,612.00	11 1/4	73,125.00	0.60	3,900.00	1.56
Colgate-Palmolive Company	6,000	160,256.94	24 1/2	147,000.00	0.88	5,280.00	3.29
Eastman Kodak Company	4,000	347,916.20	62 3/8	249,500.00	2.10	8,400.00	2.41
Minnesota Mining & Manufacturing Co.	5,000	268,867.97	48 1/2	242,500.00	1.70	8,500.00	3.16
Revlon Incorporated	8,000	259,730.43	37	296,000.00	0.90	7,200.00	2.77
Sunbeam Corporation	9,000	233,525.00	19 1/2	175,500.00	1.08	9,720.00	4.16
Total Consumer-Durables & Nondurables		$ 1,793,632.68		$ 1,411,125.00		$ 53,000.00	2.95%
CONSUMER–MISCELLANEOUS							
ARA Services, Incorporated	1,800	$ 135,064.56	38 7/8	$ 69,975.00	$ 1.32	$ 2,376.00	1.76%
Disney (Walt) Productions	5,197	286,182.59	35	181,895.00	0.16	831.52	0.29
Holiday Inns, Incorporated	4,200	140,159.33	11 5/8	48,825.00	0.465	1,953.00	1.39
McDonald's Corporation	5,000	216,614.53	39 7/8	199,375.00	0.10	500.00	0.23
Total Consumer-Miscellaneous		$ 778,021.01		$ 500,070.00		$ 5,660.52	0.73%

(Continued on page 8)

GROWTH SHARE ACCOUNT – MINNESOTA SUPPLEMENTAL RETIREMENT FUND (Continued)

DRUGS							
American Home Products Corporation	7,000	$ 259,076.98	27 3/8	$ 191,625.00	$ 1.10	$ 7,700.00	2.97%
Johnson & Johnson	3,000	297,601.76	63 1/8	189,375.00	1.50	4,500.00	1.51
Medtronic, Inc.	7,000	166,796.32	26 1/8	182,875.00	—	—	—
Schering-Plough Corporation	4,000	234,262.34	33 1/8	132,500.00	1.00	4,000.00	1.71
Total Drugs		$ 957,737.40		$ 696,375.00		$ 16,200.00	1.69%
FOODS—BEVERAGES							
CPC International, Inc.	8,000	$ 347,723.13	50	$ 400,000.00	$ 2.50	$ 20,000.00	5.75%
PepsiCo, Inc.	5,500	374,041.53	69 7/8	384,312.50	2.40	13,200.00	3.53
Total Foods-Beverages		$ 721,764.66		$ 784,312.50		$ 33,200.00	4.60%
RETAIL SALES							
American Greetings Corporation	13,000	$ 211,070.00	9 11/16	$ 125,944.00	$ 0.34	$ 4,420.00	2.09%
Kresge (S.S.) Company	5,000	189,580.00	28 7/8	144,375.00	0.56	2,800.00	1.48
Penney (J.C.) Company, Incorporated	6,000	304,302.11	37 1/4	223,500.00	1.48	8,880.00	2.92
Southland Corporation	6,150	149,679.50	22 1/8	136,068.75	0.50	3,075.00	2.05
Total Retail Sales		$ 854,631.61		$ 629,887.75		$ 19,175.00	2.24%
Total Consumer-Oriented		$ 5,776,023.68		$ 4,601,270.25		$144,335.52	2.50%
IV. TECHNOLOGY							
Burroughs Corporation	2,000	$ 133,187.47	57	$ 114,000.00	$ 0.80	$ 1,600.00	1.20%
Digital Equipment Corporation	6,000	218,427.71	38 1/2	231,000.00	—	—	—
Hewlett-Packard Company	4,000	367,883.21	69 3/8	277,500.00	0.40	1,600.00	0.43
Honeywell, Inc.	3,000	307,265.16	50 1/4	150,750.00	1.60	4,800.00	1.56
International Business Machines Corp.	3,512	905,954.77	258 3/4	908,730.00	10.00	35,120.00	3.88
Xerox Corporation	3,200	343,924.39	45 1/2	145,600.00	1.20	3,840.00	1.12
Total Technology		$ 2,276,642.71		$ 1,827,580.00		$ 46,960.00	2.06%
V. BASIC INDUSTRY							
AEROSPACE							
Boeing Co.	7,000	$ 311,885.00	48 1/4	$ 337,750.00	$ 1.40	$ 9.800.00	3.14%
BUILDING & FOREST PRODUCTS							
Georgia-Pacific Corporation	8,000	256,200.00	31 5/8	$ 253,000.00	$ 0.80	$ 6,400.00	2.50%
Masonite Corporation	10,000	285,728.13	19 1/2	195,000.00	0.60	6,000.00	2.10
Total Building & Forest Products		$ 541,928.13		$ 448,000.00		$ 12,400.00	2.29%
CHEMICALS							
Air Products and Chemicals, Inc.	7,670	$ 252,614.75	26	$ 199,420.00	$ 0.20	$ 1,534.00	0.61%
Dow Chemical Company (The)	4,500	204,297.50	37 1/4	167,062.50	1.00	4,500.00	2.20
du Pont (E.I.) de Nemours & Co.	2,100	308,449.15	125 5/8	263,812.50	5.00	10,500.00	3.40
Total Chemicals		$ 765,361.40		$ 630,295.00		$ 16,534.00	2.16%
ELECTRICAL EQUIPMENT							
Emerson Electric Co.	11,000	$ 386,912.84	32 7/8	$ 361,625.00	$ 1.00	$ 11,000.00	2.84%
Gould, Inc.	6,500	171,758.80	32 3/8	210,437.50	1.12	7,280.00	4.24
Total Electrical Equipment		$ 558,671.64		$ 572,062.50		$ 18,280.00	3.27%
MACHINERY							
Clark Equipment Company	4,000	$ 162,410.00	40 1/4	$ 161,000.00	$ 1.60	$ 6,400.00	3.94%
Trans Union Corporation	3,000	95,252.00	35 1/4	105,750.00	1.76	5,280.00	5.54
Total Machinery		$ 257,662.00		$ 266,750.00		$ 11,680.00	4.53%

