MINNESOTA
STATE
RETIREMENT
SYSTEM

COMPREHENSIVE ANNUAL REPORT
July 1, 1980–June 30, 1981

COMPREHENSIVE ANNUAL FINANCIAL REPORT
of the
MINNESOTA STATE RETIREMENT SYSTEM

July 1, 1980–June 30, 1981

Paul L. Groschen
Executive Director
Minnesota State Retirement System
529 Jackson Street at 10th
St. Paul, MN 55101

MINNESOTA STATE RETIREMENT SYSTEM
COMPREHENSIVE ANNUAL REPORT
FISCAL YEAR ENDED JUNE 30, 1981

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OFFICERS
Paul L. Groschen, Executive Director
Assistant Directors
Douglas Mewhorter
Warren D. Dreyer

MINNESOTA STATE RETIREMENT SYSTEM

No.

529 Jackson at 10th Street St. Paul, Minnesota 55101

Tel. (612) 296-2761

LETTER OF TRANSMITTAL

To the Board of Directors
Minnesota State Retirement System

As prescribed by Minnesota Statutes, Chapter 356, the comprehensive annual report of the Minnesota State Retirement System for the fiscal year ended June 30, 1981, is submitted herewith. Fiscal 1980 figures are included for comparison. This report covers the operation of the funds and plans as indicated below:

- State Employees Retirement Fund
  - General Employees Retirement Plan
  - Military Affairs Retirement Plan
  - Correctional Officers Retirement Plan
- Highway Patrol Retirement Fund
- Judges Retirement Fund
- Unclassified Employees Retirement Plan
- Deferred Compensation Plan

The System also administers two plans which are a part of the State General Fund. Highlights of these plans and the Minnesota Post Retirement Investment Fund (MPRIF) as well as a short description of the 1981 law changes can be found in the General Information section of this report.

Accounting System and Reports

The accrual basis of accounting is used to record assets, liabilities, revenues and expenses. Revenues for the System are taken into account when earned without regard to date of collection, and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Fixed assets are recorded at cost and depreciated through charges to expense over the estimated useful lives of the assets.

Summary annual reports have been sent to all active and retired members of the funds or plans indicated above with a notice that they may receive a copy of this report on request.

Professional Services

The actuarial firm of Touche Ross & Co., represented by John H. Flittie, F.S.A. and Andrea Feshbach, F.S.A. is retained on contract to provide actuarial services for the System. Actuarial valuations must be made annually while experience studies must be made every four years as provided by Minnesota Statutes 356.215. The last experience study was performed as of June 30, 1979.

The actuary's certification letter and required schedules for fiscal 1981 are included in each section to which they apply.

The State Commissioner of Health or his designee is the medical advisor to the System as provided by Minnesota Statutes, 352.03, Subd. 8. It is his responsibility to designate physicians to examine disability applicants, investigate medical statements for disability applicants and report his conclusions and recommendations to the Executive Director.

The Attorney General, represented by Merwin Peterson, is the legal advisor to the System as provided for by Minnesota Statutes 352.03, Subd. 11. There were no litigation proceedings during fiscal 1980, nor are there any pending.

The Legislative Auditor is charged with the responsibility of auditing the books and records of MSRS. His audit opinions for the fiscal year ended June 30, 1981 are included in this report in each section to which they apply.

Administration

Continued effort was made this year to bring the highest quality of service to the covered employees through group retirement presentations, individual counseling in person or by telephone or written correspondence with informational data supplied. A major undertaking in the computerization of a data base to assist us in supplying this information went forward with considerable progress.

Acknowledgements

This report is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship for assets contributed by the members and their employers.

I would like to take this opportunity to express my gratitude to the Board of Directors, staff, the advisors, and to the many people who worked so diligently to assure the successful operation of the System.

Respectfully submitted,

Paul L Groschen

Paul L. Groschen
Executive Director

MINNESOTA STATE RETIREMENT SYSTEM
ADMINISTRATIVE ORGANIZATION
JUNE 30, 1981

BOARD OF DIRECTORS

Francis D. Hage, Chairman
DNR-Division of Lands & Forestry
2223 Selmser Avenue
Cloquet, Minnesota 55720
Telephone 218/879-4544 or 879-8636
Term: March 7, 1978-March 1, 1982
Elected—State Employee

Carolyn Anderson, Vice Chairwoman
University of Minnesota
2226 Arthur St. N.E.
Minneapolis, Minnesota 55418
Telephone 612/373-3991 or 789-9368
Term: March 4, 1980-March 5, 1984
Elected—State Employee

Robert H. Blanck
Department of Transportation
5250 Woodlane Drive
Woodbury, Minnesota 55125
Telephone 612/296-3041 or 459-5304
Term: August 15, 1980—March 1, 1982
Elected—State Employee

Joseph J. Bright
2189 Powers Avenue
St. Paul, Minnesota 55119
Telephone 612/735-6906
Term: March 4, 1980-March 1, 1982
Elected—Retired State Employee

Karl W. Christey
Minnesota State Patrol
565 Wheeler Drive
Excelsior, Minnesota 55331
Telephone 612/482-5902 or 474-6167
Term: March 7, 1978-March 1, 1982
Elected—Highway Patrol Member

Mel Hansen
4505—28th Avenue South
Minneapolis, Minnesota 55406
Telephone 612/722-2182
Term: February 25, 1981—January 7, 1985
Appointed—Public Member

Richard G. Ryan
Metropolitan Transit Commission
2985 Vincent Avenue North
Minneapolis, Minnesota 55411
Telephone 612/379-2914 or 529-2423
Term: March 4, 1980-March 5, 1984
Appointed—MTC/TOD Designate

Lou Wangberg
Lieutenant Governor
2427 Farrington Circle
Roseville, Minnesota 55113
Telephone 612/296-2374 or 482-8344
Term: Co-Terminous with Governors
Appointed—Constitutional Officer

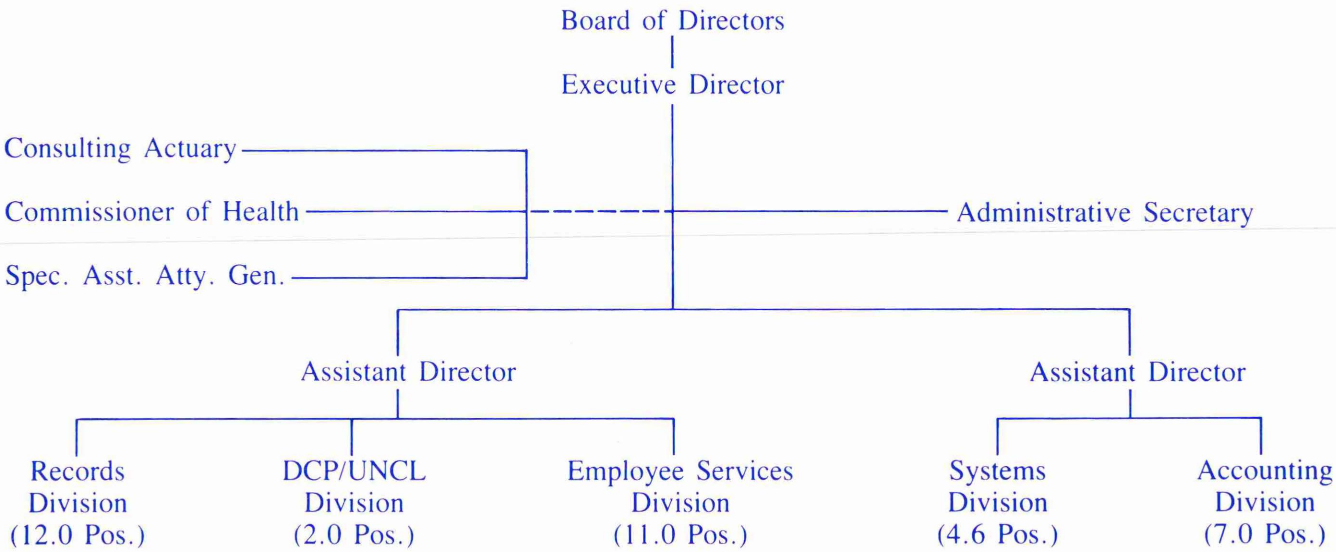
Bernard O. Weber
Department of Transportation
126 Riverside Drive N.E.
St. Cloud, Minnesota 56301
Telephone 612/255-4268 or 251-6766
Term: March 4, 1980-March 5, 1984
Elected—State Employee

Leo D. Wells
1755 Highland Parkway
St. Paul, Minnesota 55116
Telephone 612/690-4949
Term: February 25, 1981—January 2, 1984
Appointed—Public Member

OFFICERS

Paul L. Groschen, Executive Director
Douglas Mewhorter, Assistant Director
Employee Services and Records
Warren D. Dreyer, Assistant Director
Finance and Systems

MINNESOTA STATE RETIREMENT SYSTEM
ORGANIZATION CHART
June 30, 1981



Number of Positions	Unclass.	Class.
Full Time	2.0	37.0
Part Time	.0	.6
Student	1.0	.0
	3.0	37.6

OFFICERS
Paul L. Groschen, Executive Director
Assistant Directors
Douglas Mewhorter
Warren D. Dreyer

MINNESOTA STATE RETIREMENT SYSTEM
No. 529 Jackson at 10th Street St. Paul, Minnesota 55101
Tel. (612) 296-2761

CHAIRMAN'S REPORT

To all Participants
of the
Minnesota State Retirement System

This annual report of the Minnesota State Retirement System again illustrates the continued progress of the financial condition of the system. The State of Minnesota recognizes the important role served by a retirement system in attracting and retaining competent employees, and is committed, as is the Board of Directors, to maintain a sound system.

Through its retirement plans, the State of Minnesota makes promises of future payments to its employees. To assure that these benefits will be paid, actuarial valuations are performed every year, and experience studies every four years, to determine costs and to test the adequacy of the financing.

The Board receives and considers requests for improvement or change in the retirement plans. The Board weighs several factors in determining whether to recommend to the legislature that a benefit should be added; principally need, cost and equity of the proposed provision. As the Board has a responsibility to maintain a sound system, adequate financing for each plan improvement must be a major consideration.

The MSRS Board of Directors experienced three changes during the fiscal year. Mrs. Humphrey resigned from state service and consequently, from the board. Mr. Blanck, a former member of the board, was appointed by the board to complete Mrs. Humphrey's term. Mr. Hansen and Mr. Wells were appointed by the Governor to replace Mr. Farmer and Mr. Thomsen as the Governors appointees.

On behalf of myself, the other members of the Board, and the MSRS staff, I would like to express my thanks to all the System's participants and advisors. We ask for your continued support, so that through a group effort, we may continue to provide a sound and secure retirement future.

Sincerely,

Francis D. Hage

Francis D. Hage
Chairman,
Board of Directors

MINNESOTA STATE RETIREMENT SYSTEM
GENERAL INFORMATION

SECTION
I

1981 LAW CHANGES
MINNESOTA POST RETIREMENT INVESTMENT FUND
LEGISLATORS RETIREMENT PLAN
ELECTIVE STATE OFFICERS RETIREMENT PLAN

1981 LAW CHANGES

OPTIONAL ANNUITY ELECTION

A retiring employee must be provided a written statement summarizing the optional annuities available, a general indication of the consequences of selecting one option over another, a calculation of the reduction which would be required if an option was selected and the procedure to obtain more information. A copy of the written statement must be provided to the spouse of a retiring employee prior to the election of an annuity. Following the election of an annuity, a copy of the completed annuity application must be sent by certified mail to the spouse. (Laws 1981, Chapter 68, Section 29) (Laws 1981, Chapter 156, Section 6)

SHARED POSITIONS

Employees in shared positions covered by the State Employees Retirement Fund or Highway Patrol Retirement Fund are to accrue, retroactively, full service credit for vesting purposes but their benefit is to be computed on a proportional basis. (Laws 1981, Chapter 68, Section 1 and 2)

STATE BOARD OF INVESTMENT

The list of authorized investments was expanded to allow various investments in commingled funds and limited partnerships. In addition, the restriction that a fund could not be invested for more than 50% of its book value in corporate stocks was changed to 75% of the market value including the aggregate value of the above mentioned newly authorized investments. (Laws 1981, Chapter 208, Section 5)

A retiree currently receiving benefits from the MPRIF is to be appointed by the Governor to the Investment Advisory Council. (Laws 1981, Chapter 298, Section 3)

MINNESOTA POST RETIREMENT INVESTMENT FUND

A clarification to the law provided that the required reserves for those participants eligible for an annuity increase in January following the close of a fiscal year need not be adjusted for mortality between the July 1 and January 1 in question. There was also a minor correction setting forth the disposition of the excess investment earnings when the deficiency of the fund is less than the offset required. (Laws 1981, Chapter 208, Section 2)

The distribution of the earnings in excess of the required 5% on required reserves was changed. The amount of excess earnings set aside to amortize any deficiency was reduced from 25% to 5%, thus allowing 95% of the excess earnings to be used to fund benefit increases. (Laws 1981, Chapter 158)

MINNESOTA SUPPLEMENTAL INVESTMENT FUND

A fourth investment account was added to this fund. This new account is a bond account and except for adding a deferred yield adjustment account, it is very similar to the fixed return account. Interest on the bond account is set at a fixed rate for a specified number of years. (Laws 1981, Chapter 208, Section 1)

STATE EMPLOYEES RETIREMENT FUND

An optional form of an annuity is now available for disabilitants at the time their disability benefit begins to accrue. If a disabilitant does not elect an option at that time, he may elect an option at age 65 if in the General Employees Plan or age 62 if in the Correctional Plan. (Laws 1981, Chapter 68, Sections 10-13)

Certain specified buybacks were authorized and are based on the increase in value of the benefit at the time payment is made or on the current contribution rate and salary for the period allowed. Payment is to be by lump sum or in installments plus interest over a period not to exceed three years and must be arranged for by July 1, 1982. The employer or former employer may pay part of the payment within certain restrictions. (Laws 1981, Chapter 297, Section 2)

Five employees who were employed in a covered correctional position on January 1, 1981 and who had service in a security guard classification prior to that time may obtain correctional service coverage for that service in lieu of General Plan coverage upon payment of additional contributions plus interest at 6% per annum compounded annually. The Department of Corrections is also required to make an additional contribution. (Laws 1981, Chapter 297, Section 3 and 4)

Lump sum payments were provided for annuitants in an amount equal to $16 during 1981 and $17 during 1982 for each full year of credited service. The payments are to be made in December of 1981 and 1982. To be eligible, the annuitant must have had his benefit computed under the laws in effect prior to July 1, 1973. MTC/TOD annuitants whose benefit was computed under their prior plan document before December 31, 1977, are also included. These payments are funded by a State General Fund appropriation. (Laws 1981, Chapter 298, Section 1)

The definition of allowable service was modified to include the demonstration job-sharing program. This law also requires that an actuarial valuation exhibit be prepared separately for the Military Affairs Plan. The remainder of the law made some minor language corrections. (Laws 1981, Chapter 224, Section 41-60)

The Military Affairs Plan was modified to include two former employees of the Department of Military Affairs who retired after January 1, 1978, but prior to the effective date of the plan. (Laws 1981, Chapter 319, Section 5)

HIGHWAY PATROL RETIREMENT FUND

An optional form of annuity is now available for disabilitants at the time their disability benefit begins to accrue. If a disabilitant does not elect an option at that time, he may elect an option at age 55. (Laws 1981, Chapter 68, Sections 14, 15)

Lump sum payments were provided for annuitants in an amount equal to $16 during 1981 and $17 during 1982 for each full year of credited service. The payments are to be made in December of 1981 and 1982. To be eligible, the annuitant must have had his benefit computed under the laws in effect prior to June 1, 1973. These payments are funded by a State General Fund appropriation. (Laws 1981, Chapter 298, Section 1)

The name of the fund was changed from the Highway Patrolmen's Retirement Fund to the Highway Patrol Retirement Fund. The remainder of the law made some minor language corrections. (Laws 1981, Chapter 224, Section 61-65)

JUDGES RETIREMENT FUND

A benefit is now provided for the survivors of former judges who have qualified for an annuity but have not yet begun receiving benefits. (Laws 1981, Chapter 319, Section 1)

UNCLASSIFIED EMPLOYEES RETIREMENT PLAN

The Clerk of the Supreme Court was made eligible to participate in this plan retroactively to the date of the initial appointment. Other changes in this law make minor language corrections and clarifications. (Laws 1981, Chapter 224, Sections 68-71)

MINNESOTA POST RETIREMENT INVESTMENT FUND

OWNERSHIP OF THE MPRI FUND

The Minnesota Post Retirement Investment Fund (MPRIF) as provided in M.S. 11A.18 is the investment medium for the reserves set aside to pay benefits to retired public employees. An amount of money determined necessary to fully fund the retirement annuity based on an actuarially estimated life expectancy and an assumption that the monies will earn at a rate of 5%, is transferred to the MPRI Fund at time of retirement by the participating retirement plan. The public retirement funds or plans participating in the Minnesota Post Retirement Investment Fund are the following:

- State Employees Retirement Fund
- Highway Patrol Retirement Fund
- Judges Retirement Fund
- Legislators' Retirement Plan
- State Teachers Retirement Fund
- Public Employees Retirement Fund
- Public Employees Police and Fire Fund

The funds or plans authorized to participate in the MPRIF own an undivided participation in all the assets of the fund. The extent of each fund or plans annual participation is determined by adding to the prior years participation all transfers of funds, interest income and adjustments. The participation shown on the actuarial and accounting balance sheets is equal to the required reserves. Any difference between the two is explained in the footnotes to the accounting statements.