METALS & MINING							
Hanna Mining Company (The)	6,500	$ 309,502.35	53 1/2	$ 347,750.00	$ 1.80	$ 11,700.00	3.78%
St. Joe Minerals Corporation	6,500	261,170.00	42	273,000.00	1.30	8,450.00	3.24
Total Metals & Mining		$ 570,672.35		$ 620,750.00		$ 20,150.00	3.53%
PAPER							
International Paper Company	4,300	$ 264,362.50	58	$ 249,400.00	$ 2.00	$ 8,600.00	3.25%
MISCELLANEOUS							
International Telephone & Telegraph Corp.	5,500	$ 264,786.26	33 5/8	$ 184,937.50	$ 1.76	$ 9,680.00	3.66%
Total Basic Industry		$3,535,329.28		$ 3,309,945.00		$107,124.00	3.03%
VI. ENERGY							
OIL							
Atlantic Richfield Company	5,000	$ 268,650.00	58 1/2	$ 292,500.00	$ 1.60	$ 8,000.00	2.98%
Exxon Corporation	14,000	626,617.21	51 5/8	722,750.00	3.00	42,000.00	6.70
Louisiana Land and Exploration Co.	10,000	264,881.00	26 1/8	261,250.00	1.20	12,000.00	4.53
Marathon Oil Company	8,000	458,480.00	50 3/4	406,000.00	2.20	17,600.00	3.84
Total Oil		$ 1,618,628.21		$ 1,682,500.00		$ 79,600.00	4.92%
ENERGY-RELATED							
Baker International Corporation	8,000	$ 387,086.43	47 3/4	$ 382,000.00	$ 0.46	$ 3,680.00	0.95%
Halliburton Company	6,000	304,872.00	60 1/8	360,750.00	1.00	6,000.00	1.97
Williams Companies (The)	6,800	196,995.35	23 3/4	161,500.00	1.00	6,800.00	3.45
Total Energy-Related		$ 888,953.78		$ 904,250.00		$ 16,480.00	1.85%
Total Energy		$ 2,507,581.99		$ 2,586,750.00		$ 96,080.00	3.83%
VII. TRANSPORTATION							
AIRLINES							
Northwest Airlines Incorporated	6,000	$ 149,591.38	26	$ 156,000.00	$ 0.50	$ 3,000.00	2.01%
Total Common Stocks (Growth Share Account)		$17,588,009.78		$15,445,292.25		$552,518.52	3.14%
Total Portfolio Including Short-Term Obligations		$18,015,009.78		$15,872,346.22			
Less Accumulated Profit on Securities Sold		332,954.46					
Plus Cash and Accrued Income		11,279.50		11,279.50			
Net Portfolio Cost and Market Valuation as Adjusted		$17,693,334.82		$15,872,346.22			
(Divided by Number of Outstanding Share-Units)				3,104,320			
Value per Share-Unit, April 29, 1977				$5.12			

STATE OF MINNESOTA — STATE BOARD OF INVESTMENT
INCOME SHARE ACCOUNT — MINNESOTA SUPPLEMENTAL RETIREMENT FUND — APRIL 29, 1977

DEBT OBLIGATIONS	Quality Ratings Moody's	Std. & Poors	Face Value	Amortized Cost	Price April 29, 1977	Market Value	Coupon	Annual Income*	Yield at Cost to Maturity**
Short-Term Debt Obligation:									
U.S. Government Treasury Bills, due 10-6-77			$ 1,470,000.00	$ 1,435,769.84		$ 1,438,248.00 #			4.779%
# Includes interest from date of purchase to April 29, 1977									
GOVERNMENT NATIONAL MORTGAGE ASSOCIATION GUARANTEED MORTGAGE — BACKED SECURITY									
Weaver Bros. Inc., Mtg.-Backed Cert., due 9-15-2006	Aaa	AAA	$ 696,889.13	$ 690,754.34	99 1/2	$ 693,404.68	8.000%	$ 55,751.13	8.071%
Intermediate-Term Corporate Debt Obligations:									
ACF Industries, Inc., ETC, due 4-1-78/85	A	AA	$ 120,000.00	$ 120,000.00	104 7/8	$ 125,850.00	9.500%	$ 11,400.00	9.500%
Burlington-Northern, CSA, due 10-1-77/78	A	A	183,333.33	183,333.33	106 7/8	195,937.50	9.625	17,645.83	9.625
Burlington-Northern, (First Western Bank & Trust Co.), CSA, due 5-1-77/78	A	A	193,355.99	193,355.99	103	199,156.67	8.600	16,628.62	8.600
Chesapeake & Ohio Ry. Co., (The First Pennsylvania Banking & Trust Co.), CSA, due 9-15-77/3-15-89	A	A	490,921.18	490,921.18	102 1/2	503,194.21	8.750	42,955.60	8.750
Dresser Industries, Note, Due 5-15-85	A	A	400,000.00	401,789.70	105	420,000.00	8.650	34,376.20	8.556
Fruit Growers Express, ETC, due 6-15-77/85	A	A	135,000.00	135,000.00	106	143,100.00	9.750	13,162.50	9.750
General Electric Credit Corp., (Delaware & Hudson Ry. Co.), CSA, due 9-1-77/85		A	154,875.51	154,875.51	108	167,265.55	10.500	16,261.93	10.500
Minnesota Gas Co., Deb., Due 11-15-81	A	A	800,000.00	797,072.38	105 1/4	842,000.00	9.250	74,650.64	9.366
Northwest Bancorporation, Note, due 9-15-86	Aa	AAA	800,000.00	799,058.80	101 1/2	812,000.00	7.875	63,100.80	7.897
Phelps Dodge Corp., Note, due 6-1-85	A	A	400,000.00	398,430.58	104 1/8	416,500.00	8.500	34,194.16	8.582
Rohm & Haas Co., Note, due 4-15-85	A	A	500,000.00	500,000.00	106	530,000.00	9.000	45,000.00	9.000
Total Intermediate-Term Corporate Debt Obligatons			$ 4,177,486.01	$ 4,173,837.47		$ 4,355,003.93		$ 369,376.28	8.850%
Long-Term Corporate Debt Obligations:									
ACF Industries, Inc., ETC, due 2-1-78/92		A	$ 500,000.00	$ 500,000.00	98 5/8	$ 493,125.00	8.000%	$ 40,000.00	8.000%
Alum. Co. of Canada, Ltd., S/F Deb., due 3-1-95	A	A	800,000.00	787,790.63	102 1/4	818,000.00	9.500	76,684.60	9.734
Atlantic Richfield Co., (Channelview Leasing Co., Inc.), Secured Note, due 7-15-96	Aa	AA	800,000.00	800,000.00	104 1/2	836,000.00	9.250	74,000.00	9.250
Bell Telephone Co. of Canada, FMB, due 6-1-2004	Aa	AA	800,000.00	800,000.00	104 5/8	837,000.00	9.500	76,000.00	9.500
Canadian Pacific, Ltd., ETC, due 1-15-83/92	Aa	AA	500,000.00	500,000.00	99 1/2	497,500.00	8.625	43,125.00	8.625
Cities Service Gas Co., Deb., due 6-1-91	Aa	AA	400,000.00	400,000.00	98	392,000.00	8.250	33,000.00	8.250
Deere (John) Credit Co., Deb., due 4-30-98		AA	500,000.00	497,920.75	92 3/4	463,750.00	7.500	37,599.00	7.551
FMC Corp., S/F Deb., due 1-15-2000	A	A	800,000.00	792,648.72	108 3/8	867,000.00	9.500	76,324.36	9.629
Ford Motor Credit Co., Deb., due 4-1-99	Aa	A	800,000.00	784,673.08	102 3/8	819,000.00	8.700	70,299.36	8.959
Ford Motor Credit Co.,Deb., due 7-15-2000	Aa	A	800,000.00	798,115.26	107 3/4	862,000.00	9.700	77,681.36	9.733
Ford Motor Co., Guaranteed Note, due 12-1-96	Aaa	AAA	700,000.00	700,000.00	102	714,000.00	8.625	60,375.00	8.625
Honeywell Finance, Inc., S/F Deb., due 12-15-98	A	A	800,000.00	787,872.80	95 1/2	764,000.00	8.200	66,161.84	8.398

Louisville & Nashville Railroad Co., CSA, due 10-20-82/91	A	A	487,694.83	[illegible]7,694.83	102 1/4	498,667.96	9.000	43,892.53	9.000
Marathon Oil Co., S/F Deb., due 2-1-2000	A	AA	800,000.00	794,137.44	101 3/4	814,000.00	8.500	68,257.76	8.595
Moore Business Forms, Inc., Senior Note, due 10-1-96	Aa	AA	500,000.00	500,000.00	95 1/4	476,250.00	7.900	39,500.00	7.900
New York Telephone Co., RMB, Series U, due 7-15-2008	Aaa	AAA	800,000.00	746,983.00	98 1/2	788,000.00	8.000	65,701.00	8.796
Northwest Bancorporation, S/F Deb., due 3-15-2003	(Fitch-	AAA)	800,000.00	800,000.00	93 3/8	747,000.00	7.750	62,000.00	7.750
Plantation Pipeline Co., (Exxon Corp., Std. Oil of Calif., & Shell Oil Co., Guarantors), Note, due 10-1-2001	Aaa	AAA	400,000.00	400,000.00	97 7/8	391,500.00	7.875	31,500.00	7.875
Standard Oil of Calif., (Union Bank), First Preferred Ship Mtg. Bond., due 2-10-97 through 11-6-97	Aaa	AAA	800,000.00	800,000.00	97 1/2	780,000.00	7.700	61,600.00	7.700
Standard Oil Co., (Indiana), Note due 10-1-2000	Aaa	AAA	800,000.00	779,849.98	95 3/4	766,000.00	7.500	60,860.52	7.804
Stauffer Chemical Co., Note, due 3-15-97	A	A	500,000.00	500,000.00	92 5/8	463,125.00	7.500	37,500.00	7.500
Wells Fargo & Co., Note, due 11-1-98	(Fitch	AAA)	800,000.00	800,000.00	94	752,000.00	8.125	65,000.00	8.125
Total Long-Term Corporate Debt Obligations			$14,887,694.83	$14,757,686.49		$14,839,917.96		$1,267,062.33	8.586%
Canadian Governmental Obligations:									
British Columbia Hydro & Power Authority Bond, due 7-15-96	Aa	AA	$ 800,000.00	$ 800,000.00	104 3/4	$ 838,000.00	9.625%	$ 77,000.00	9.625%
The Manitoba Hydro-Electric Board, Bond, due 10-15-97	Aa	AA	500,000.00	500,000.00	91 1/4	456,250.00	7.650	38,250.00	7.650
The New Brunswick Electric Power Commission, S/F Deb., due 4-1-98	A	A	800,000.00	800,000.00	89 7/8	719,000.00	7.875	63,000.00	7.875
Nova Scotia Power Corp., S/F Deb., due 7-15-98	A	A	800,000.00	798,164.90	92 1/2	740,000.00	8.125	65,086.64	8.155
Ontario Hydro, Note, due 3-15-96	Aaa	AA	800,000.00	800,000.00	105 1/4	842,000.00	9.500	76,000.00	9.500
Ontario Province of, Deb., due 5-15-2001	Aaa	AA	300,000.00	300,000.00	93 3/4	281,250.00	7.850	23,550.00	7.850
Ontario Province of, Deb., due 12-15-2002	Aaa	AA	500,000.00	500,000.00	88	440,000.00	7.300	36,500.00	7.300
Total Canadian Governmental Obligations			$ 4,500,000.00	$ 4,498,164.90		$ 4,316,500.00		$ 379,386.64	8.434%
Total Government National Mortgage Association, Corporate and Canadian Governmental Debt Obligations			$24,262,069.97	$24,120,443.20		$24,204,826.57		$2,071,576.38	8.588%