MORTALITY ADJUSTMENT

The actuarial tables used to determine the amount of money transferred to the Minnesota Post Retirement Investment Fund for a retired employee are based on a five percent interest assumption and average life expectancy. If a retired employee lives longer than expected, there is an actuarial loss; if death occurs sooner than anticipated in the tables, there is an actuarial gain.

Since the assets of the Minnesota Post Retirement Investment Fund are owned by several retirement funds, the actuarially determined reserves are adjusted annually for the actual mortality experienced during the year by each participating fund.

The cash transfer for mortality adjustments as of June 30, 1981 were as follows:

Transferred from the MPRIF to MSRS for mortality gains		Transferred from MSRS to the MPRIF for mortality losses	
State Employees	Highway Patrol	Judges	Legislators
$461,252	$177,960	$190,399	$104,552

MPRI FUND ASSETS

The assets of the MPRI Fund increased from $1,122 million at June 30, 1980 to $1,338 million at June 30, 1981. The fixed income and convertible securities are valued at amortized cost while the remaining assets are valued at cost. Up to 50% of the fund may be invested in common stock and convertible debentures.

The MPRIF assets were invested in the type of securities indicated at June 30:

	1981	1980	1979
Common Stock	30.51%	38.56%	43.44%
Fixed Income Securities	47.61%	46.44%	46.25%
Convertible Securities	.00%	.10%	.12%
U.S. Govt. Short Term Securities	16.74%	6.98%	3.90%
Commerical Paper	5.14%	7.92%	6.29%
Total	100.00%	100.00%	100.00%

A 1981 law changes the restriction on common stock investments from 50% of book value to 75% of market value including investments in commingled funds and limited partnerships.

MPRI FUND INCOME

The income to the MPRI Fund includes dividends, interest, accruals and realized capital gains or losses on equities offset by a portion of the balance of the Deferred Yield Adjustment Account which is the unamortized loss on the sale or disposition of debt securities. The account is increased by the loss on the sale of debt securities and decreased by the gain on the sale of such securities with a portion of the balance offset against investment income each year.

Total income to the fund for FY 1981 was $145,381,756. Of this total, $780,326 was added to the FY 1980 deferred income of $31,213,029 to provide the January 1, 1981 increase in benefits. The required earnings of 5% on the required reserves amounted to $58,514,013 leaving a balance of excess investment income in the amount of $86,087,417. Of the excess, $4,304,371 was used to reduce the deficiency of the fund and the remaining $81,783,046 increased by 2½% from FY 1982 income will be used to provide a permanent increase in benefits for those eligible, effective January 1, 1982.

The deficiency of the fund was reduced from $34,065,724 to $32,271,661. The reduction is the result of the 5% of excess income, $4,304,371, offset by the increase in the Deferred Yield Adjustment Account of $2,510,308.

MPRI Fund income distribution to the four participating funds or plans administered by MSRS was as follows:

	State Employees	Highway Patrol	Judges	Legislators
Fiscal 1981 Income				
Distributed To:				
Required Reserves	$10,582,572	$ 854,667	$205,201	$135,904
Deficiency	341,177	33,639	1,992	4,180
Undistributed	14,396,044	1,161,652	267,723	162,891
Total	$25,319,793	$2,049,958	$474,916	$302,975
Fiscal 1980 Income				
Distributed To:				
Required Reserves	$9,062,607	$ 663,194	$171,613	$104,999
Deficiency	2,442,283	242,492	14,345	30,096
Undistributed	5,546,186	456,019	95,457	65,647
Total	$17,051,076	$1,361,705	$281,415	$200,742

BENEFIT ADJUSTMENTS

An increase in benefit payments is possible on January 1 following the close of the fiscal year for those participants whose benefit began to accrue at least one year prior to the close of the fiscal year. The increase is dependent upon the income of the fund.

If the fund earned more than the 5% on the required reserves, then any excess may be used for increased benefits. However, if there is a deficiency in the fund, then 5% (25% for FY 80) of the excess income is withheld to gradually eliminate the deficiency. The remaining 95% (75% for FY 80) of the excess income increased by 2½% is then available for increased benefits on January 1 following the close of the fiscal year. The resulting dollar amount is then divided by the total present value of benefits of all participating funds or plans for those eligible participants to determine a percentage amount to increase benefits.

There was income in excess of the 5% required for the fiscal year ended June 30, 1981 so those participants whose benefit began to accrue prior to July 1, 1980 will receive a 7.436% increase in benefits beginning January 1, 1982. The MPRI Fund provided a 3.209% increase on January 1, 1981 for those participants whose benefit began to accrue prior to July 1, 1979.

MPRI FUND DEFICIENCY

If the required reserves, as determined by the actuary, as of June 30 are greater than the book value of the assets of the fund, a deficiency exists. If the income to the fund exceeds the 5% required, then 5% (25% for FY 80) of the excess is used to gradually eliminate this deficiency. Such was the case this past fiscal year.

The actuarially determined reserve requirement for annuities in force on June 30, 1981 for the funds or plans administered by MSRS exceeded their share of the MPRI Fund assets as of June 30:

	State Employees	Highway Patrol	Judges	Legislators
Reserve Requirement	$230,426,989	$19,121,181	$4,904,840	$3,611,823
MPRIF Participation	224,289,960	18,515,976	4,869,044	3,536,713
Deficiency	$ 6,137,029	$ 605,205	$ 35,796	$ 75,110

LEGISLATORS RETIREMENT PLAN

The Legislators Retirement Plan is a defined benefit plan covering the legislators, spouses and children. The plan is administered in accordance with Chapter 3A of Minnesota Statutes. The plan is a part of the State General Fund and accordingly is reported as a part of that fund. The administration of the plan is vested with MSRS.

The retired legislators participate in the MPRI Fund and their benefits are funded on a terminal funding basis. The spouses and children do not participate in the MPRIF and their benefits as well as other expenses of the plan are on a pay-as-you-go basis.

There are 201 legislators who are required by statute to contribute 9% of salary towards their retirement. During FY 1981, their contributions amounted to $329,060 leaving a net balance of accumulated contributions of $1,541,207. Their contributions are deposited and credited to the State General Fund.

During FY 1981, the state contributed $1,642,000 of which $173,491 represented legislators contributions. There were 13 legislators that took a refund of their accumulated contributions amounting to $48,778. Surviving spouse and children benefits totaled $55,118 while administrative costs amounted to $25,337. The present value of benefits which was transferred to the MPRIF for the legislators that retired during the year amounted to $1,428,351 of which $124,713 represented legislators contributions. The remaining $84,416 was transferred to the MPRI Fund for reserve strengthening and mortality loss.

There was $363,437 paid in benefits to retired legislators from the MPRI Fund during FY 81. Two retired legislators died during the year leaving 86 retired legislators at June 30, 1981 receiving an average monthly benefit of $404.37. There were 23 spouses and 15 children receiving an average monthly benefit of $182.20 and $86.44 respectively, at June 30, 1981.

ELECTIVE STATE OFFICERS RETIREMENT PLAN

The Elective State Officers Retirement Plan is a defined benefit plan covering the elected non-legislative officers, spouses and children in accordance with Chapter 352C of Minnesota Statutes. The plan is a part of the State General Fund and accordingly, is reported as a part of that fund. The administration of the plan is vested with MSRS.

There are six elected officers who are required by statute to contribute 9% of salary towards their retirement. Their contributions are deposited and credited to the State General Fund. All funds necessary for the administration of the plan are appropriated as needed.

During FY 1981, the elected officers contributed $24,446, leaving a total net accumulated contributions of $162,356 at June 30, 1981. Benefits paid to the retired elected officers totaled $67,602 during FY 1981 while survivor benefits totaled $18,204 and administrative expenses were $1,178.

There were six retired elected officers at June 30, 1981 receiving an average monthly benefit of $938.92. There were three spouses receiving benefits at June 30, 1981 for an average monthly benefit of $505.65.

MINNESOTA STATE RETIREMENT SYSTEM
STATE EMPLOYEES RETIREMENT FUND

SECTION
II

FINANCIAL
STATISTICAL
ACTUARIAL

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
Veterans Service Building
St. Paul, Minnesota 55155

GERALD W. CHRISTENSON
Legislative Auditor

(612) 296-4708

Francis D. Hage, Chairman
Board of Directors
Minnesota State Retirement System

and

Paul L. Groschen, Executive Director
Minnesota State Retirement System

We have examined the Accounting Balance Sheet of the State Employees Retirement Fund as of June 30, 1981 and 1980, and the related Statements of Revenues and Expenditures for the fiscal years then ended and the Statement of Changes in Reserve Accounts for the fiscal year ended June 30, 1981, all of which are presented in the Financial portion of this section. We have also examined the Chapter 356 Balance Sheet and the Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981 and the related Analysis of Income and Deduction's From Income and Effect on the Unfunded Accrued Liability for the fiscal year then ended, all of which are presented in the Actuarial portion of this section. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The reserves required for the fund, totaling $861,658,302 and $767,247,161 at June 30, 1981 and 1980, respectively, are presented in accordance with reports certified by the consulting actuary of the system.

In our opinion, the aforementioned financial statements in the Financial portion of this section fairly present the financial position of the State Employees Retirement Fund as of June 30, 1981 and 1980, and the results of operations for the fiscal years then ended and the changes in its reserve accounts for the fiscal year ended June 30, 1981, in conformity with generally accepted accounting principles (GAAP) applied on a consistent basis after restatement for the changes, with which we concur, in the format of the fiscal year 1980 financial statements as described in footnote 1 (i) of the financial statements. In addition, relying on the certification from the consulting actuary as to the required reserves, the aforementioned financial statements in the Actuarial portion of this section fairly present the financial position of the State Employees Retirement Fund as of June 30, 1981 and the results of operations for the fiscal year then ended in accordance with Minn. Stat. Section 356.20 applied on a consistent basis.

The Schedule of Operating Expenses and the Statement of Changes in Investments for the fiscal years ended June 30, 1981 and 1980, are presented for supplementary analysis purposes and are not necessary for the fair presentation of the financial statements of the State Employees Retirement Fund in conformity with GAAP. These schedules have been subjected to the tests and other audit procedures applied in the examination of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the respective fund financial statements taken as a whole.

The accompanying supplemental information in the Statistical and Actuarial portions of this section is not necessary for a fair presentation of the financial statements in conformity with GAAP. This information has not been subjected to sufficient audit procedures and tests to express, and we do not express, an opinion on this supplemental information.

Sincerely,

Gerald W. Christenson

Gerald W. Christenson
Legislative Auditor

January 15, 1982

ACCOUNTING BALANCE SHEET
JUNE 30, 1981 AND 1980

ASSETS	1981	1980
Cash in State Treasury	$ (2,455.07)	$ (6,258.76)
Cash in bank (imprest cash)	149.76	200.00
Short term investments (at cost)[2]	72,694,560.75	61,820,857.78
Accounts receivable		
a) Accrued employee contributions	980,932.31	854,747.34
b) Accrued employer contributions	1,564,844.69	1,357,145.38
c) Employee buybacks	200,802.79	210,612.91
d) Other	471.56	2,526.40
Due from other plans	120,534.75	60,831.95
Due from the MPRI Fund	461,789.94	239.20
Accrued interest on investments	7,121,893.83	4,296,131.69
Dividends declared and payable, not yet received	773,093.26	799,008.24
Investment in debt securities at amortized cost[2]	192,893,073.10	144,824,652.50
Investment in GNMA's at amortized cost[2]	20,384,081.69	20,936,277.50
Investment in equities at cost[2]	143,908,168.08	139,620,478.79
Equipment at depreciated cost	20,918.06	23,811.52
Deferred Yield Adjustment Account	4,511,134.59	3,527,951.07
Participation in the MPRI Fund[3]	230,426,989.00	205,104,321.00
Total Assets	$676,060,983.09	$583,433,534.51

LIABILITIES AND RESERVES

Liabilities	1981	1980
Accounts Payable		
a) Security purchases	$ 388,182.37	$ 3,224,061.71
b) Annuities	226.26	1,805.40
c) Annuitant deposits	1,146.48	6,387.28
d) Accrued expenses	90,273.97	86,272.35
e) Overpaid dividends	0.00	1,785.00
Due To Unclassified Retirement Plan	286,150.90	166,163.71
Due To MPRI Fund	67,324.55	10,771,901.20
Due To General Fund	540.00	0.00
Total Liabilities	$ 833,844.53	$ 14,258,376.65
Reserves		
Minnesota Post Retirement Investment Fund reserve[3]	$230,426,989.00	$205,104,321.00
Survivor benefit reserve	197,897.00	228,240.00
Employee contribution reserve	153,317,649.12	136,370,227.75
State contribution reserve	291,284,603.44	227,472,369.11
Total Reserves	$675,227,138.56	$569,175,157.86
Total Liabilities and Reserves	$676,060,983.09	$583,433,534.51

The footnotes are an integral part of the financial statements.

STATEMENT OF REVENUE AND EXPENDITURES
FOR FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

REVENUES	1981	1980
From Employees		
Employee contributions	$ 27,301,889.02	$ 24,813,907.11
Employee accrued contributions receivable	980,932.31	854,747.34
Employee buybacks	41,770.83	53,152.60
From Employers		
Employer contributions	27,840,757.51	24,961,874.01
Employer additional contributions	15,633,332.35	14,616,051.97
Employer accrued contributions receivable	1,564,844.69	1,357,145.38
From Investments		
Interest on short term, GNMA's and debt securities	25,241,336.31	17,481,714.08
Dividends on corporate stock	8,402,903.51	8,232,253.01
Gain on sale of stock	15,932,242.04	5,452,425.17
Interest on back payments by employees	137,570.92	151,256.78
From MPRI Fund Participation		
Participation in MPRI Fund income[4]	16,267,413.28	9,062,607.13
Other Revenues		
Miscellaneous	44,770.62	11,155.81
Total Revenues	$139,389,763.39	$107,048,290.39
EXPENDITURES		
Benefits		
Service retirement annuities	$ 22,374,035.24	$ 20,440,425.86
Disability retirement annuities	1,450,559.19	1,286,140.58
Survivor benefits (spouses)	22,787.49	26,883.78
Refunds		
Left service	6,119,720.04	6,409,056.37
Employee deaths	372,340.70	375,953.92
Annuitant deposits	65,239.75	75,375.47
Erroneous deductions	28,624.69	36,895.86
Interest on refunds	287,886.17	265,783.12
Operating Expenses		
Administrative expenses (Exhibit A)	1,335,410.13	1,063,474.15
Loss on disposition of assets	452.19	2,186.67
Write off uncollectible accounts	0.00	65.29
Interest expense on mortality adjustment	0.00	17,354.83
Interest expense on lump sum cancellation[5]	125,218.97	0.00
Miscellaneous	0.00	524.50
Total Expenditures	$ 32,182,274.56	$ 30,000,120.40
Excess of Revenues Over Expenditures	$107,207,488.83	$ 77,048,169.99
OTHER FINANCING SOURCES (USES)		
Transfers from other funds/plans	$ 236,010.91	$ 2,803,771.30
Lump sum payments[5]	(1,252,020.00)	(1,330,155.00)
Supplemental payments[6]	(60,546.00)	(68,962.00)
Transfers to other funds/plans	(79,186.12)	(673,441.70)
Total Other Financing Sources (Uses)	$ (1,155,741.21)	$ 731,212.60
Excess of Revenues and Other Sources Over Expenditures and Other Uses	$106,051,747.62	$ 77,779,382.59

The footnotes are an integral part of the financial statements.

CHANGES IN RESERVE ACCOUNTS
FISCAL YEAR ENDED JUNE 30, 1981

	Total Reserves	Reserve for Employee Contributions	Reserve for Survivor Benefits	Reserve for Participation in MPRI Fund	Reserve for State Contributions
Balances at June 30, 1980	$569,175,157.86	$136,370,227.75	$ 228,240.00	$205,104,321.00	$227,472,369.11
Prior period adjustment:	233.08	93.23			139.85
Revised Balances	$569,175,390.94	$136,370,320.98	$ 228,240.00	$205,104,321.00	$227,472,508.96
Reserves increased by:					
Employee contributions	28,324,592.16	28,324,592.16			
Employer contributions	45,038,934.55				45,038,934.55
Investment income	49,576,481.86				49,576,481.86
Interest on buybacks	137,570.92				137,570.92
Income from MPRIF part.	16,267,413.28			16,267,413.28	
Trsfd from Unclassified Plan	175,464.91	57,458.10			118,006.81
Trsfd from General Fund	60,546.00				60,546.00
Miscellaneous	44,770.62			3,634.24	41,136.38
	$708,801,165.24	$164,752,371.24	$ 228,240.00	$221,375,368.52	$322,445,185.48
Reserves decreased by:					
Benefits paid	(23,847,381.92)		(22,787.49)	(23,824,594.43)	
Refunds paid	(6,585,925.18)	(6,520,685.43)		(65,239.75)	
Interest paid on refunds	(287,886.17)				(287,886.17)
Interest expense—lump sum	(125,218.97)				(125,218.97)
Lump sum payments	(1,252,020.00)				(1,252,020.00)
Supplemental payments	(60,546.00)				(60,546.00)
Trsfd to General Fund	(48,060.00)				(48,060.00)
Trsfd to Unclassified Plan	(31,126.12)	(7,711.46)			(23,414.66)
Administrative expense (net)	(1,335,862.32)				(1,335,862.32)
	$675,227,138.56	$158,223,974.35	$ 205,452.51	$197,485,534.34	$319,312,177.36
Transfers between reserves:					
Inactive employee contributions transferred to the fund	0.00	(50,731.19)			50,731.19
Acturial value of benefits authorized	0.00	(4,855,594.04)		33,402,706.41	(28,547,112.37)
Survivor benefit reserve adjustment	0.00		(7,555.51)		7,555.51
Mortality gain adjustment	0.00			(461,251.75)	461,251.75
Balances at June 30, 1981	$675,227,138.56	$153,317,649.12	$ 197,897.00	$230,426,989.00	$291,284,603.44

The footnotes are an integral part of the financial statements.

Notes to the Financial Statements

1. Summary of Significant Accounting Policies

(a) Administration of System

The State Employees Retirement Fund is a statewide retirement fund for most state employees, administered in accordance with Chapter 352 of Minnesota Statutes. Encompassed within the fund are three plans; the General Employees Retirement Plan, the Correctional Officers Retirement Plan and the Military Affairs Plan.

(b) Employee Contributions

Employee contributions are established by statute at 4% of total compensation for the General Employees Plan, 5% for the Military Affairs Plan and 6% for the Correctional Officers Plan, and are deducted from the employee's salary and remitted by the employers. The Employee Contribution Reserve represents employee contributions less amounts transferred to reserves for retirement and disability or refunded.

(c) Employer Contributions

Employer contributions for the General Employees Plan are set by statute at 4% of total compensation plus an additional 2% to amortize past fund deficit. For the Military Affairs Plan the contributions are 5% plus an additional 2% and for the Correctional Officers Plan the contributions are 9% plus an additional 5%.

The Metropolitan Transit Commission/Transit Operating Division (MTC/TOD) pays an additional 3.8% of salary to fund an additional unfunded deficit which was created when their employees were transferred to the General Employees Plan on July 1, 1978. If their payroll increases at the statutory assumed rate of 3½% per year and the additional unfunded deficit remains the same, the balance of $3,550,866 due at June 30, 1981 will be paid in about two years.

(d) Actuarial Valuations

Actuarial valuations are done yearly and experience studies are done every four years. The last completed experience study was as of June 30, 1979. The entry age normal method, a projected benefit cost method, is used to value the fund with contributions being made as a level percentage of covered employee salaries.

(e) Benefit Reserves

The Minnesota Post Retirement Investment Fund (MPRIF) Reserve and the Participation in the MPRIF are equal to the retirement funds required reserves for retired lives. The Survivor Benefit Reserve represents the required reserve for those under an old law survivor benefit provision which is no longer in the law.

(f) Investments

Stock and short-term investments are reflected on the balance sheet at cost. Fixed income investments are reflected on the balance sheet at adjusted amortized cost. Income is recognized over the life of the investment. The cost of investments sold is determined using the original cost for stock and amortized cost for debt securities. Dividend income is recognized based on the payable date for dividends declared.

(g) Equipment and Fixtures

Equipment and fixtures are capitalized at the time of acquisition. Depreciation is computed on the straight line method over the estimated useful life of the asset.

(h) Basis of Accounting

The basic financial statements were prepared using the accrual basis of accounting.

(i) The fiscal year 1980 Accounting Balance Sheet and Statement of Revenues and Expenditures are changed from the prior financial statement due to accrual changes and a change in recognition of certain liabilities and revenues. The assets are reduced by a net of $5,878 and the liabilities are reduced by a net of $15,169. This results in a net increase in the State contribution reserve and total reserves of $9,291.

2. Market Value	June 30, 1981	June 30, 1980
Equities	$165,639,743	$153,175,726
Debt securities (including G.N.M.A.)*	162,006,470	144,365,592
Short term investments*	75,636,693	62,908,161
Total	$403,282,906	$360,449,479

*Some securities are loaned out to generate additional income of 0.5%. Securities on loan were $11,900,000 on June 30, 1981, and $8,000,000 on June 30, 1980 with collateral of 105% of its market value.

3. The retirement funds actual participation in the net assets of the MPRIF at June 30, 1981 was $224,289,960 or $6,137,029 less than the required reserves. The deficiency is part of the MPRIF and is funded by earnings in excess of the 5% required. The funds actual participation at June 30, 1980 was $198,626,114 or $6,478,206 less than the required reserves.

4. MPRI Fund Income	FY 1981	FY 1980
Total income	$25,458,448	$17,051,076
Deferred from prior year	5,546,186	-0-
Total available	$31,004,634	$17,051,076
Used for deficiency	341,177	2,442,283
Deferred to next F.Y.	14,396,044[a]	5,546,186[b]
Recognized	$16,267,413	$ 9,062,607

[a]To fund a 7.436% benefit increase effective January 1, 1982.
[b]To fund a 3.209% benefit increase effective January 1, 1981.

5. The lump sum payments for the pre July, 1973 annuitants for FY 1981 and 1980 were funded by a General Fund appropriation of $2,630,745 which was transferred to the retirement fund in December, 1979. The appropriation law required the retirement fund to pay interest on that portion of the appropriation that was held until it was used or cancelled. The payments were made in December, 1979 and 1980 and the balance of appropriation was cancelled in January, 1981. This resulted in an interest expense of $125,219.

6. Annuitants who were receiving benefits at June 30, 1963 with at least 20 years of service have been entitled to supplemental benefits since July 1, 1967. Those who did not have social security coverage are entitled to $18 a month and those that did have social security coverage are entitled to $10 a month. These benefits are funded by the States General Fund.

7. Subsequent Event

   Employee, employer and employer additional contributions were reduced for the General Employees, Military Affairs and Correctional Officers Plans beginning with the first full payperiod after December 31, 1981. The full impact of the reduction in funding cannot be determined until after the F.Y. 1982 actuarial valuation has been performed.

EXHIBIT A—OPERATING EXPENSES
FOR FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

	1981	1980
Personal Services		
Staff salaries	$ 673,015.92	$ 597,236.50
Social Security	40,944.70	34,105.87
Retirement	39,777.07	34,938.02
Insurance	39,961.44	35,022.33
Tuition	40.00	378.00
Total Personal Services	$ 793,739.13	$ 701,680.72
Professional Services		
Actuarial	$ 53,432.00	$ 59,625.00
Data processing		
System development	475,771.21	284,662.16
System operations	99,640.72	88,770.32
Audit	59,002.58	16,808.92
Disability examinations	19,374.05	16,928.30
Legal counsel	9,727.80	4,369.71
Investment expense	0.00	1,363.11
Total Professional Services	$ 716,948.36	$ 472,527.52
Communication		
Printing	$ 55,228.46	$ 23,843.86
Telephone	6,889.05	5,215.58
Postage	32,970.86	31,860.92
Travel	9,110.49	7,673.91
Subscriptions and memberships	1,001.75	887.65
Total Communication	$ 105,200.61	$ 69,481.92
Rentals		
Office Space	$ 34,276.90	$ 34,587.50
Equipment leasing	1,560.00	1,356.32
Total Rentals	$ 35,836.90	$ 35,943.82
Miscellaneous		
Utilities	$ 5,194.08	$ 4,531.22
Supplies	10,455.15	9,325.22
Repairs	1,858.21	2,009.15
Department Head and Board Member expense	2,013.95	1,626.20
Depreciation	12,367.23	3,045.07
State indirect cost	14,756.00	15,696.00
Other purchased services	6,274.96	1,150.51
Total Miscellaneous	$ 52,919.58	$ 37,383.37
Total Operating Expenses	$1,704,644.58	$1,317,017.35
Expense attributable to other plans		
Highway Patrol Fund	$ 52,646.00	$ 32,290.01
Judges Retirement Fund	34,077.95	11,386.58
Legislators Retirement	25,336.75	9,052.30
Elected Officials	1,178.25	409.80
Deferred Compensation	208,095.17	159,720.87
Unclassified Employees	47,900.33	40,683.64
Total distribution to other plans	$ 369,234.45	$ 253,543.20
Balance attributable to the SER Fund	$1,335,410.13	$1,063,474.15

CHANGES IN INVESTMENTS
FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

	1981	1980
CORPORATE STOCK (At Cost)		
Balances at June 30, P.Y.	$139,620,478.79	$136,479,812.59
Add: Purchases	73,142,115.22	29,699,866.28
	$212,762,594.01	$166,179,678.87
Deduct: Frac. & stock dividends sold	16.77	49.72
Stock Sold	68,854,409.16	26,559,150.36
Balances at June 30, C.Y.	$143,908,168.08	$139,620,478.79
Current Yield	5.1%	5.2%
Market value at June 30, C.Y.	$165,639,742.89	$153,175,726.14
DEBT SECURITIES (Par Value)		
Balances at June 30, P.Y.	$167,174,481.97	$143,913,647.19
Purchases	95,800,000.00	29,501,067.12
	$262,974,481.97	$173,414,714.31
Deduct: Maturities and calls	3,001,617.11	3,740,232.34
Debt securities sold	28,568,833.58	2,500,000.00
Balances at June 30, C.Y.*	$231,404,031.28	$167,174,481.97
Avg. Yield to Maturity	10.40%	9.14%
Book Value	$213,277,154.79	$165,760,930.00
Estimated Market Value	$162,006,469.90	$144,365,592.48
SHORT TERM INVESTMENTS (At Cost)		
Balances at June 30, P.Y.	$ 61,820,857.78	$ 24,296,275.28
Add: Purchases	940,854,776.03	434,280,389.94
	$1,002,675,633.81	$458,576,665.22
Deduct: Redemptions	929,981,073.06	396,755,807.44
Balances at June 30, C.Y.	$ 72,694,560.75	$ 61,820,857.78
*Distribution of Debt Securities:		
Municipals	$ 571,000.00	$ 812,000.00
U.S. Govt. Agency & Govt. Guar.	60,054,962.40	38,014,328.50
Canadian Govt. & Govt. Guar.	23,750,000.00	23,785,000.00
Corporate Obligations	147,028,068.88	104,563,153.47
	$ 231,404,031.28	$167,174,481.97

RETURN ON INVESTMENTS

In Minnesota, insurance companies calculate earnings using the following formula:

$$\frac{2I}{A+B-I}$$

where, I = Net investment income
A = Sum of invested assets, cash, accrued interest and dividends at the beginning of the year
B = Same as A except sum is at the end of the year

Earnings for the last four years were calculated using the above formula, modified to include the Deferred Yield Adjustment Account in the beginning and ending assets. Income on investments is accounted for on an accrual basis and includes interest on bonds (adjusted for amortization of premiums and accumulation of discounts), interest on short term investments, dividends on corporate stock, premium on bonds called and the sum of these adjusted for amortization of the deferred yield adjustment account. The deferred yield adjustment account represents the capitalized losses on bond sales to be written off against income over the remaining life of the bonds sold.

Earnings	**1981**	**1980**	**1979**	**1978**
Excluding gain on stock sales	8.58%	7.76%	6.86%	6.14%
Including gain on stock sales	12.90%	9.49%	7.10%	6.38%

DISTRIBUTION OF INVESTMENTS

The law provides that the aggregate of equity type investments (stocks, convertible issues, investments in commingled funds and investments in limited partnerships) cannot exceed 75% of the total invested assets at market value at any time.

The funds assets were invested at market as follows at June 30:

Bonds	**1981**	**1980**	**1979**	**1978**
Government				
U.S. Government	12.1%	9.8%	6.4%	8.2%
Canadian Government	3.9%	5.6%	7.4%	7.9%
Municipal	.1%	.2%	.4%	.8%
Total Government	16.1%	15.6%	14.2%	16.9%
Corporate				
Public Utilities	8.9%	3.1%	4.2%	5.3%
Financial	5.0%	5.7%	6.5%	6.0%
Industrial	8.2%	12.4%	15.3%	14.6%
Transportation	1.9%	3.2%	4.0%	4.3%
Total Corporate	24.0%	24.4%	30.0%	30.2%
Total Bonds	40.1%	40.0%	44.2%	47.1%
Short Term Investments	18.8%	17.5%	8.2%	4.4%
Equities[1]	41.1%	42.5%	47.6%	48.5%
Total Portfolio (%)	100.0%	100.0%	100.0%	100.0%
Total Portfolio (Millions $)	$403.3	$360.5	$300.0	$239.7

[1]Investments in commingled funds and limited partnerships were authorized by the 1981 legislature. There were no investments of this type at June 30, 1981. Convertible issues represent less than .05% at each fiscal year end.

SCHEDULE OF REVENUE BY SOURCE

Year Ending	Employee Contributions	Employer Contributions	Investment Income	Miscellaneous	Total
6-30-72	$ 7,721,856	$10,261,195	$10,754,457	$ 319	$ 28,737,827
6-30-73	8,648,559	11,531,159	14,376,714	723	34,557,155
6-30-74	12,278,882	18,864,384	11,487,006	1,012	42,631,284
6-30-75	14,634,281	22,459,969	11,697,401	1,960	48,793,611
6-30-76	16,771,281	25,785,186	13,852,593	4,592	56,413,652
6-30-77	18,316,117	28,080,209	23,653,136	2,217,806[1]	72,267,268
6-30-78	20,450,119	31,426,248	22,312,348	1,403	74,190,118
6-30-79	23,228,656	36,966,944	29,339,452	21,245,704[2]	110,780,756
6-30-80	25,442,110	40,650,797	40,424,477	2,745,965[3]	109,263,349
6-30-81	28,316,881	45,027,367	65,933,604	220,236	139,498,088

[1]State General Fund appropriation to fund a 4% benefit increase effective 1-1-78
[2]Transfer of assets and liabilities from the Metropolitant Transit Commission retirement plan to the General Plan.
[3]State General Fund appropriation to fund lump sum benefits for pre 7-1-73 retirees.