*Annual income includes accumulation of discounts and amortization of premiums.
**Average yield figures mean annual income as percentage of amortized cost.
Abbreviation ETC — Equipment Trust Certificate; CSA — Conditional Sale Agreement; RMB — Refunding Mortgage Bond; FMB — First Mortgage Bond.

COMMON STOCKS	Number of Shares	Cost	Price April 29, 1977	Market Value	Indicated Dividend	Annual Income	Yield at Cost
I. UTILITIES							
ELECTRIC							
Commonwealth Edison Company	17,000	$ 502,498.76	28 5/8	$ 486,625.00	$ 2.40	$ 40,800.00	8.12%
Minnesota Power & Light Company	17,200	360,710.00	21 7/8	376,250.00	1.76	30,272.00	8.39
Northern States Power Co. (Minn.)	18,000	478,197.49	27 3/8	492,750.00	1.94	34,920.00	7.30
Public Service Company of Indiana	8,000	223,167.50	27 1/8	217,000.00	1.92	15,360.00	6.88
Texas Utilities Company	23,800	573,456.61	19 1/4	458,150.00	1.40	33,320.00	5.81
Total Electric		$ 2,138,030.36		$ 2,030.775.00		$ 154,672.00	7.23%
NATURAL GAS							
Houston Natural Gas Corporation	3,000	$ 95,140.00	28 3/4	$ 86,250.00	$ 0.70	$ 2,100.00	2.21%
Panhandle Eastern Pipe Line Company	14,000	465,649.24	45 1/2	637,000.00	2.50	35,000.00	7.52
Peoples Gas Company	7,500	355,045.50	46 7/8	351,562.50	3.40	25,500.00	7.18
Total Natural Gas		$ 915,834.74		$ 1,074,812.50		$ 62,600.00	6.84%
COMMUNICATIONS							
American Telephone & Telegraph Company	19,000	$ 967,382.14	63	$ 1,197,000.00	$ 4.20	$ 79,800.00	8.25%
General Telephone & Electronics Corp.	22,000	599,981.77	30 1/8	662,750.00	2.00	44,000.00	7.33
Total Communications		$ 1,567,363.91		$ 1,859,750.00		$ 123,800.00	7.90%
Total Utilities		$ 4,621,229.01		$ 4,965,337.50		$ 341,072.00	7.38%

(Continued on page 12)

II. FINANCIAL SERVICES							
BANKS							
Continental Illinois Corporation	9,000	$ 372,368.92	51 5/8	$ 464,625.00	$ 2.40	$ 21,600.00	5.80%
Manufacturers Hanover Corporation	11,000	400,248.02	36 7/8	405,625.00	1.92	21,120.00	5.28
Northwest Bancorporation	10,000	411,152.81	50 3/4	507,500.00	1.92	19,200.00	4.67
Total Banks		$ 1,183,769.75		$ 1,377,750.00		$ 61,920.00	5.23%
FINANCE							
Household Finance Corporation	22,000	$ 502,605.65	20 1/8	$ 442,750.00	$ 1.20	$ 26,400.00	5.25%
INSURANCE							
INA Corporation	10,000	$ 430,495.80	43 7/8	$ 438,750.00	$ 2.30	$ 23,000.00	5.34%
NLT Corporation	11,000	142,570.64	22 1/8	243,375.00	0.76	8,360.00	5.86
United States Fidelity & Guaranty Co.	8,800	367,259.07	54 1/4	477,400.00	2.76	24,288.00	6.61
Total Insurance		$ 940,325.51		$ 1,159,525.00		$ 55,648.00	5.92%
Total Financial Services		$ 2,626,700.91		$ 2,980,025.00		$ 143,968.00	5.48%
III. CONSUMER ORIENTED							
AUTOMOBILES—AUTOMOTIVE PARTS							
Ford Motor Company	7,600	$ 416,424.48	55 1/2	$ 421,800.00	$ 4.00	$ 30,400.00	7.30%
General Motors Corporation	7,000	499,980.15	68 3/8	478,625.00	3.40	23,800.00	4.76
Goodyear Tire & Rubber Company (The)	11,500	330,325.93	19 1/2	224,250.00	1.10	12,650.00	3.83
Total Automobiles—Automotive Parts		$ 1,246,730.56		$ 1,124,675.00		$ 66,850.00	5.36%
CONSUMER—PRODUCTS							
Avon Products, Inc.	10,000	$ 393,787.78	45 1/2	$ 455,000.00	$ 2.00	$ 20,000.00	5.08%
Colgate-Palmolive Company	9,000	239,196.44	24 1/2	220,500.00	0.88	7,920.00	3.31
McDonalds Corporation	2,000	108,300.71	39 7/8	79,750.00	0.10	200.00	0.18
Minnesota Mining & Manufacturing Company	9,000	534,394.03	48 1/2	436,500.00	1.70	15,300.00	2.86
Sunbeam Corporation	14,000	288,321.50	19 1/2	273,000.00	1.08	15,120.00	5.24
Total Consumer-Products		$ 1,564,000.46		$ 1,464.750.00		$ 58,540.00	3.74%
DRUGS							
American Home Products Corporation	4,000	$ 128,025.00	27 3/8	$ 109,500.00	$ 1.10	$ 4,400.00	3.44%
Pfizer Incorporated	14,000	465,796.31	25 7/8	362,250.00	0.96	13,440.00	2.89
Warner-Lambert Company	14,000	570,773.22	26 1/4	367,500.00	1.00	14,000.00	2.45
Total Drugs		$ 1,164,594.53		$ 839,250.00		$ 31,840.00	2.73%
FOODS—BEVERAGES							
CPC International, Inc.	10,000	$ 441,386.28	50	$ 500,000.00	$ 2.50	$ 25,000.00	5.66%
Consolidated Foods Corporation	12,000	369,336.67	25 1/4	303,000.00	1.40	16,800.00	4.55
General Foods Corporation	15,000	377,826.75	31 5/8	474,375.00	1.64	24,600.00	6.51
PepsiCo, Inc.	6,600	351,321.32	69 7/8	461,175.00	2.40	15,840.00	4.51
Total Foods—Beverages		$ 1,539,871.02		$ 1,738,550.00		$ 82,240.00	5.34%
RETAIL SALES							
Federated Department Stores, Incorporated	11,000	$ 476,652.50	39 1/4	$ 431,750.00	$ 1.46	$ 16,060.00	3.37%
Sears Roebuck & Company	7,500	583,574.43	57 3/8	430,312.50	2.10	15,750.00	2.70
Total Retail Sales		$ 1,060,226.93		$ 862,062.50		$ 31,810.00	3.00%
Total Consumer Oriented		$ 6,575,423.50		$ 6,029,287.50		$ 271,280.00	4.13%
IV. TECHNOLOGY							
OFFICE EQUIPMENT							
International Business Machines Corp.	4,500	$ 1,177,287.75	258 3/4	$ 1,164,375.00	$10.00	$ 45,000.00	3.82%
V. BASIC INDUSTRY							
AEROSPACE							
United Technologies Corporation	13,000	$ 388,479.69	38 1/2	$ 500,500.00	$ 1.80	$ 23,400.00	6.02%
BUILDING & FOREST PRODUCTS							
Georgia-Pacific Corporation	15,953	$ 471,286.20	31 5/8	$ 504,513.63	$ 0.80	$ 12,762.40	2.71%
Masonite Corporation	4,000	82,888.00	19 1/2	78,000.00	0.60	2,400.00	2.90
Total Building & Forest Products		$ 554,174.20		$ 582,513.63		$ 15,162.40	2.74%

CHEMICALS							
du Pont (E.I.) de Nemours & Co.	3,300	$ 433,[illegible]11	125 5/8	$ 414,562.50	$ 5.00	$ 16,500.00	3.81%
Monsanto Company	3,000	170,620.07	78 3/8	235,125.00	3.10	9,300.00	5.45
Union Carbide Corporation	9,500	447,140.76	54 3/4	520,125.00	2.80	26,600.00	5.95
Total Chemicals		$ 1,051,355.94		$ 1,169,812.50		$ 52,400.00	4.98%
ELECTRICAL EQUIPMENT							
General Electric Company	5,000	$ 245,626.79	53 7/8	$ 269,375.00	$ 1.80	$ 9,000.00	3.66%
Gould, Inc.	30,000	499,716.49	32 3/8	971,250.00	1.12	33,600.00	6.72
Total Electrical Equipment		$ 745,343.28		$ 1,240,625.00		$ 42,600.00	5.72%
MACHINERY							
Clark Equipment Company	4,000	$ 183,290.00	40 1/4	$ 161,000.00	$ 1.60	$ 6,400.00	3.49%
Combustion Engineering, Incorporated	8,000	525,708.70	56 7/8	455,000.00	2.20	17,600.00	3.35
Trans Union Corporation	8,000	252,508.00	35 1/4	282,000.00	1.76	14,080.00	5.58
Total Machinery		$ 961,506.70		$ 898,000.00		$ 38,080.00	3.96%
METALS							
St. Joe Minerals Corporation	11,000	$ 450,413.64	42	$ 462,000.00	$ 1.30	$ 14,300.00	3.17%
PAPER							
International Paper Company	9,000	$ 359,876.74	58	$ 522,000.00	$ 2.00	$ 18,000.00	5.00%
Union Camp Corporation	3,000	181,670.00	61 1/2	184,500.00	1.80	5,400.00	2.97
Total Paper		$ 541,546.74		$ 706,500.00		$ 23,400.00	4.32%
MISCELLANEOUS							
International Telephone & Telegraph Corp.	12,000	$ 467,493.71	33 5/8	$ 403,500.00	$ 1.76	$ 21,120.00	4.52%
Total Basic Industry		$ 5,160,313.90		$ 5,963,451.13		$ 230,462.40	4.47%
VI. ENERGY—							
OIL—DOMESTIC							
Continental Oil Company (Del.)	22,000	$ 518,270.25	36 1/4	$ 797,500.00	$ 1.40	$ 30,800.00	5.94%
Marathon Oil Company	10,000	575,404.89	50 3/4	507,500.00	2.20	22,000.00	3.82
Standard Oil Company (Indiana)	12,000	503,953.76	53 5/8	643,500.00	2.60	31,200.00	6.19
Total Oil — Domestic		$ 1,597,628.90		$ 1,948,500.00		$ 84,000.00	5.26%
OIL—INTERNATIONAL							
Exxon Corporation	22,000	$ 869,973.92	51 5/8	$ 1,135,750.00	$ 3.00	$ 66,000.00	7.59%
Mobil Oil Corporation	12,000	611,653.24	66 1/4	795,000.00	3.80	45,600.00	7.46
Texaco Inc.	17,000	511,124.47	26 7/8	456,875.00	2.00	34,000.00	6.65
Total Oil — International		$ 1,992,751.63		$ 2,387,625.00		$ 145,600.00	7.31%
ENERGY—RELATED							
Dresser Industries, Inc.	9,000	$ 305,762.50	45 1/4	$ 407,250.00	$ 0.80	$ 7,200.00	2.35%
Williams Companies, Inc.	6,000	137,683.00	23 3/4	142,500.00	1.00	6,000.00	4.36
Total Energy-Related		$ 443,445.50		$ 549,750.00		$ 13,200.00	2.98%
Total Energy		$ 4,033,826.03		$ 4,885,875.00		$ 242,800.00	6.02%
VII. TRANSPORTATION							
RAILROADS							
Southern Railway Company	5,500	$ 299,984.89	57 7/8	$ 318,312.50	$ 2.32	$ 12,760.00	4.25%
Union Pacific Corporation	4,200	128,244.99	53 7/8	226,275.00	1.70	7,140.00	5.57
Total Railroads		$ 428,229.88		$ 544,587.50		$ 19,900.00	4.65%
Total Common Stocks (Income Share Account)		$24,623,010.98		$26,532,938.63		$1,294,482.40	5.26%
Total Bonds		$24,120,443.20		$24,204,826.57		$2,071,576.38	8.59%
Total Permanent Portfolio (Income Share Acct)		$48,743,454.18		$50,737,765.20		$3,366,058.78	6.91%
Total Portfolio Including Short-Term Obligations		$50,179,224.02		$52,176,013.20			
Less Accumulated Profit on Securities Sold		249,179.81					
Plus Cash and Accrued Income		362,310.35		362,310.35			
Net Portfolio Cost and Market Valuations as Adjusted		$50,292,354.56		$52,538,323.55			
(Divided by Number of Outstanding Share-Units)				6,097,670			
Value per Share-Unit, April 29, 1977				$8.62			