SCHEDULE OF EXPENSES BY TYPE

Year Ending	Aggregate Benefit Payments: Annuities	Disabilities	Refunds	Interest	Admin. Expense	Miscellaneous	Total
6-30-72	$ 5,305,418	$ 187,435	$2,209,588	$110,600	$ 446,124	$ 0	$ 8,259,165
6-30-73	5,901,290	222,041	2,469,715	67,543	441,493	0	9,102,082
6-30-74	8,649,174	312,080	2,793,105	132,034	461,848	0	12,348,241
6-30-75	11,152,822	400,201	3,108,967	143,978	551,892	0	15,357,860
6-30-76	13,279,774	510,946	2,904,458	175,585	676,331	0	17,547,094
6-30-77	14,523,069	642,792	3,985,695	191,106	721,493	0	20,064,155
6-30-78	15,942,445	746,625	4,237,578	197,124	910,926	0	22,034,698
6-30-79	19,143,247	1,201,406	5,864,072	234,401	1,041,312	0	27,484,438
6-30-80	21,797,465	1,286,141	6,897,282	375,253	1,063,439	20,131[1]	31,439,711
6-30-81	23,648,844	1,450,559	6,585,925	299,733	1,335,426	125,671[2]	33,446,158

[1]Interest expense on mortality adjustment: $17,355
[2]Interest expense on excess General Fund appropriation: $125,219

SUMMARY DATA FOR THE FISCAL YEAR ENDED JUNE 30, 1981

ACTIVE EMPLOYEES	Number Beg. of Yr.	Increases New	Decreases Refunds	Decreases Annuities	Decreases Disabilities	Decreases Inactive	Decreases Death	Net Transfers	Number At End Of Year Total	Number At End Of Year Vested	Number At End Of Year Non-Vested	Average Accumulated Contributions
General Plan	46,242	8,586	5,564	624	63	1,743	85	(86)	46,663	14,546	32,117	$3,089
Correctional Plan	990	163	104	21	2	11	1	(49)	965	236	729	4,758
Mil. Aff. Plan	0	0	1	1	0	0	0	8	6	2	4	5,318
Total	47,232	8,749	5,669	646	65	1,754	86	(127)	47,634	14,784	32,850	$3,121

INACTIVE EMPLOYEES	Number Beg. of Yr.	Increases From Active	Increases Transfer	Decreases To Active	Decreases To Annuity	Decreases To Refunds	Decreases To Retirement Fund	Number At End of Year Total	Number At End of Year Vested	Number At End of Year Non-Vested	Average Accumulated Contributions
General Plan	4,286	1,743	115	193	64	700	574	4,613	793	3,820	$ 758
Correctional Plan	22	11	25	0	1	14	0	43	5	38	1,648
Mil. Aff. Plan	0	0	0	0	0	0	0	0	0	0	0
Total	4,308	1,754	140	193	65	714	574	4,656	798	3,858	$ 766

ANNUITANTS	Number Beg. of Yr.	Increases New	Increases Re-instate	Decreases Deaths	Decreases Rescinded	Net Transfers	Number End of Yr.	Averages: All Annuitants on June 30 Age	Service	Monthly Benefit	Averages: New in Fiscal Year 1981 Age	Service	Monthly Benefit
General Plan	8,617	756	12	386	1	(2)	8,996	73.0	22.0	$198	63.3	19.9	$281
Correctional Plan	250	24	0	7	0	0	267	63.5	19.5	416	57.4	18.5	578
Mil. Aff. Plan	0	1	0	0	0	2	3	61.9	26.4	747	60.7	26.2	646
Total	8,867	781	12	393	1	0	9,266	72.7	21.9	$204	63.1	19.9	$291

DISABILITANTS	Number Beg. of Yr.	Increases New	Increases Re-instate	Decreases Deaths	Decreases Rescinded	Number End of Yr.	Averages: All Disabilitants on June 30 Age	Service	Monthly Benefit	Averages: New In Fiscal Year 1981 Age	Service	Monthly Benefit
General Plan	626	69	0	48	8	639	64.9	18.2	$181	58.7	16.9	$234
Correctional Plan	7	2	0	1	0	8	54.6	15.7	274	49.1	13.4	428
Mil. Aff. Plan	0	0	0	0	0	0	—	—	0	—	—	0
Total	633	71	0	49	8	647	64.8	18.2	$182	58.4	16.8	$239

REFUNDS*	Number of Refunds Male	Number of Refunds Female	Number of Refunds Total	Average Age of Member Male	Average Age of Member Female	Average Years of Service Forfeited Male	Average Years of Service Forfeited Female	Number of Refunds With Interest	Number of Members Forfeiting Vested Rights
General Plan	1960	4259	6219	32.3	30.7	1.8	1.8	1547	150
Correctional Plan	82	19	101	31.7	32.5	2.1	2.1	25	3
Mil. Aff. Plan	1	0	1	31.2	—	2.5	—	0	0
Total	2043	4278	6321	32.3	30.7	1.8	1.8	1572	153

*Refunds for 'Deductions in Error' are not included in this section.

EMPLOYEES ELIGIBLE TO AN IMMEDIATE ANNUITY ON JUNE 30, 1981

GENERAL EMPLOYEES RETIREMENT PLAN

	Male	Female	Total
Full Benefit	232	175	407
Reduced Benefit Due To Early Retirement	1,030	621	1,651
Full Benefit (MTC/TOD Savings Clause)	30	0	30
Reduced Benefit Due To Service Less Than 30 Years (MTC/TOD Savings Clause)	166	10	176
Proportional Benefit (Age Equal To Or Greater Than 65, Service Less Than 10 Years)	64	65	129
Subtotals	1,522	871	2,393
Employees Not Eligible to Immediate Benefit	20,696	23,574	44,270
Totals	22,218	24,445	46,663

CORRECTIONAL OFFICERS RETIREMENT PLAN

	Male	Female	Total
Full Benefit	38	6	44
Employees Not Eligible to Immediate Benefit	818	103	921
Totals	856	109	965

MILITARY AFFAIRS RETIREMENT PLAN

	Male	Female	Total
Full Benefit	0	0	0
Employees Not Eligible to Immediate Benefit	6	0	6
Totals	6	0	6

ANNUITY & DISABILITY DEATHS

GENERAL EMPLOYEES RETIREMENT PLAN

Year	Average Age At Death				Average Years of Retirement				Number of Deaths		Percent of Members Who Received More In Annuity Payments Than They Had Contributed		Ratio Of Annuity Payments/Contributions For Deceased Service Annuitants*
	Annuity		Disability		Annuity		Disability						
Ending	Male	Female	Male	Female	Male	Female	Male	Female	Annuity	Disability	Annuity	Disability	
6-30-72	76.3	76.4	63.3	55.7	9.8	10.6	4.2	0.9	229	25	82.5%	52.0%	4.0
6-30-73	76.0	77.4	63.0	68.3	10.0	10.9	3.7	6.3	225	25	86.2	56.0	4.0
6-30-74	76.9	77.6	58.1	62.2	10.3	11.3	2.6	4.8	252	24	84.9	45.8	4.4
6-30-75	77.2	77.7	63.2	64.5	10.5	11.4	4.2	4.7	249	30	89.2	50.0	4.0
6-30-76	77.0	78.1	59.2	66.7	11.2	12.2	4.5	4.5	279	17	93.2	58.8	4.7
6-30-77	76.8	77.5	63.4	60.5	10.7	11.0	4.4	3.7	255	36	91.4	52.8	4.3
6-30-78	77.3	78.6	59.8	66.1	11.3	12.2	3.2	5.4	255	31	93.5	54.8	5.0
6-30-79	77.3	77.8	66.9	65.1	12.0	12.3	9.6	6.4	350	44	87.1	72.7	4.6
6-30-80	77.9	79.2	66.3	61.2	12.5	13.8	9.9	5.1	350	49	91.5	61.2	5.2
6-30-81	76.7	80.9	64.7	60.8	11.8	13.9	8.0	5.7	378	43	94.2	74.4	5.4

CORRECTIONAL OFFICERS RETIREMENT PLAN

Year	Average Age At Death				Average Years of Retirement				Number of Deaths		Percent of Members Who Received More In Annuity Payments Than They Had Contributed		Ratio Of Annuity Payments/Contributions For Deceased Service Annuitants*
	Annuity		Disability		Annuity		Disability						
Ending	Male	Female	Male	Female	Male	Female	Male	Female	Annuity	Disability	Annuity	Disability	
6-30-76	63.0	—	—	—	1.4	—	—	—	3	0	100%	N/A	1.78
6-30-77	64.0	—	—	—	2.4	—	—	—	3	0	100	N/A	2.46
6-30-78	61.5	—	—	—	3.2	—	—	—	2	0	100	N/A	3.28
6-30-79	58.0	—	—	—	3.7	—	—	—	6	0	100	N/A	4.00
6-30-80	64.8	—	—	—	4.1	—	—	—	9	0	100	N/A	4.20
6-30-81	64.4	—	53.0	—	5.1	—	1.8	—	7	0	100	N/A	4.14

*i.e. In 1972 the average annuitant who died had received annuity payments in excess of his contributions equal to 4.0 times the contributions he had made as an employee.

REFUND STATISTICS

GENERAL EMPLOYEES RETIREMENT PLAN

Year Ending	Number of Refunds Male	Number of Refunds Female	Number of Refunds Total	Average Age of Member Male	Average Age of Member Female	Average Years of Service Forfeited Male	Average Years of Service Forfeited Female	Number of Refunds With Interest*	Number of Members Forfeiting Vested Rights
6-30-72	1,893	4,083	5,976	34.4	29.6	2.2	1.8	N/A	109
6-30-73	1,914	4,124	6,038	33.5	29.8	2.3	2.0	N/A	99
6-30-74	1,972	4,023	5,995	33.2	29.7	2.3	2.0	1,498	87
6-30-75	2,039	4,022	6,061	32.5	29.7	2.3	2.0	1,408	71
6-30-76	1,745	3,552	5,297	32.4	29.7	2.2	1.7	1,011	57
6-30-77	1,882	3,837	5,719	31.7	30.7	2.0	1.8	1,243	82
6-30-78	2,091	3,849	5,940	32.0	30.0	1.6	1.6	1,344	78
6-30-79	2,145	4,036	6,181	32.5	30.9	2.3	2.3	1,637	110
6-30-80	2,151	4,240	6,391	35.6	30.5	2.3	2.4	1,709	138
6-30-81	1,960	4,259	6,219	32.3	30.7	1.8	1.8	1,547	150

CORRECTIONAL OFFICERS RETIREMENT PLAN

Year Ending	Number of Refunds Male	Number of Refunds Female	Number of Refunds Total	Average Age of Member Male	Average Age of Member Female	Average Years of Service Forfeited Male	Average Years of Service Forfeited Female	Number of Refunds With Interest*	Number of Members Forfeiting Vested Rights
6/30/77	133	18	151	31.3	31.4	1.8	1.9	24	1
6/30/78	97	15	112	32.4	30.2	2.0	1.3	23	0
6/30/79	117	15	132	31.1	34.9	2.3	2.8	39	2
6/30/80	112	23	135	30.6	30.6	3.6	2.8	39	1
6/30/81	82	19	101	31.7	32.5	2.1	2.1	25	3

*Prior to June 30, 1973 interest was not paid on a normal refund. Since then interest (3½% Compounded Annually) is paid on deductions taken after the third year of coverage.

SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT
JUNE 30, 1981

Amount of Monthly Benefit	Deferred	Number of Retirees	Type Of Retirement* 1	2	3	4	5	6	7	8	Option Selected# Life	I	II	III
$ 1—$100	230	3184	1763	770	408	205	22	0	0	16	2874	265	41	4
101— 200	194	3059	1663	1078	20	261	34	3	0	0	2698	327	27	7
201— 300	140	1593	976	454	1	115	44	2	0	1	1414	168	9	2
301— 400	74	823	561	171	0	50	39	2	0	0	690	121	5	7
401— 500	60	512	388	72	0	16	35	1	0	0	411	97	2	2
501— 600	38	286	199	44	0	8	35	0	0	0	212	74	0	0
601— 700	27	175	125	17	0	10	22	0	1	0	125	50	0	0
701— 800	13	123	96	8	0	1	17	0	1	0	91	32	0	0
801— 900	6	75	56	7	0	2	9	0	1	0	51	24	0	0
901—1000	6	31	25	1	0	1	4	0	0	0	18	13	0	0
Over 1000	10	52	44	2	0	0	6	0	0	0	32	20	0	0
Totals	798	9913	5896	2624	429	669	267	8	3	17	8616	1191	84	22

Deferred—Former member with deferred future benefit

*Type of Retirement
1—Normal retirement for age & service
2—Early retirement
3—Proportionate annuity
4—Disability retirement
5—Correctional Annuity
6—Correctional Disability
7—Military Affairs
8—Survivors of Deceased Former Members (Non MPRIF)

#Option Selected
Life
Option I —Joint & Survivor
Option II —Death while eligible and ''Old Law'' survivors
Option III—Period Certain

SCHEDULE OF AVERAGE ANNUITY AND DISABILITY BENEFIT PAYMENTS AUTHORIZED WITHIN A FISCAL YEAR

GENERAL EMPLOYEES RETIREMENT PLAN

	YEARS OF CREDITED SERVICE									
Retirement Effective Dates	**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30-35**	**35-40**	**40+**	**Totals**
Period 7/1/76—6/30/77										
Average Monthly Benefit	28.33	58.78	92.29	152.80	232.87	292.26	437.80	651.04	645.87	190.20
Average Final Salary	1012.15	761.20	736.00	772.64	888.32	891.28	1093.98	1394.69	1307.16	847.93
Average Age At Retirement	64.8	63.9	63.2	63.4	62.7	63.3	62.7	63.7	63.2	63.3
Number Retired	21	82	199	146	108	62	49	20	15	702
Period 7/1/77—6/30/78										
Average Monthly Benefit	26.67	61.85	96.20	161.20	226.81	316.21	476.26	547.08	748.39	199.14
Average Final Salary	1076.23	773.78	769.75	831.33	891.10	983.00	1193.64	1165.82	1434.30	889.48
Average Age At Retirement	64.0	63.7	63.8	63.3	63.6	63.5	62.9	62.4	64.7	63.5
Number Retired	26	73	215	106	112	66	48	27	13	686
Period 7/1/78—6/30-79										
Average Monthly Benefit	37.64	68.61	111.58	178.55	255.84	338.88	491.11	599.83	698.69	235.20
Average Final Salary	1313.87	883.93	877.23	929.39	995.00	1068.62	1233.10	1291.56	1295.61	1003.26
Average Age At Retirement	64.4	64.0	62.8	63.1	62.8	62.8	62.1	62.7	63.4	63.0
Number Retired	23	65	216	122	97	54	83	40	12	712
Period 7/1/79—6/30/80										
Average Monthly Benefit	35.18	76.67	127.42	200.92	274.13	389.34	537.34	722.54	757.95	280.86
Average Final Salary	1407.14	956.22	978.41	1002.70	1057.35	1199.14	1352.45	1441.74	1507.64	1111.69
Average Age At Retirement	64.6	63.7	63.2	63.1	62.7	62.3	62.1	62.3	63.1	63.2
Number Retired	18	40	195	105	103	52	89	34	17	653
Period 7/1/80—6/30/81										
Average Monthly Benefit	33.08	81.97	133.77	212.04	298.42	430.94	596.53	741.97	793.15	280.69
Average Final Salary	1170.44	1002.58	1056.76	1101.97	1189.68	1321.06	1498.31	1608.45	1546.83	1188.73
Average Age At Retirement	64.0	64.2	63.2	63.7	63.0	62.8	62.9	62.8	63.7	63.3
Number Retired	26	45	235	147	113	69	68	23	18	764

CORRECTIONAL OFFICERS RETIREMENT PLAN

	YEARS OF CREDITED SERVICE								
Retirement Effective Dates	**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30-35**	**35+**	**Totals**
Period 7/1/76—6/30/77									
Average Monthly Benefit	0.00	171.81	275.48	467.36	575.07	629.89	0.00	0.00	436.15
Average Final Salary	0.00	992.05	913.52	1055.77	1056.47	974.01	0.00	0.00	993.10
Average Age At Retirement	0.0	58.6	58.2	58.5	56.0	55.9	0.0	0.0	57.3
Number Retired	0	4	12	5	12	6	0	0	39
Period 7/1/77—6/30/78									
Average Monthly Benefit	0.00	180.81	354.08	445.59	659.10	705.12	0.00	0.00	524.39
Average Final Salary	0.00	964.30	1195.28	1097.67	1208.67	1102.40	0.00	0.00	1149.85
Average Age At Retirement	0.0	62.0	59.7	56.2	55.8	55.0	0.0	0.0	57.0
Number Retired	0	1	3	4	6	2	0	0	16
Period 7/1/78—6/30-79									
Average Monthly Benefit	0.00	217.65	383.33	384.55	693.16	985.47	722.70	0.00	573.60
Average Final Salary	0.00	1133.32	1266.30	1123.45	1245.19	1474.47	1118.14	0.00	1241.59
Average Age At Retirement	0.0	56.4	59.6	56.2	62.0	55.0	59.3	0.0	57.4
Number Retired	0	3	5	4	1	5	4	0	22
Period 7/1/79—6/30/80									
Average Monthly Benefit	0.00	277.76	421.28	541.56	664.54	750.74	1269.50	0.00	580.27
Average Final Salary	0.00	1357.74	1330.72	1228.65	1286.13	1403.15	1813.47	0.00	1337.98
Average Age At Retirement	0.00	62.7	56.9	57.4	56.4	54.9	61.9	0.0	56.9
Number Retired	0	1	10	4	6	5	1	0	27
Period 7/1/80—6/30/81									
Average Monthly Benefit	0.00	0.00	373.93	537.30	627.14	906.29	704.97	0.00	567.06
Average Final Salary	0.00	0.00	1283.37	1391.98	1352.92	1380.36	1251.38	0.00	1341.45
Average Age At Retirement	0.0	0.0	54.6	58.4	55.3	55.0	55.0	0.0	56.1
Number Retired	0	0	8	9	3	4	2	0	26

Touche Ross & Co.