STATE OF MINNESOTA – STATE BOARD OF INVESTMENT
FIXED-RETURN ACCOUNT – MINNESOTA SUPPLEMENTAL RETIREMENT FUND – APRIL 29, 1977

DEBT OBLIGATIONS	Quality Ratings Moody's	Std. & Poors	Face Value	Amortized Cost	Price April 29, 1977	Market Value	Coupon	Annual Income*	Yield at Cost to Maturity**
Short-Term Debt Obligation:									
U.S. Government Repurchase Agreement, due 5-2-77			$ 445,000.00	$ 445,000.00		$ 445,056.24#			4.550%
# Includes interest from date of purchase to April 29, 1977									
United States Government Agency Obligation:									
Federal Home Loan Mortgage Corp., Guaranteed Mtge. Certif., due 3-15-2007	Aaa	AAA	$ 200,000.00	$ 199,008.31	101	$ 202,000.00	8.050%	$ 16,133.24	8.107%
Intermediate-Term Corporate Debt Obligations:									
Northwest Bancorp., Note, due 9-15-86	Aa	AAA	$ 250,000.00	$ 249,705.91	101 1/2	$ 253,750.00	7.875%	$ 19,719.06	7.879%
Ralston Purina Co., Note, due 12-31-82		AA	250,000.00	250,000.00	105	262,500.00	8.000	20,000.00	8.000
Total Intermediate-Term Corporate Debt Obligations			$ 500,000.00	$ 499,705.91		$ 516,250.00		$ 39,719.06	7.948%
Long-Term Corporate Debt Obligations:									
ACF Industries, Inc., ETC, due 3-31-82/91	A	A	$ 150,000.00	$ 150,000.00	101 1/2	$ 152,250.00	9.000%	$ 13,500.00	9.000%
ACF Industries, Inc., ETC, due 2-1-78/92		A	100,000.00	100,000.00	98 5/8	98,625.00	8.000	8,000.00	8.000
AMAX, Inc., S/F Deb., due 3-1-2001	A	A	150,000.00	148,909.53	102 1/2	153,750.00	8.625	12,983.22	8.719
Ashland Oil, Inc., S/F Deb. due 9-1-2000	A	A	150,000.00	150,000.00	110 3/4	166,125.00	10.000	15,000.00	10.000
Atlantic Richfield Co., (Channelview Leasing Co., Inc.), Secured Note, due 7-15-96	Aa	AA	150,000.00	150,000.00	104 1/2	156,750.00	9.250	13,875.00	9.250
Canadian Pacific, Ltd., ETC, due 1-15-83/92	Aa	AA	250,000.00	250,000.00	99 1/2	248,750.00	8.625	21,562.50	8.625
du Pont (E.I.) de Nemours, S/F Deb., due 11-15-2004	Aaa	AAA	150,000.00	148,692.31	105 1/2	158,250.00	8.450	12,722.52	8.556
Exxon Pipeline Co., Guaranteed Deb., due 3-1-2001	Aaa	AAA	250,000.00	246,689.85	103	257,500.00	8.250	20,763.84	8.417
FMC Corp., S/F Deb., due 1-15-2000	A	A	150,000.00	148,621.68	108 3/8	162,562.50	9.500	14,310.84	9.629
Firestone Tire & Rubber, S/F Deb., due 12-1-2004	Aa	AA	150,000.00	149,483.68	106	159,000.00	9.250	13,893.72	9.294
Ford Motor Co., S/F Deb., due 7-15-94	Aaa	AAA	150,000.00	149,591.01	108	162,000.00	9.250	13,898.88	9.291
Ford Motor Credit Co., Deb., due 7-15-2000	Aa	A	150,000.00	149,646.59	107 3/4	161,625.00	9.700	14,565.24	9.733
Houston Lighting & Power Co., S/F Deb., due 10-1-2006	Aa	AA	250,000.00	248,753.53	99	247,500.00	8.375	20,979.86	8.434
Iowa-Illinois Gas & Electric Co., First Mtge. Bd., due 1-15-2007	Aa	AA	250,000.00	248,135.48	98 3/4	246,875.00	8.250	20,687.88	8.337
Louisville & Nashville Railroad Co., CSA, due 10-28-82/91	A	A	146,308.45	146,308.45	102 1/4	149,600.39	9.000	13,167.76	9.000
Louisville & Nashville Railroad Co., CSA, due 10-28-82/91	A	A	95,335.97	95,335.97	99 1/2	94,859.29	8.375	7,984.39	8.375
Minnesota Power & Light Co., First Mtge. Bd., due 8-1-2005	A	A	150,000.00	150,000.00	111	166,500.00	10.500	15,750.00	10.500
Minnesota Power & Light Co., First Mtge. Bd., due 9-1-2006	A	A	100,000.00	100,000.00	101 1/8	101,125.00	8.700	8,700.00	8.700
New York Telephone Co., Refunding Mtge. Bd., due 7-15-2008	Aaa	AAA	250,000.00	224,631.25	98 1/2	246,250.00	8.000	20,813.96	9.266
Olympic Pipeline Co., Note, due 9-1-2001	Aaa	AAA	250,000.00	250,000.00	107 1/8	267,812.50	8.850	22,125.00	8.850

Pacific Gas & Electric Co., First Refunding Mtge. Bd., due 12-1-2005	Aa	AA	250,000.00	243,046.08	92 1/2	231,250.00	7.750	19,618.24	8.072
Pacific Telephone & Telegraph Co., Deb., due 3-1-2007	Aaa	AAA	250,000.00	250,296.68	95 1/4	238,125.00	7.800	19,490.04	7.787
Plantation Pipeline Co., (Exxon Corp., Std. Oil of Calif., & Shell Oil Co., Guarantors), Note, due 10-1-2001	Aaa	AAA	250,000.00	242,712.11	97 7/8	244,687.50	7.875	19,985.94	8.234
Public Service Co. of Indiana, Inc., First Mortgage Bond, due 1-1-2007	Aa	AA	250,000.00	243,492.34	93 1/2	233,750.00	7.625	19,281.86	7.919
Seaboard Coastline R R Co., CSA, due 4-1-82/92	A	A	250,000.00	250,000.00	103 3/8	258,437.50	9.000	22,500.00	9.000
Southern Bell Telephone & Telegraph Co., Deb., due 3-15-2013	Aaa	AAA	250,000.00	225,746.80	94 1/8	235,312.50	7.625	19,739.30	8.744
Standard Oil Co., (California) First Pref. Ship Mtge. Bd., due 7-2-99	Aaa	AAA	150,000.00	150,000.00	101 7/8	152,812.50	8.500	12,750.00	8.500
Standard Oil Co., (Indiana) S/F Deb., due 7-15-2004	Aaa	AAA	150,000.00	152,095.82	107 5/8	161,437.50	9.200	13,722.84	9.022
Stauffer Chemical Co., Deb., due 1-15-2001	A	A	150,000.00	150,000.00	105 1/4	157,875.00	8.850	13,275.00	8.850
Texas Power & Light Co., First Mtge. Bd., due 2-1-2007	Aaa	AAA	250,000.00	249,690.11	100 3/4	251,875.00	8.250	20,635.44	8.264
Union Oil Company of California, Deb., due 3-1-2006	Aa	AA	250,000.00	250,218.85	104 1/4	260,625.00	8.625	21,554.94	8.614
Total Long-Term Corporate Debt Obligations			$5,891,644.42	$5,812,098.12		$5,983,897.18		$507,838.21	8.738%
Intermediate-Term Canadian Governmental Obligations:									
Export Development Corp., Note, due 7-15-81	Aaa	AAA	$ 150,000.00	$ 150,000.00	103 1/4	$ 154,875.00	8.500%	$ 12,750.00	8.500%
Manitoba Hydro-Electric Board, Bond, Series 3J, due 10-1-85	Aa	AA	150,000.00	150,000.00	107 3/8	161,062.50	9.500	14,250.00	9.500
Total Intermediate-Term Canadian Governmental Obligations			$ 300,000.00	$ 300,000.00		$ 315,937.50		$ 27,000.00	9.000%
Long-Term Canadian Governmental Obligations:									
British Columbia Hydro & Power Authority, Bond, due 7-15-96	Aa	AA	$ 150,000.00	$ 150,000.00	104 3/4	$ 157,125.00	9.625%	$ 14,437.50	9.625%
Ontario Hydro, Note, due 3-15-96	Aaa	AA	150,000.00	150,000.00	105 1/4	157,875.00	9.500	14,250.00	9.500
Ontario, Province of, Deb., due 6-15-2005	Aaa	AA	150,000.00	148,209.96	105	157,500.00	9.125	13,751.22	9.278
Total Long-Term Canadian Governmental Obligations			$ 450,000.00	$ 448,209.96		$ 472,500.00		$ 42,438.72	9.468%
Total United States Government Agency, Corporate and Canadian Government Debt Obligations			$7,341,644.42	$7,259,022.30		$7,490,584.68		$633,129.23	8.722%
Total Portfolio including Short-Term Debt Obligations				$7,704,022.30		$7,935.640.92			
Less Accumulated Deferred Yield Adjustments				15,553.06					
Plus Cash and Accrued Income				243,640.11		243,640.11			
Net Portfolio Cost and Market Valuation as Adjusted***				$7,932,109.35		$8,179,281.03			

*Annual income includes accumulation of discounts and amortization of premiums.
**Average yield figures mean annual income as a percentage of amortized cost.
***The unit value on April 29, 1977 and on all dates remains at $5.00; in this particular account, changes in interest rates effect income received on contributions, not the theoretical unit value. Amounts contributed are invested in full, including any fractional portion of unit values.
Abbreviation: ETC — Equipment Trust Certificate; CSA — Conditional Sale Agreement