January 15, 1982

Board of Directors
Minnesota State Retirement System
529 Jackson at 10th Street
St. Paul, Minnesota 55101

Ladies and Gentlemen:

We have performed an actuarial valuation of the Minnesota State Retirement System, State Employees' Retirement Fund as of June 30, 1981.

The valuation was performed on the basis of accepted actuarial methods and procedures, in accordance with the applicable provisions set forth in Minnesota Statutes (Chapter 356) and stipulated in the Contract between the State of Minnesota and Touche Ross & Co.

We hereby certify that on the basis of our valuation, contributions required from employees and the State under Minnesota Statutes (Chapter 352) are adequate to provide benefits payable from the Fund. Furthermore, the entry age normal cost method was utilized in determining the accrued liability for all benefits payable under the Fund.

We further certify the following:

The financing objective of the plan is to pay normal costs (computed as a level percentage of payroll on a variation of the Entry Age Normal actuarial cost method) and to provide level dollar amortization of the unfunded actuarial liability by the year 2009.

The contributions made in recent years have been sufficient to meet this objective.

There have been no significant changes since the previous valuation in the nature of this plan, or actuarial assumptions or methods. Benefits paid to some retirees and beneficiaries were increased 3.209% on January 1, 1981 in accordance with Chapter 11A of the Minnesota Statutes.

Actuarial valuations are performed once a year. The most recent valuation was as of June 30, 1981.

Plan assets are valued at cost value for stock and short-term investments, and adjusted amortized cost for fixed income investments.

All employee and financial data were provided by the plan administrator, and we relied on that data, performing only general checks of reasonableness.

In general, the actuarial assumptions were specified by the administrative board of the plan with the recommendation of the previous actuary on the basis of an experience study performed as of June 30, 1979. However, the interest and salary scale assumptions are set by state law.

It is our opinion that the assumptions used produce results which, in the aggregate, relate reasonably to the past and anticipated experience of the plan.

The schedules presented in the Actuarial Section of the report as of June 30, 1981, were prepared by Touche Ross & Co.

TOUCHE ROSS & CO.

John H. Flittie

John H. Flittie, F.S.A.

Andrea Feshbach

Andrea Feshbach, F.S.A.

AF:llf

900 PILLSBURY CENTER - MINNEAPOLIS, MINNESOTA 55402 - (612) 333-2301

Summary of Actuarial Assumptions and Methods

All Plans

1. Mortality:	1971 Group Annuity Mortality Table, with ages set back eight years for females. Adopted 1980
2. Post-Disablement Mortality:	Combined Annuity Mortality Table. Adopted 1972
3. Withdrawal:	Graded rates based on actual experience developed by the June 30, 1971 experience analysis. Adopted 1972
4. Expenses:	.18% of covered payroll. Adopted 1980
5. Interest Rate:	Set by statute at 5% per annum. Adopted 1973
6. Salary Scale:	Set by statute at 3½% per annum. Adopted 1973
7. Assumed Retirement Age:	Graded rates beginning at age 58 for the General Employees Plan. Assumed age 60 for the Military Affairs Plan and age 58 for the Correctional Officers Plan. Adopted 1979
8. Actuarial Cost Method:	Entry age cost method, with normal cost determined as a level percentage of future covered payroll, on an aggregate basis. Prescribed by statute.

Correctional Officers Plan Only

9. Social Security:	Based on the present law (2nd phase 1980) and 3½% salary scale applicable to current salaries. No wage base increases beyond those specifically prescribed in the Social Security Act of 1977 are projected. No cost of living increases are projected. Adopted 1980

Chapter 356 Balance Sheet as of June 30, 1981

ASSETS AND UNFUNDED ACCRUED LIABILITY

Touche Ross & Co.

A. ASSETS[1]		
1. Cash in State Treasury		$ (2,455.07)
2. Cash in Bank (Imprest Cash)		149.76
3. Short term investments (at cost)		72,694,560.75
a. Accrued employee contributions	$ 980,932.31	
b. Accrued employer contributions	1,564,844.69	
c. Employee buybacks	200,802.79	
d. Other	471.56	2,747,051.35
4. Due from MPRI Fund		461,789.94
5. Due from other plans		120,534.75
6. Accrued interest on investments		7,121,893.83
7. Dividends declared and payable, but not yet received		773,093.26
8. Investment in debt securities at amortized cost		192,893,073.10
9. Investment in G.N.M.A.'s at amortized cost		20,384,081.69
10. Investment in equities at cost		143,908,168.08
11. Equipment at depreciated cost		20,918.06
12. Deferred yield adjustment account		4,511,134.59
13. Participation in MPRI Fund[2]		230,426,989.00
14. Total assets		$676,060,983.09
B. UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability to be funded by portion of employee contributions and State "matching" contribution in excess of entry age normal cost contribution and operating expenses		$ 76,398,409.00
2. Unfunded accrued liability to be funded by State's "additional" contribution		110,032,754.44
3. Total unfunded accrued liability		$186,431,163.44
4. TOTAL ASSETS AND UNFUNDED ACCRUED LIABILITY		$862,492,146.53

CURRENT LIABILITIES AND RESERVES REQUIRED

C. LIABILITIES		
1. Accounts payable:		
a. Security purchases	$ 388,182.37	
b. Annuities	226.26	
c. Annuitant deposits	1,146.48	
d. Accrued expenses	90,273.97	
e. Transfer to unclassified retirement	286,150.90	
f. Due MPRI Fund	67,324.55	
g. Due general fund	540.00	
2. Total liabilities		$ 833,844.53
D. RESERVES REQUIRED		
1. Total reserves required per attached Table 3(b)		$861,658,302.00
2. TOTAL CURRENT LIABILITIES AND RESERVES REQUIRED		$862,492,146.53

[1]Accumulated contributions, without interest, of members not yet retired amounted to 153,317,649 as of June 30, 1981 (includes accrued but unpaid contributions).

[2]Participation equals Required Reserves for retired lives as of June 30, 1981, excluding the January 1, 1982 benefit increases.

Table 3(b)
Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981

Touche Ross & Co.

	(1) Present Value of Benefits	(2) Present Value of Applicable Portion of Normal Cost Contribution	(3) Accrued Liability Equals Reserves Required (1)-(2)
A. DETERMINATION OF ACCRUED LIABILITY			
1. Active Members			
a. Retirement benefits	$ 855,153,962	$314,121,174	$541,032,788
b. Disability benefits	63,216,190	24,189,355	39,026,835
c. Refundments due to death or withdrawal	156,686,821	136,457,891	20,228,930
d. Surviving spouse benefits	27,290,840	8,655,452	18,635,388
2. Deferred annuitants	11,059,859		11,059,859
3. Former members without vested rights	1,049,616		1,049,616
4. Survivors	197,897		197,897
5. Participation in MPRI Fund	230,426,989		230,426,989
6. Total	$1,345,082,174	$483,423,872	$861,658,302
B. DETERMINATION OF UNFUNDED ACCRUED LIABILITY			
1. Accrued Liability			$861,658,302
2. Valuation assets			675,227,139
3. Unfunded accrued liability (1-2)			186,431,163

Analysis of Income and Deductions from Income and Effect on the Unfunded Accrued Liability

Touche Ross & Co.

A. INCOME		
1. From employees		
a. Employee contributions	$ 27,301,889.02	
b. Employee accrued contributions receivable	980,932.31	
c. Employee contributions, accounts receivable	41,770.83	$ 28,324,592.16
2. From employers		
a. Employer contributions	$ 27,840,757.51	
b. Employer additional contributions	15,633,332.35	
c. Employer accrued contributions receivable	1,564,844.69	45,038,934.55
3. From investments		
a. Interest on securities, short term and GNMA's	$ 25,241,336.31	
b. Dividends on corporate stock	8,402,903.51	
c. Gain on sale of securities	15,932,242.04	
d. Interest on back payments by employees	137,570.92	49,714,052.78
4. From MPRI Fund participation		
a. Participation in MPRI Fund income		16,267,413.28
5. Other revenues		
a. Miscellaneous		44,770.62
6. TOTAL INCOME		$139,389,763.39
B. DEDUCTIONS FROM INCOME		
1. Benefits		
a. Service retirement annuities	$ 22,374,035.24	
b. Disability retirement benefits	1,450,559.19	
c. Survivor benefits (spouse)	22,787.49	$ 23,847,381.92
2. Refundments (employee contributions)		
a. Left service	$ 6,119,720.04	
b. Erroneous deductions	28,624.69	
c. Annuitant deposits	65,239.75	
d. Employee death	372,340.70	
e. Interest on refundments	287,886.17	6,873,811.35
3. Operating expenses		
a. Administrative expenses	$ 1,335,410.13	
b. Loss on disposition of assets	452.19	
c. Interest expense on lump sum cancellation	125,218.97	1,461,081.29
4. Increase in total reserves required		
a. Reserves required 6/30/80	$767,247,161.00	
b. Reserves required 6/30/81	861,658,302.00	94,411,141.00
5. TOTAL DEDUCTIONS FROM INCOME		$126,593,415.56
C. OTHER FINANCING SOURCES (USES)		
1. Transfers from other funds/plans		$ 236,010.91
2. Lump sum payments		(1,252,020.00)
3. Supplemental payments		(60,546.00)
4. Transfers to other funds/plans		(79,186.12)
5. TOTAL OTHER FINANCING SOURCES (USES)		$ (1,155,741.21)
D. EXCESS OF INCOME AND OTHER SOURCES OVER DEDUCTIONS FROM INCOME AND OTHER USES		$ 11,640,606.62
E. DECREASE IN UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability 6/30/80		
a. Unfunded Liability in June 30, 1980 Valuation Report	$198,081,293.33	
b. Decrease in Unfunded Liability after prior period adjustment	9,523.27	$198,071,770.06
2. Unfunded accrued liability 6/30/81		186,431,163.44
3. DECREASE IN UNFUNDED ACCRUED LIABILITY		$ 11,640,606.62

DEPTH OF FUNDING—PLAN CONTINUATION BASIS

The Plan Continuation Ratio is an indication of the extent to which the benefits *earned to date* are funded. The value of the benefits earned to date are calculated on a plan continuation basis applying all ongoing actuarial assumptions including assumed future salary increases and turnover. It is measured by the ratio of the valuation assets to the present value of accrued benefits.

On this basis, a ratio of 100% indicates full funding of all benefits earned to date.

	Present Value of Accrued Benefits				
Valuation Date	Active, Deferred, Inactive	Retirees and Beneficiaries	Total	Reported Assets	Portion of Benefits Earned To Date Covered By Reported Assets
6-30-76	$254,079,150	$110,267,694	$364,346,844	$293,008,488	80.7%
6-30-77	266,439,050	140,980,813	407,419,863	357,556,308	87.8
6-30-78	314,298,931	151,518,891	465,817,822	408,755,610	87.8
6-30-79	384,816,431	179,314,989	564,131,420	482,465,961	85.5
6-30-80	448,335,844	205,332,561	653,668,405	569,165,868	87.1
6-30-81	508,876,656	230,624,886	739,501,542	675,227,139	91.3

SOLVENCY TEST—FUNDING RATIO

One of the tests of financial solvency is to determine what portion of the accrued liabilities are covered by current assets. If the funding is on a sound basis, the retirement fund will pay all promised benefits when due.

In a short term solvency test, the funds current assets are compared with the liabilities for active member contributions (liability 1), the liabilities for future benefits to present retired lives (liability 2) and the employer liability for service already rendered by active employees (liability 3). Generally, if the fund has been using level cost financing, the funded portion of liability 3 should increase over time with liability 1 and 2 being fully funded. Liability 3 being fully funded is very rare.

	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered By Reported Assets			Funding Ratio
Valuation Date	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)	(1) + (2) + (3)
6-30-72	$ 47,240,336	$ 53,852,677	$ 96,070,127	$178,211,897	100%	100%	80.3%	90.4%
6-30-73	51,746,933	61,988,765	249,548,762	204,230,993	100	100	36.3	56.2[1]
6-30-74	57,523,937	85,378,345	255,048,944	234,857,990	100	100	36.1	59.0
6-30-75	65,678,307	103,633,726	279,180,173	265,533,524	100	100	34.5	59.2
6-30-76	75,780,365	110,267,694	284,383,583	293,008,488	100	100	37.6	62.3
6-30-77	87,098,476	140,980,813	293,079,566	357,556,308	100	100	44.2	68.6
6-30-78	100,278,842	151,518,891	343,729,375	408,755,610	100	100	45.7	68.6
6-30-79	121,815,771	179,314,989	365,970,371	482,465,961	100	100	49.6	72.3
6-30-80	136,370,228	205,332,561	425,544,372	569,165,868	100	100	53.5	74.2
6-30-81	153,317,649	230,624,886	477,715,767	675,227,139	100	100	61.0	78.4

[1]High-5 law and Correctional Officers Plan became effective July 1, 1973.

CURRENT SUPPORT

Employee and employer contributions are set by statute at a specified rate and apply to total salary. The employer additional contributions are for the purpose of paying for the unfunded accrued liability. It has been a philosophy of the legislature that the employee and employer share the normal cost of retirement benefits on an equal basis.

	Employee Contributions	Employer Normal Cost Contributions	Employer Additional Contributions	Total
General Employees Plan	4%	4%	2%	10%
Military Affairs Plan	5%	5%	2%	12%
Correctional Officers Plan	6%	9%	5%	20%

UNFUNDED ACCRUED LIABILITY (UAL)

The unfunded accrued liability is the total liability of a fund for benefits earned in the past as well as those earnable in the future, less the assets on hand, less the present value of future employee contributions and less the present value of future employer normal cost contributions.

Looking at just the dollar amounts of the UAL can be misleading. By dividing the unfunded accrued liability by the active employee payroll, we can provide an index which indicates whether the fund is becoming financially stronger or weaker. The smaller the ratio of unfunded liabilities to active member payroll, the stronger the fund.

Valuation Date	Aggregate Accrued Liabilities	Reported Assets	UAL	Active Member Payroll	UAL As A % of Active Member Payroll
6-30-72	$197,163,140	$178,211,897	$ 18,951,243	$286,119,678	6.6%
6-30-73	363,284,460	204,230,993	159,053,467	321,499,616	49.5%[1]
6-30-74	397,951,226	234,857,990	163,093,236	360,573,148	45.2%
6-30-75	448,492,206	265,533,524	182,958,682	414,852,162	44.1%
6-30-76	470,431,642	293,008,488	177,423,154	460,999,409	38.5%
6-30-77	521,158,855	357,556,308	163,602,547	483,203,504	33.9%
6-30-78	595,527,108	408,755,610	186,771,498	569,301,385	32.8%
6-30-79	667,101,131	482,465,961	184,635,170	637,592,557	29.0%
6-30-80	767,247,161	569,165,868	198,081,293	703,470,202	28.2%
6-30-81	861,658,302	675,227,139	186,431,163	796,297,430	23.4%

[1]High-5 law and Correctional Officers Plan became effective July 1, 1973

NORMAL COST

The entry age normal cost method of funding is required by statute. Under this method, a level contribution rate is determined, which, if contributed on behalf of all employees from date of entry into service to date of separation, will be adequate to provide the full funding of prospective benefits. Factors of great importance in such determinations are the projected rate of earnings of the fund, the rates of separation from active service, salary progression scales and mortality rates.

Comparative normal cost figures, including administrative expenses, were as follows:

Valuation Date	General Employees Plan	Military Affairs Plan	Correctional Officers Plan
6-30-77	7.23%	N/A	11.18%
6-30-78	7.20%	N/A	11.16%
6-30-79	6.67%	N/A	10.38%
6-30-80	7.00%	[1]	10.82%
6-30-81	6.91%	[1]	11.23%

[1]Included in the General Employees Plan.

MINNESOTA STATE RETIREMENT SYSTEM
HIGHWAY PATROL RETIREMENT FUND

SECTION
III

FINANCIAL
STATISTICAL
ACTUARIAL

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
Veterans Service Building
St. Paul, Minnesota 55155

GERALD W. CHRISTENSON
Legislative Auditor

(612) 296-4708

Francis D. Hage, Chairman
Board of Directors
Minnesota State Retirement System

and

Paul L. Groschen, Executive Director
Minnesota State Retirement System

We have examined the Accounting Balance Sheet of the Highway Patrol Retirement Fund as of June 30, 1981 and 1980, and the related Statements of Revenues and Expenditures for the fiscal years then ended and the Statements of Changes in Reserve Accounts for the fiscal year ended June 30, 1981, all of which are presented in the Financial portion of this section. We have also examined the Chapter 356 Balance Sheet and the Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981 and the related Analysis of Income and Deductions From Income and Effect on the Unfunded Accrued Liability for the fiscal year then ended, all of which are presented in the Actuarial portion of this section. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The reserves required for the fund, totaling $100,517,909 and $85,830,394 at June 30, 1981 and 1980, respectively, are presented in accordance with reports certified by the consulting actuary of the system.

In our opinion, the aforementioned financial statements in the Financial portion of this section fairly present the financial position of the Highway Patrol Retirement Fund as of June 30, 1981 and 1980, and the results of operations for the fiscal years then ended and the changes in its reserve accounts for the fiscal year ended June 30, 1981, in conformity with generally accepted accounting principles (GAAP) applied on a consistent basis after restatement for the changes, with which we concur, in the format of the fiscal year 1980 financial statements as described in footnote 1 (h) of the financial statements. In addition, relying on the certification from the consulting actuary as to the required reserves, the aforementioned financial statements in the Actuarial portion of this section fairly present the financial position of the Highway Patrol Retirement Fund as of June 30, 1981 and the results of operations for the fiscal year then ended in accordance with Minn. Stat. Section 356.20.

The Statement of Changes in Investments for the fiscal years ended June 30, 1981 and 1980, is presented for supplementary analysis purposes and is not necessary for the fair presentation of the financial statements of the Highway Patrol Retirement Fund in conformity with GAAP. This statement has been subjected to the tests and other audit procedures applied in the examination of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the respective fund financial statements taken as a whole.

The accompanying supplemental information in the Statistical and Actuarial portions of this section is not necessary for a fair presentation of the financial statements in conformity with GAAP. This information has not been subjected to sufficient audit procedures and tests to express, and we do not express, an opinion on this supplemental information.

Sincerely,

Gerald W. Christenson

Gerald W. Christenson
Legislative Auditor

January 15, 1982

ACCOUNTING BALANCE SHEET
JUNE 30, 1981 AND 1980

ASSETS	1981	1980
Cash	$ 471.34	$ 3,264.90
Short term investments[2]	5,311,051.25	5,812,667.23
Accounts Receivable		
a) Accrued employee contributions	64,992.56	39,624.44
b) Accrued employer contributions	194,947.76	118,873.35
c) Employee buybacks	1,655.35	0.00
Due from the MPRI Fund	177,959.76	0.00
Accrued interest on investments	545,771.22	456,801.65
Dividends declared and payable, not yet received	75,221.31	49,832.94
Investment in debt securities at amortized cost[2]	17,442,751.26	14,868,890.11
Investment in GNMA's at amortized cost[2]	1,090,981.23	1,146,562.15
Investment in equities at cost[2]	14,578,171.08	13,156,990.31
Deferred Yield Adjustment Account	248,149.47	128,909.40
Participation in the MPRI Fund[3]	19,121,181.00	16,238,628.00
Total Assets	$58,853,304.59	$52,021,044.48

LIABILITIES AND RESERVES		
Liabilities		
Accounts Payable		
a) Security purchases	$ 80,497.88	$ 345,986.02
Due To SER Fund	52,646.00	32,290.01
Due To MPRI Fund	0.00	2,021,874.00
Total Liabilities	$ 133,143.88	$ 2,400,150.03
Reserves		
Minnesota Post Retirement Investment Fund reserve[3]	$19,121,181.00	$16,238,628.00
Disability reserve	1,007,850.00	819,360.00
Survivor benefit reserve—children	126,836.00	151,831.00
Employee contribution reserve	10,251,898.70	9,432,723.59
State contribution reserve	28,212,395.01	22,978,351.86
Total Reserves	$58,720,160.71	$49,620,894.45
Total Liabilitites and Reserves	$58,853,304.59	$52,021,044.48

The footnotes are an integral part of the financial statements.

STATEMENT OF REVENUES AND EXPENDITURES
FOR FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

REVENUES	1981	1980
From Employees		
Employee contributions	$ 1,217,856.70	$1,163,502.20
Employee accrued contributions	64,992.56	39,624.44
From Employers		
Employer contributions	2,083,933.60	1,994,322.42
Employer additional contributions	1,562,633.37	1,494,863.91
Employer accrued contributions	194,947.76	118,873.35
From Investments		
Interest on short term, GNMA's and debt securities	2,257,600.74	1,747,823.76
Dividends on corporate stock	833,390.62	748,597.29
Gain on sale of stock	1,381,153.61	592,634.29
Interest on back payments by employees	787.57	0.00
From MPRI Fund Participation		
Participation in MPRIF income[4]	1,322,086.37	663,193.76
Other		
Miscellaneous	330.00	532.94
Total Revenues	$10,919,712.90	$8,563,968.36
EXPENDITURES		
Benefits		
Service retirement annuities	$ 1,576,999.68	$1,397,074.19
Disability retirement benefits	58,432.16	62,152.98
Survivor benefits (children)	29,478.80	32,138.29
Refunds		
Left service	33,888.75	54,020.17
Employee death	7,029.87	0.00
Erroneous deductions	227.32	222.44
Operating Expenses		
Administrative expenses	52,646.00	32,290.01
Interest expense on mortality adjustment	0.00	16,189.63
Interest expense on lump sum cancellation[5]	5,230.98	0.00
Total Expenditures	$ 1,763,933.56	$1,594,087.71
Excess of Revenues over Expenditures	$ 9,155,779.34	$6,969,880.65
OTHER FINANCING SOURCES (USES)		
Transfers from other funds/plans	$ 3,630.00	$ 117,690.00
Lump sum payments[5]	(59,910.00)	(61,410.00)
Total Other Financing Sources (Uses)	$ (56,280.00)	$ 56,280.00
Excess of Revenues and Other Sources Over Expenditures and Other Uses	$ 9,099,499.34	$7,026,160.65

The footnotes are an integral part of the financial statements.

CHANGES IN RESERVE ACCOUNTS
FISCAL YEAR ENDED JUNE 30, 1981

	Total Reserves	Reserve for Employee Contributions	Reserve for Disabilities & Children	Reserve for Participation in MPRI Fund	Reserve for State Contributions
Balances at June 30, 1980	$49,620,894.45	$ 9,432,723.59	$ 971,191.00	$16,238,628.00	$22,978,351.86
Prior period adjustment:	(233.08)	(93.23)			(139.85)
Revised Balances	$49,620,661.37	$ 9,432,630.36	$ 971,191.00	$16,238,628.00	$22,978,212.01
Reserves increased by:					
Employee contributions	1,282,849.26	1,282,849.26			
Employer contributions	3,841,514.73				3,841,514.73
Investment income	3,091,778.93				3,091,778.93
Gain on sale of stock	1,381,153.61				1,381,153.61
Income from MPRIF part.	1,322,086.37			1,322,086.37	
Transfer from General Fund	3,630.00				3,630.00
Miscellaneous	330.00				330.00
	$60,544,004.27	$10,715,479.62	$ 971,191.00	$17,560,714.37	$31,296,619.28
Reserves decreased by:					
Benefits paid	(1,664,910.64)		(87,910.96)	(1,576,999.68)	
Refunds paid	(41,145.94)	(41,145.94)			
Interest Expense—lump sum	(5,230.98)				(5,230.98)
Lump sum payments	(59,910.00)				(59,910.00)
Administrative expense	(52,646.00)				(52,646.00)
	$58,720,160.71	$10,674,333.68	$ 883,280.04	$15,983,714.69	$31,178,832.30
Transfers between reserves:					
Actuarial value of benefits authorized	0.00	(422,434.98)	159,021.80	3,315,426.07	(3,052,012.89)
Disability and children reserves adjustment	0.00		92,384.16		(92,384.16)
Mortality gain adjustment	0.00			(177,959.76)	177,959.76
Balances at June 30, 1981	$58,720,160.71	$10,251,898.70	$1,134,686.00	$19,121,181.00	$28,212,395.01

The footnotes are an integral part of the financial statements.

Notes to the Financial Statements

1. Summary of Significant Accounting Policies
   (a) Administration of System

   The Highway Patrol Retirement Fund is a retirement fund for Minnesota state troopers, conservation officers, and Crime Bureau personnel, administered in accordance with Chapter 352B of Minnesota Statutes.

   (b) Employee Contributions

   Employee contributions are established by statute at 7% of total compensation and are deducted from the employee's salary and remitted by the employers. The Employee Contribution Reserve represents employee contributions less amounts transferred to reserves for retirement and disability or refunded.

   (c) Employer Contributions

   Employer contributions are set by statute at 12% of total compensation plus an additional 9% to amortize past fund deficit.

   (d) Actuarial Valuations

   Actuarial valuations are done yearly and experience studies are done every four years. The last completed experience study was as of June 30, 1979. The entry age normal method, a projected benefit cost method, is used to value the fund with contributions being made as a level percentage of covered employee salaries.

   (e) Benefit Reserves

   The Minnesota Post Retirement Investment Fund (MPRIF) Reserve and the Participation in the MPRIF are equal to the retirement funds required reserves for retired lives. The Disability and Survivor Benefit Reserve represents the required reserves as determined by the actuary.

   (f) Investments

   Stock and short-term investments are reflected on the balance sheet at cost. Fixed income investments are reflected on the balance sheet at adjusted amortized cost. Income is recognized over the life of the investment. The cost of investments sold is determined using the original cost for stock and amortized cost for debt securities. Dividend income is recognized based on the payable date for dividends declared.

   (g) Basis of Accounting

   The basic financial statements were prepared using the accrual basis of accounting.

   (h) Fiscal year 1980 is restated from the prior financial statement for a change resulting from the 1980 audit. Total liabilities were reduced and state reserve increased by $882 for unredeemed 6 year warrants which are no longer handled as a payable after the warrants are cancelled.

2. **Market Value**	**June 30, 1981**	**June 30, 1980**
Equities	$16,595,269	$14,231,542
Debt securities (including G.N.M.A.)*	13,761,502	13,945,448
Short term investments*	5,449,349	5,917,497
Total	$35,806,120	$34,094,487

*Some securities are loaned out to generate additional income of 0.5%. Securities on loan were $425,000 on June 30, 1981 and $0.00 on June 30, 1980, with collateral of 105% of its market value.

3. The retirement funds actual participation in the net assets of the MPRIF at June 30, 1981, was $18,515,976 or $605,205 less than the required reserves. The deficiency is part of the MPRIF and is funded by earnings in excess of the 5% required. The funds actual participation at June 30, 1980 was $15,599,785 or $638,843 less than the required reserves.

4. **MPRI Fund Income**

	1981	1980
Total income	$2,061,357	$1,361,705
Deferred from prior year	456,019	—0—
Total Available	$2,517,376	$1,361,705
Used for deficiency	33,638	242,492
Deferred to next F.Y.	1,161,652[a]	456,019[b]
Recognized	$1,322,086	$ 663,194

[a]To fund a 7.436% benefit increase effective January 1, 1982.
[b]To fund a 3.209% benefit increase effective January 1, 1981.

5. The lump sum payments for pre June, 1973 annuitants for FY 1981 and 1980 were funded by a General Fund appropriation of $117,690 which was transferred to the retirement fund in December, 1979. The appropriation law required the retirement fund to pay interest on that portion of the appropriation that was held until it was used or cancelled. The payments made in December, 1979 and 1980 exceeded the appropriation by $3,630 which offset part of the interest expense ($5,231) paid to the General Fund in January, 1981.

CHANGES IN INVESTMENTS
FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

CORPORATE STOCK (At Cost)	1981	1980
Balances as of June 30, P.Y.	$ 13,156,990.31	$13,001,763.30
Add: Purchases	7,667,355.76	3,107,217.97
	$ 20,824,346.07	$16,108,981.27
Deduct: Frac. stock dividends sold	30.40	38.00
Stock sold	6,246,144.59	2,951,952.96
Balances as of June 30, C.Y.	$ 14,578,171.08	$13,156,990.31
Current Yield	5.1%	5.2%
Market Value, June 30, C.Y.	$16,595,268.88	$14,231,541.63
DEBT SECURITIES (Par Value)		
Balances as of June 30, P.Y.	$ 16,098,652.15	$13,823,334.86
Add: Purchases	6,491,000.00	3,000,000.00
	$ 22,589,652.15	$16,823,334.86
Deduct: Maturities and calls	316,127.87	324,682.71
Debt securities sold	1,856,193.74	400,000.00
Balances as of June 30, C.Y.*	$ 20,417,330.54	$16,098,652.15
Avg. Yield to Maturity	10.27%	9.26%
Book value of debt securities	$ 18,533,732.49	$16,015,452.26
Estimated Current Value	$ 13,761,501.74	$13,945,448.39
SHORT TERM INVESTMENTS (At Cost)		
Balances as of June 30, P.Y.	$ 5,812,667.23	$ 2,308,216.11
Add: Purchases	129,170,152.97	62,098,496.56
	$134,982,820.20	$64,406,712.67
Deduct: Redemptions	129,671,768.95	58,594,045.44
Balances as of June 30, C.Y.	$ 5,311,051.25	$ 5,812,667.23

*Distribution of debt securities:

Municipals	$ 39,000.00	$ 54,000.00
U.S. Govt. Agency & Govt. Guar.	2,380,418.41	1,748,909.37
Canadian Govt. & Govt. Guaranteed	1,889,500.00	1,928,000.00
Corporate obligations	16,108,412.13	12,367,742.78
	$ 20,417,330.54	$16,098,652.15

RETURN ON INVESTMENTS

In Minnesota, insurance companies calculate earnings using the following formula:

$$\frac{2I}{A+B-I}$$

where, I = Net investment income
A = Sum of invested assets, cash, accrued interest and dividends at the beginning of the year
B = Same as A except sum is at the end of the year

Earnings for the last three years were calculated using the above formula, modified to include the Deferred Yield Adjustment Account in the beginning and ending assets. Income on investments is accounted for on an accrual basis and includes interest on bonds (adjusted for amortization of premiums and accumulation of discounts), interest on short term investments, dividends on corporate stock, premium on bonds called and the sum of these adjusted for amortization of the deferred yield adjustment account. The deferred yield adjustment account represents the capitalized losses on bond sales to be written off against income over the remaining life of the bonds sold.

Earnings	**1981**	**1980**	**1979**
Excluding gain on stock sales	8.61%	7.95%	7.01%
Including gain on stock sales	12.70%	9.93%	7.18%

DISTRIBUTION OF INVESTMENTS

The law provides that the aggregate of equity type investments (stock, convertible issues, investments in commingled funds and investments in limited partnerships) cannot exceed 75% of the total invested assets at market value at any time.