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMMON STOCKS ELIGIBLE FOR PURCHASE IN STATE RETIREMENT FUNDS

I. UTILITIES

ELECTRIC
*Central & South West
*Cincinnati Gas & Electric
*Commonwealth Edison
*Florida Power & Light
*Houston Industries
*Louisville Gas & Electric
*Middle South Utilities
*Minnesota Power & Light
*Northern States Power
*Pacific Gas & Electric
Public Service of Colorado
*Public Service of Indiana
*Southern California Edison
*Southern Company
*Texas Utilities
Tucson Gas & Electric
*Virginia Electric & Power

GAS
*Houston Natural Gas
*Panhandle Eastern Pipe Line
*Peoples Gas

COMMUNICATIONS
*American Telephone & Telegraph
Communications Satellite
*General Telephone & Electronics
*United Telecommunications

II. FINANCIAL SERVICES

BANKS
*BankAmerica
Bankers Trust
Chase Manhattan
*Citicorp
Citizens & Southern National
*Continental Illinois Corp.
*First Bank System
*First Int'l. Bancshares
First Union Corp.
*Manufacturers Hanover Corp.
*Morgan (J.P.) & Co.
National City (Cleveland)
*Northwest Bancorporation
*Security Pacific Corp.
*Valley National Bank (Arizona)
Wells Fargo
Western Bancorporation

FINANCE
*Beneficial Corp.
*Household Finance Corp.
Investors Diversified Serv. "A"
*MGIC Investment Corp.

INSURANCE
*Aetna Life & Casualty
*Chubb Corp.
*Connecticut General Insurance
CNA Financial Corp.
*INA Corp.
*Jefferson-Pilot
*NLT Corp.
*Northwestern National Life
*SAFECO Corp.
*St. Paul Companies
*Travelers Corp.
*U.S. Fidelity and Guaranty

III. CONSUMER—ORIENTED

AUTOMOBILES AND AUTOMOTIVE PARTS
Chrysler
*Ford Motor
*General Motors
*Genuine Parts
*Goodyear Tire & Rubber

CONSUMER—DURABLES
Carrier Corp.
*Sunbeam
*Whirlpool

CONSUMER—NONDURABLES
*Avon Products
*Clorox
*Colgate-Palmolive
*Eastman Kodak
Economics Laboratory
Gillette
*Minnesota Mining & Manufacturing
Polaroid
*Procter & Gamble
*Revlon

CONSUMER—MISCELLANEOUS
*ARA Services
CBS, Inc.
*Disney (Walt) Productions
*Holiday Inns
*McDonald's Corp.
Tonka Corp.
*Warner Communications, Inc.

DRUGS
*American Home Products
Becton Dickinson
*Johnson & Johnson
*Medtronic
*Merck
*Pfizer, Inc.
*Schering-Plough
Searle (G.D.)
Upjohn
*Warner-Lambert

FOODS—BEVERAGE
*CPC International
Campbell Soup
*Coca-Cola
*Consolidated Foods
*General Foods
*General Mills
Green Giant
*Kraft, Inc.
*Norton Simon
*PepsiCo.
*Pillsbury

PRINTING—PUBLISHING
*Donnelley (R.R.) & Sons
*Dun & Bradstreet
*Harcourt, Brance & Jovanovich
Prentice-Hall

RETAIL SALES
*American Greetings Corp.
*Dayton Hudson
*Federated Department Stores
Great A. & P Tea
*Kresge (S.S.) Company
*Penney (J.C.)
*Sears Roebuck & Co.
*Southland Corp.
Super Valu Stores
Zale Corp.

IV. TECHNOLOGY

ELECTRONICS
*Hewlett-Packard
Texas Instruments

OFFICE EQUIPMENT
*Burroughs
*Control Data
*Digital Equipment
*Honeywell
*International Business Machines
*Xerox

V. BASIC INDUSTRIES

AEROSPACE
*Boeing
*United Technologies Corp.

BUILDING—FOREST PRODUCTS
*Georgia-Pacific
*Masonite
*Owens Corning Fiberglas
*Weyerhaeuser

CHEMICALS
*Air Products & Chemicals
American Cynamid
*Dow Chemical
*du Pont (E.I.) de Nemours
*Hercules
International Minerals & Chemicals
*Monsanto
*Union Carbide

ELECTRICAL EQUIPMENT
*Emerson Electric Co.
*General Electric
*Gould, Inc.
*Westinghouse Electric

MACHINERY
ACF Industries
*Caterpillar Tractor
*Clark Equipment
*Combustion Engineering
General American Transportation
International Harvester
Toro Company
*Trans Union

METALS
*Aluminum Co. of America
Armco Steel
*Hanna Mining
Inland Steel
*Pittston
*St. Joe Minerals Corp.

PAPER
*International Paper
Scott Paper
*Union Camp Corp.

TEXTILES
*Burlington Industries

MISCELLANEOUS
Continental Can
*Corning Glass Works
*International Telephone & Telegraph

VI. ENERGY

OIL—DOMESTIC
*Atlantic Richfield
*Continental Oil
*Louisiana Land & Exploration
*Marathon Oil Co.
*Phillips Petroleum
*Standard Oil (Indiana)
*Standard Oil (Ohio)

OIL—INTERNATIONAL
*Exxon Corp.
*Gulf Oil
*Mobil Oil
*Standard Oil (California)
*Texaco

ENERGY—RELATED
*Baker International
*Dresser Industries
*Halliburton
*Williams Companies

VII. TRANSPORTATION

AIRLINES
American Airlines
*Delta Air Lines
*Northwest Airlines
*UAL, Inc.

RAILROADS
*Burlington Northern
Norfolk & Western
Southern Pacific
*Southern Railway
*Union Pacific Corp.

*These stocks were held in one or more of Minnesota's retirement funds on April 29, 1977; stocks owned and those on the approved list are subject to change at any time.

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