The funds assets were invested at market as follows at June 30:

	1981	**1980**	**1979**
Bonds			
Government			
U.S. Government	5.2%	4.8%	4.3%
Canadian Government	3.4%	4.8%	6.3%
Municipal	.1%	.1%	.3%
Total Government	8.7%	9.7%	10.9%
Corporate			
Public Utilities	12.7%	5.4%	7.5%
Financial	3.5%	5.7%	5.2%
Industrial	9.0%	13.4%	14.2%
Transportation	4.5%	6.7%	7.0%
Total Corporate	29.7%	31.2%	33.9%
Total Bonds	38.4%	40.9%	44.8%
Short Term Investments	15.2%	17.4%	8.1%
Equities[1]	46.4%	41.7%	47.1%
Total Portfolio (%)	100.0%	100.0%	100.0%
Total Portfolio (Millions $)	$35.8	$34.1	$28.7

[1]Investments in commingled funds and limited partnerships were authorized by the 1981 legislature. There were no investments of this type at June 30, 1981 nor were there any investments in convertible issues.

SCHEDULE OF REVENUE BY SOURCE

Year Ending	Employee Contributions	Employer Contributions	Investment Income	Miscellaneous	Total
6-30-72	$ 549,618	$1,507,169	$ 960,695	$ 71	$ 3,017,482
6-30-73	616,700	1,692,005	1,177,541	0	3,486,246
6-30-74	762,498	2,088,163	990,749	0	3,841,410
6-30-75	841,956	2,314,847	1,100,910	0	4,257,713
6-30-76	957,335	2,625,932	1,279,575	0	4,862,842
6-30-77	1,030,791	2,828,652	2,085,783	237,356[1]	6,182,582
6-30-78	1,203,801	3,306,684	2,045,792	0	6,556,277
6-30-79	1,066,932	3,173,261	2,615,178	0	6,855,371
6-30-80	1,203,127	3,608,060	3,752,249	118,223[2]	8,681,659
6-30-81	1,282,849	3,841,515	5,795,019	3,960	10,923,343

[1]State General Fund appropriation to fund a 4% benefit increase effective 1-1-78.
[2]State General Fund appropriation to fund lump sum benefits for pre 6-1-73 retirees.

SCHEDULE OF EXPENSES BY TYPE

Year	Aggregate Benefit Payments			Admin.		
Ending	Annuites	Disabilities	Refunds	Expense	Miscellaneous	Total
6-30-72	$ 438,064	$ 2,446	$21,807	$10,821	$ 0	$ 473,138
6-30-73	475,839	6,030	18,056	15,982	0	515,907
6-30-74	685,036	11,340	23,503	30,969	0	750,848
6-30-75	781,728	19,169	25,329	29,081	0	855,307
6-30-76	876,564	24,996	26,179	30,817	0	958,556
6-30-77	1,006,855	39,795	28,187	34,981	0	1,109,818
6-30-78	1,154,699	61,500	38,881	34,438	0	1,289,518
6-30-79	1,364,064	63,565	26,163	37,322	0	1,491,114
6-30-80	1,490,622	62,153	54,243	32,290	16,190[1]	1,655,498
6-30-81	1,666,388	58,432	41,146	52,646	5,231[2]	1,823,843

[1]Interest expense on mortality adjustment
[2] Interest expense on excess General Fund appropriation

SUMMARY DATA FOR THE FISCAL YEAR ENDED JUNE 30, 1981

ACTIVE EMPLOYEES	Number Beg. of Yr.	Increases: New	Decreases: Refunds	Decreases: Annuities	Decreases: Disabilities	Decreases: Inactive	Decreases: Death	Net Transfers	Number At End Of Year: Total	Vested	Non-Vested	Average Accumulated Contributions
	782	44	7	20	1	4	1	0	793	512	281	$12,500

INACTIVE EMPLOYEES	Number Beg. of Yr.	Increases: From Active	Decreases: To Active	Decreases: To Annuity	Decreases: To Refunds	Number At End Of Year: Total	Vested	Non-Vested	Average Accumulated Contributions
	37	4	0	2	4	35	25	10	$7,386

ANNUITANTS	Number Beg. of Yr.	Increases: New	Increases: Re-instate	Decreases: Deaths	Decreases: Rescinded	Number End of Yr.	Averages: All Annuitants On June 30: Age	Service	Monthly Benefit	New In Fiscal Year 1981: Age	Service	Monthly Benefit
	266	28	0	12	2	280	68.2	25.7	$499	63.1	24.2	$703

DISABILITANTS	Number Beg. of Yr.	Increases: New	Increases: Re-instate	Decreases: Deaths	Decreases: Rescinded	Number End of Yr.	Averages: All Disabilitants On June 30: Age	Service	Monthly Benefit	New In Fiscal Year 1981: Age	Service	Monthly Benefit
	9	1	0	0	0	10	51.8	23.4	$618	53.6	21.9	$995

REFUNDS	Number of Refunds: Male	Female	Total	Average Age of Member: Male	Female	Average Years of Service Forfeited: Male	Female	Number of Members Forfeiting Vested Rights
	10	1	11	30.0	22.0	2.6	1.3	0

EMPLOYEES ELIGIBLE TO AN IMMEDIATE ANNUITY ON JUNE 30, 1981

	Male	Female	Total
Full Benefit	97	0	97
Employees Not Eligible to Immediate Benefit	676	20	696
Total	773	20	793

ANNUITY & DISABILITY DEATHS

Year Ending	Average Age At Death: Annuity: Male	Annuity: Female	Disability: Male	Disability: Female	Average Years of Retirement: Annuity: Male	Annuity: Female	Disability: Male	Disability: Female	Number of Deaths: Annuity	Number of Deaths: Disability	Percent of Members Who Received More In Annuity Payments Than They Had Contributed: Annuity	Disability	Ratio Of Annuity Payments/Contributions For Deceased Service Annuitants*
6-30-78	79.0	83.7	—	—	16.0	6.8	—	—	9	0	100%	N/A	3.44
6-30-79	72.0	78.5	—	—	10.2	5.8	—	—	6	0	100	N/A	1.70
6-30-80	75.9	78.0	—	—	13.4	4.7	—	—	17	0	100	N/A	2.78
6-30-81	74.4	76.0	—	—	15.0	13.6	—	—	12	0	100	N/A	3.11

* i.e. In 1978 the average annuitant who died had received annuity payments in excess of his contributions equal to 3.44 times the contributions he had made as an employee.

REFUND STATISTICS

Year Ending	Number of Refunds: Male	Female	Total	Average Age of Member: Male	Female	Average Years of Service Forfeited: Male	Female	Number of Members Forfeiting Vested Rights
6-30-77	9	0	9	37.9	—	4.5	—	1
6-30-78	9	0	9	34.1	—	4.9	—	1
6-30-79	4	2	6	35.5	29.5	4.6	6.1	0
6-30-80	8	3	11	32.9	29.7	5.7	0.1	2
6-30-81	10	1	11	30.0	22.0	2.6	1.3	0

SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT
JUNE 30, 1981

Amount of Monthly Benefit	Deferred	Number of Retirees	Type of Retirement* 1	Type of Retirement* 2	Option Selected# Life	Option Selected# I	Option Selected# II
$ 1–$100	0	0	0	0	0	0	0
101– 200	1	66	65	1	4	45	17
201– 300	1	26	26	0	2	20	4
301– 400	4	46	45	1	10	36	0
401– 500	1	27	25	2	11	15	1
501– 600	3	21	20	1	9	11	1
601– 700	3	22	21	1	10	10	2
701– 800	3	27	26	1	10	15	2
801– 900	1	18	17	1	8	10	0
901–1000	3	19	18	1	6	12	1
Over 1000	5	18	17	1	7	11	0
	25	290	280	10	77	185	28

Deferred—Former member with deferred future benefit

*Type of Retirement
1—Normal retirement for age & service
2—Disability (Non-MPRIF)

#Option Selected
Life
Option I—Joint & Survivor
Option II—Death while eligible and old law survivor

Not included in this table are benefits of $69-134 for each of 22 children surviving 13 former members.

SCHEDULE OF AVERAGE BENEFIT PAYMENTS AUTHORIZED WITHIN A FISCAL YEAR

Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35+	Totals
	YEARS OF CREDITED SERVICE								
Period 7/1/77–6/30/78									
Average Monthly Benefit	0.00	0.00	0.00	0.00	687.63	759.30	951.24	0.00	765.78
Average Final Salary	0.00	0.00	0.00	0.00	1130.09	1265.35	1566.18	0.00	1269.39
Average Age At Retirement	0.0	0.0	0.0	0.0	55.7	57.7	60.3	0.0	57.5
Number Retired	0	0	0	0	4	9	2	0	15
Period 7/1/78–6/30-79									
Average Monthly Benefit	0.00	158.94	331.68	376.80	603.30	866.89	1019.76	913.38	761.79
Average Final Salary	0.00	1137.22	1521.66	656.34	1165.49	1494.65	1528.12	1315.42	1339.14
Average Age At Retirement	0.0	62.4	56.9	60.0	53.9	57.5	60.1	60.2	58.7
Number Retired	0	1	1	2	2	4	6	1	17
Period 7/1/79–6/30/80									
Average Monthly Benefit	0.00	0.00	0.00	597.69	719.53	914.29	991.92	0.00	811.09
Average Final Salary	0.00	0.00	0.00	1752.23	1525.95	1619.34	1713.54	0.00	1606.10
Average Age At Retirement	0.0	0.0	0.0	56.8	56.2	56.8	60.4	0.0	57.1
Number Retired	0	0	0	1	5	3	2	0	11
Period 7/1/80–6/30/81									
Average Monthly Benefit	0.00	278.44	0.00	0.00	814.60	1038.15	1085.40	0.00	850.32
Average Final Salary	0.00	1585.45	0.00	0.00	1676.97	1863.38	1812.66	0.00	1745.08
Average Age At Retirement	0.0	62.6	0.0	0.0	59.0	57.9	61.0	0.0	59.8
Number Retired	0	4	0	0	7	6	6	0	23

Touche Ross & Co.

January 15, 1982

Board of Directors
Minnesota State Retirement System
529 Jackson at 10th Street
St. Paul, Minnesota 55101

Ladies and Gentlemen:

We have performed an actuarial valuation of the Minnesota State Retirement System Highway Patrolmen's Fund as of June 30, 1981.

The valuation was performed on the basis of accepted actuarial methods and procedures, in accordance with the applicable provisions set forth in Minnesota Statutes (Chapter 356) and stipulated in the Contract between the State of Minnesota and Touche Ross & Co.

We hereby certify that on the basis of our valuation, contributions required from employees and the State under Minnesota Statutes (Chapter 352B) represent 93.3% of the requirements set forth in Chapter 356. Furthermore, the entry age normal cost method was utilized in determining the accrued liability for all benefits payable under the Fund.

We further certify the following:

The financing objective of the plan is to pay normal costs (computed as a level percentage of payroll on a variation of the Entry Age Normal actuarial cost method) and to provide level dollar amortization of the unfunded actuarial liability by the year 2009.

The contributions made in recent years have been sufficient to meet this objective.

There have been no significant changes since the previous valuation in the nature of this plan, or actuarial assumptions or methods. Benefits paid to some retirees and beneficiaries were increased 3.209% on January 1, 1981 in accordance with Chapter 11A of the Minnesota Statutes.

Actuarial valuations are performed once a year. The most recent valuation was as of June 30, 1981.

Plan assets are valued at cost value for stock and short-term investments, and adjusted amortized cost for fixed income investments.

All employee and financial data were provided by the plan administrator, and we relied on that data, performing only general checks of reasonableness.

In general, the actuarial assumptions were specified by the administrative board of the plan with the recommendation of the previous actuary on the basis of an experience study performed as of June 30, 1979. However, the interest and salary scale assumptions are set by state law.

It is our opinion that the assumptions used produce results which, in the aggregate, relate reasonably to the past and anticipated experience of the plan.

The schedules presented in the Actuarial Section of the report as of June 30, 1981, were prepared by Touche Ross & Co.

TOUCHE ROSS & CO.

John H. Flittie

John H. Flittie, F.S.A.

Andrea Feshbach

Andrea Feshbach, F.S.A.

AF:llf

900 PILLSBURY CENTER - MINNEAPOLIS, MINNESOTA 55402 - (612) 333-2301

Summary of Actuarial Assumptions and Methods

1. Mortality:	1971 Group Annuity Mortality Table with ages set back 8 years for females. Adopted 1980.
2. Withdrawal:	Graded rates starting at .03 at age 20 and decreasing uniformly to zero at age 50.
3. Disability:	The rates of disability were adapted from experience of the New York State Employees' Retirement System.
4. Expenses:	.18% of covered payroll. Adopted 1980.
5. Interest Rate:	Set by statute at 5% per annum. Adopted 1973.
6. Salary Scale:	Set by statute at 3½% per annum. Adopted 1973.
7. Assumed Retirement Age:	Age 57 for Highway Patrolmen and for State Police Officers hired after June 30, 1961. Age 63 for State Police Officers hired before July 1, 1961.
8. Actuarial Cost Method:	Individual level dollar entry age cost method, modified to approximate a level percentage of future payroll normal cost. Prescribed by statute.
9. Assumed survivor status:	100% assumed married, female spouse 3 years younger. Fifteen percent load on spouse benefits for children's benefits.
10. Contribution refund:	All employees withdrawing after ten years of service were assumed to leave their contributions on deposit and receive a deferred annuitant benefit.

Chapter 356 Balance Sheet as of June 30, 1981

ASSETS AND UNFUNDED ACCRUED LIABILITY

Touche Ross & Co.

A. ASSETS[1]		
1. Cash		$ 471.34
2. Short term investments (at cost)		5,311,051.25
3. Accounts receivable:		
a. Accrued employee contributions	$ 64,992.56	
b. Accrued employer contributions	194,947.76	
c. Employee buybacks	1,655.35	261,595.67
4. Due from the MPRI Fund		177,959.76
5. Accrued interest on investments		545,771.22
6. Dividends declared and payable, but not yet received		75,221.31
7. Investment in debt securities at amortized cost		17,442,751.26
8. Investment in G.N.M.A.'s at amortized cost		1,090,981.23
9. Investment in equities at cost		14,578,171.08
10. Deferred yield adjustment account		248,149.47
11. Participation in MPRI Fund[2]		19,121,181.00
12. Total assets		$ 58,853,304.59
B. UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability to be funded by portion of employee contributions and State "matching" contribution in excess of entry age normal cost contribution and operating expenses		$ 5,732,892.00
2. Unfunded accrued liability to be funded by states "additional" contribution		36,064,856.00
3. Total unfunded accrued liability		$ 41,797,748.00
4. TOTAL ASSETS AND UNFUNDED ACCRUED LIABILITY		$100,651,052.59

CURRENT LIABILITIES AND RESERVES REQUIRED

C. LIABILITIES	
1. Accounts payable—Security purchases	$ 80,497.88
2. Due state employees retirement fund	52,646.00
3. Total liabilities	$ 133,143.88
D. RESERVES REQUIRED	
1. Total reserves required per attached Table 3(b)	$100,517,908.71
2. TOTAL CURRENT LIABILITIES AND RESERVES REQUIRED	$100,651,052.59

[1]Accumulated contributions, without interest, of members not yet retired amounted to $10,251,899 as of June 30, 1981 (includes accrued but upaid contributions).
[2]Participation equals Required Reserves for retired lives participating in the MPRI Fund.

Table 3(b)
Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981

Touche Ross & Co.

	Present Value of Benefits	Present Value of Applicable Portion of Normal Cost Contribution	Accrued Liability Equals Reserves Required (1)-(2)
A. DETERMINATION OF ACCRUED LIABILITY			
1. Active Members			
a. Retirement benefits	$103,282,703	$30,597,764	$ 72,684,939
b. Disability benefits	7,009,086	3,713,188	3,295,898
c. Refundments due to dealth or withdrawal	163,694	496,357	(332,663)
d. Survivor and children's benefits	3,432,941	1,817,590	1,615,351
e. Vested termination benefits	2,951,445	2,124,860	826,585
2. Deferred annuitants	2,163,174	—	2,163,174
3. Former members without vested rights	8,758	—	8,758
4. Survivors—children	126,836	—	126,836
5. Disabled members	1,007,850	—	1,007,850
6. Participation in MPRI Fund	19,121,181	—	19,121,181
7. Total	$139,267,668	$38,749,759	$100,517,909
B. DETERMINATION OF UNFUNDED ACCRUED LIABILITY			
1. Accrued Liability	—	—	$100,517,909
2. Valuation assets	—	—	58,720,161
3. Unfunded accrued liability (1-2)	—	—	41,797,748

Analysis of Income and Deductions from Income and Effect on the Unfunded Accrued Liability

Touche Ross & Co.

A. INCOME AND OTHER FINANCING SOURCES		
1. From employees		
a. Employee contributions	$ 1,217,856.70	
b. Employee accrued contributions receivable	64,992.56	$ 1,282,849.26
2. From employers		
a. Employer contributions	$ 2,083,933.60	
b. Employer additional contributions	1,562,633.37	
c. Employer accrued contributions receivable	194,947.76	3,841,514.73
3. From investments		
a. Interest on securities	$ 2,257,600.74	
b. Dividends on corporate stock	833,390.62	
c. Gain on sale of securities	1,381,153.61	
d. Interest on back payments by employees	787.57	4,472,932.54
4. From MPRI Fund participation		1,322,086.37
5. Income adjustment		330.00
6. Transfers from other funds/plans		3,630.00
7. TOTAL INCOME		$10,923,342.90
B. DEDUCTIONS FROM INCOME AND OTHER FINANCING USES		
1. Benefits		
a. Service retirement annuities	$ 1,576,999.68	
b. Disability retirement benefits	58,432.16	
c. Survivor benefits (children)	29,478.80	$ 1,664,910.64
2. Refundments (employee contributions)		
a. Left service	$ 33,888.75	
b. Employee death	7,029.87	
c. Erroneous deductions	227.32	41,145.94
3. Operating expenses		
a. Administrative expenses	$ 52,646.00	
b. Interest expense on lump sum cancellation	5,230.98	57,876.98
4. Increase in total reserves required		
a. Reserves required 6/30/80	$ 85,830,394.00	
b. Reserves required 6/30/81	100,517,909.00	14,687,515.00
5. Lump Sum Payments		59,910.00
6. TOTAL DEDUCTIONS FROM INCOME		$16,511,358.56
7. EXCESS OF DEDUCTIONS FROM INCOME OVER INCOME		$ 5,588,015.66
C. INCREASE IN UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability 6/30/80*		$36,209,732.81
2. Unfunded accrued liability 6/30/81		41,797,748.47
3. INCREASE IN UNFUNDED ACCRUED LIABILITY		$ 5,588,015.66

*Decreased by $649.19 to reflect prior period adjustments.

DEPTH OF FUNDING—PLAN CONTINUATION BASIS

The Plan Continuation Ratio is an indication of the extent to which the benefits *earned to date* are funded. The value of the benefits earned to date are calculated on a plan continuation basis applying all ongoing actuarial assumptions including assumed future salary increases and turnover. It is measured by the ratio of the valuation assets to the present value of accrued benefits.

On this basis, a ratio of 100% indicates full funding of all benefits earned to date.

	Present Value of Accrued Benefits				
Valuation Date	Active Deferred, Inactive	Retirees and Beneficiaries	Total	Reported Assets	Portion of Benefits Earned To Date Covered By Reported Assets
6-30-79	$49,097,648	$14,228,659	$63,326,307	$41,712,515	65.9%
6-30-80	61,488,728	17,209,819	78,698,547	49,620,012	63.1[1]
6-30-81	71,272,075	20,255,867	91,527,942	58,720,161	64.2

[1]The funding ratio decreased due to a change in actuarial assumptions of which the change for mortality had the greatest impact.

SOLVENCY TEST—FUNDING RATIO

One of the tests of financial solvency is to determine what portion of the accrued liabilities are covered by current assets. If the funding is on a sound basis, the retirement fund will pay all promised benefits when due.

In a short term solvency test, the funds current assets are compared with the liabilities for active member contributions (liability 1), the liabilities for future benefits to present retired lives (liability 2) and the employer liability for service already rendered by active employees (liability 3). Generally, if the fund has been using level cost financing, the funded portion of liability 3 should increase over time with liability 1 and 2 being fully funded. Liability 3 being fully funded is very rare.

	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered By Reported Assets			
Valuation Date	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)	Funding Ratio (1) + (2) + (3)
6-30-73	$ 4,137,612	$ 6,371,350	$22,755,848	$16,594,046	100%	100%	26.7%	49.9%
6-30-74	4,735,107	7,167,513	28,876,492	19,646,248	100	100	26.8	48.2
6-30-75	5,404,991	7,783,120	30,158,762	22,125,269	100	100	29.6	51.0
6-30-76	6,155,117	8,708,776	32,358,063	25,593,705	100	100	33.2	54.2
6-30-77	6,873,913	11,132,877	36,019,646	31,081,251	100	100	36.3	57.5
6-30-78	7,747,055	12,618,680	39,277,660	36,348,010	100	100	40.7	60.9
6-30-79	8,505,215	14,228,659	46,063,984	41,712,515	100	100	42.1	61.5
6-30-80	9,432,724	17,209,819	59,187,851	49,620,012	100	100	38.8	57.8[1]
6-30-81	10,251,899	20,255,867	70,010,143	58,720,161	100	100	40.3	58.4

1The funding ratio decreased due to a change in actuarial assumptions of which the change for mortality had the greatest impact.

CURRENT SUPPORT

Employee and employer contributions are set by statute at a specified rate and apply to total salary. The employer additional contributions are for the purpose of paying for the unfunded accrued liability. It has been a philosophy of the legislature that the employee and employer share the normal cost of retirement benefits on an equal basis.

	Employee Contributions	Employer Normal Cost Contributions	Employer Additional Contributions	Total
Highway Patrol Fund	7%	12%	9%	28%

UNFUNDED ACCRUED LIABILITY (UAL)

The unfunded accrued liability is the total liability of a fund for benefits earned in the past as well as those earnable in the future, less the assets on hand, less the present value of future employee contributions and less the present value of future employer normal cost contributions.

Looking at just the dollar amounts of the UAL can be misleading. By dividing the unfunded accrued liability by the active employee payroll, we can provide an index which indicates whether the fund is becoming financially stronger or weaker. The smaller the ratio of unfunded liabilities to active member payroll the stronger the fund.

Valuation Date	Aggregate Accrued Liabilities	Reported Assets	UAL	Active Member Payroll	UAL As A % of Active Member Payroll
6-30-73	$ 33,264,810	$16,594,046	$16,670,764	$ 9,036,012	184.5%
6-30-74	40,779,112	19,646,248	21,132,864	11,051,726	191.2
6-30-75	43,346,873	22,125,269	21,221,604	11,214,526	189.2
6-30-76	47,221,956	25,593,705	21,628,251	11,996,584	180.3
6-30-77	54,026,436	31,081,251	22,945,185	12,974,808	176.8
6-30-78	59,643,395	36,348,010	23,295,385	13,771,848	169.2
6-30-79	67,797,858	41,712,515	26,085,343	16,429,135	158.8
6-30-80	85,830,394	49,620,012	36,210,382	18,003,587	201.1[1]
6-30-81	100,517,909	58,720,161	41,797,748	19,967,408	209.3

[1]The ratio increased due to a change in actuarial assumptions of which the change for mortality had the greatest impact.

NORMAL COST

The entry age normal cost method of funding is required by statute for valuation purposes. Under this method, a level contribution rate is determined, which, if contributed on behalf of all employees from date of entry into service to date of separation, will be adequate to provide the full funding of prospective benefits. Factors of great importance in such determinations are the projected rate of earnings of the fund, the rates of separation from active service, salary progression scales and mortality rates.

Comparative normal cost figures, including administrative expenses, were as follows:

Valuation Date	Normal Cost
6-30-77	14.72%
6-30-78	14.44
6-30-79	14.83
6-30-80	15.68
6-30-81	15.95

MINNESOTA STATE RETIREMENT SYSTEM
JUDGES RETIREMENT FUND

FINANCIAL
STATISTICAL
ACTUARIAL

SECTION
IV

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
Veterans Service Building
St. Paul, Minnesota 55155

GERALD W. CHRISTENSON
Legislative Auditor

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Francis D. Hage, Chairman
Board of Directors
Minnesota State Retirement System

and

Paul L. Groschen, Executive Director
Minnesota State Retirement System

We have examined the Accounting Balance Sheet of the Judges Retirement Fund as of June 30, 1981 and 1980, and the related Statement of Revenues and Expenditures for the fiscal years then ended and the Statement of Changes in Reserve Accounts for the fiscal year ended June 30, 1981, all of which are presented in the Financial portion of this section. We have also examined the Chapter 356 Balance Sheet and the Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981 and the related Analysis of Income and Deductions From Income and Effect on the Unfunded Accrued Liability for the fiscal year then ended, all of which are presented in the Actuarial portion of this section. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The reserves required for the fund, totaling $32,615,251 and $31,367,041 at June 30, 1981 and 1980, respectively, are presented in accordance with reports certified by the consulting actuary of the system.

In our opinion, the aforementioned financial statements in the Financial portion of this section fairly present the financial position of the Judges Retirement Fund as of June 30, 1981 and 1980, and the results of operations for the fiscal years then ended and the changes in its reserve accounts for the fiscal year ended June 30, 1981, in conformity with generally accepted accounting principles (GAAP) applied on a consistent basis. In addition, relying on the certification from the consulting actuary as to the required reserves, the aforementioned financial statements in the Actuarial portion of this section fairly present the financial position of the Judges Retirement Fund as of June 30, 1981 and the results of operation's for the fiscal year then ended in accordance with Minn. Stat. Section 356.20.

The Statement of Changes in Investments for the fiscal years ended June 30, 1981 and 1980, is presented for supplementary analysis purposes and is not necessary for the fair presentation of the financial statements of the Judges Retirement Fund in conformity with GAAP. This statement has been subjected to the tests and other audit procedures applied in the examination of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the respective fund financial statements taken as a whole.

The accompanying supplemental information in the Statistical and Actuarial portions of this section is not necessary for a fair presentation of the financial statements in conformity with GAAP. This information has not been subjected to sufficient audit procedures and tests to express, and we do not express, an opinion on this supplemental information.

Sincerely,

Gerald W. Christenson

Gerald W. Christenson
Legislative Auditor

January 15, 1982

ACCOUNTING BALANCE SHEET
JUNE 30, 1981 AND 1980

ASSETS	1981	1980
Cash	$ 22,247.08	$ 5,567.54
Short term investments[2]	1,012,000.00	554,000.00
Accounts Receivable		
a) Accrued Judges contributions	2,300.81	1,392.82
b) Miscellaneous	40.00	0.00
Accrued interest on investments	52,310.54	59,524.58
Dividends declared and payable, not yet received	6,082.50	4,187.25
Investments in debt securities at amortized cost[2]	1,754,037.28	2,189,579.54
Investments in GNMA's at amortized cost[2]	245,687.97	256,537.33
Investments in equities at cost[2]	729,077.34	1,083,743.17
Deferred Yield Adjustment Account	88,337.51	(4,500.00)
Participation in the MPRI Fund[3]	4,904,840.00	3,760,185.00
Total Assets	$8,816,961.03	$7,910,217.23
LIABILITIES AND RESERVES		
Liabilities		
Deferred credits and county reimbursement	$ 78,542.79	$ 91,818.88
Accounts Payable		
a) Security purchases	0.00	28,723.82
Due To SER Fund	34,077.95	11,386.58
Due To MPRI Fund	190,399.60	135,840.00
Due To General Fund	0.00	1,386.66
Total Liabilities	$ 303,020.34	$ 269,155.94
Reserves		
Minnesota Post Retirement Investment Fund reserve[3]	$4,904,840.00	$3,760,185.00
Retirement reserve "old law" Judges	974,292.00	873,720.00
Retirement reserve—Add'l Judges & Survivors	7,276,502.00	7,290,998.00
Judges contribution reserve	2,177,802.37	1,867,726.05
State contribution reserve[4]	(6,819,495.68)	(6,151,567.76)
Total Reserves	$8,513,940.69	$7,641,061.29
Total Liabilities and Reserves	$8,816,961.03	$7,910,217.23

The footnotes are an integral part of the financial statements.

STATEMENT OF REVENUES AND EXPENDITURES FOR FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

REVENUES	1981	1980
From Judges		
Judges contributions	$ 489,713.52	$ 415,914.08
From Employers		
Employer contributions	1,069,137.79	1,082,907.93
From Investments:		
Interest on short term, GNMA's and debt securities	273,188.69	271,724.99
Dividends on corporate stock	61,500.13	53,393.38
Gain on sale of stock	109,442.44	7,831.00
Loss on sale of short term securities	(4,968.75)	(10,618.75)
Interest earned on mortality adjustment	0.00	2,184.09
From MPRI Fund Participation		
Participation in MPRI Fund income[5]	303,044.32	171,612.94
Other		
County reimbursements	95,223.06	98,243.88
Interest on back payments	0.00	204.56
Prior year reimbursements	443.00	7,143.30
Total Revenues	$2,396,724.20	$2,100,541.40
EXPENDITURES		
Benefits		
Judges plan		
Retirement annuities	$ 622,870.45	$ 545,987.41
Survivors benefits	50,392.74	49,596.84
Disabilities	16,825.20	16,559.52
Supreme and district court judges plan	409,441.47	406,990.86
Survivors of supr. and dist. court judges plan	214,823.03	188,301.42
Survivors of county court judges plan	23,737.82	24,471.33
County paid judges plan	105,168.54	106,725.24
Refunds		
Left service	21,320.34	4,019.31
Erroneous contributions	1,221.80	2,918.49
Employee death	14,079.63	0.00
Interest paid	9,885.83	198.34
Other Expenses		
Administrative expenses	34,077.95	11,036.58
Total Expenditures	$1,523,844.80	$1,356,805.34
Excess of Revenues over Expenditures	$ 872,879.40	$ 743,736.06

The footnotes are an integral part of the financial statements.

CHANGES IN RESERVE ACCOUNTS
FISCAL YEAR ENDED JUNE 30, 1981

	Total Reserves	Reserve for Judges Contributions	Reserve for Add'l Judges and Surv.	Reserve for "Old Law" Judges	Reserve for Participation in MPRI Fund	Reserve for State Contributions
Balances at June 30, 1980	$ 7,641,061.29	$1,867,726.05	$7,290,998.00	$873,720.00	$3,760,185.00	$(6,151,567.76)
Reserves increased by:						
Judges contributions	489,713.52	468,099.55	21,613.97			
Employer contributions	1,069,137.79					1,069,137.79
Investment income	329,720.07					329,720.07
Gain on sale of stock	109,442.44					109,442.44
Participation in MPRIF income	303,044.32				303,044.32	
County re-imbursements	95,223.06					95,223.06
	$10,037,342.49	$2,335,825.60	$7,312,611.97	$873,720.00	$4,063,229.32	$(4,548,044.40)
Reserves decreased by:						
Benefits paid	(1,443,259.25)		(803,563.60)	(125,460.38)	(514,235.27)	(9,885.83)
Refunds paid	(46,507.60)	(36,621.77)				
Administrative expense (net)	(33,634.95)					(33,634.95)
	$ 8,513,940.69	$2,299,203.83	$6,509,048.37	$748,259.62	$3,548,994.05	$(4,591,565.18)
Transfers between reserves:						
Adjust Add'l Judges and Surv.	0.00		767,453.63			(767,453.63)
Adjust "Old Law" reserve	0.00			(21.22)		21.22
Actuarial value of benefits authorized	0.00	(121,401.46)		226,053.60	1,165,446.35	(1,270,098.49)
Mortality loss adjustment	0.00				190,399.60	(190,399.60)
Balances at June 30, 1981	$8,513,940.69	$2,177,802.37	$7,276,502.00	$974,292.00	$4,904,840.00	$(6,819,495.68)

The footnotes are an integral part of the financial statements.

Notes to the Financial Statements

1. Summary of Significant Accounting Policies

(a) Administration of System

The Judges Retirement Fund consists of five defined benefit retirement plans covering all judges and their spouses of the State of Minnesota. The fund is administered in accordance with Chapter 490 of Minnesota Statutes.

(b) Judges Contributions

Judges contributions to the fund are based on total salary at the Social Security contribution rate plus ½ of 1%, but not less than 7% in total.

Those judges who elected to participate in the Social Security program, first pay up to the maximum to Social Security each year and then to Judges Retirement Fund. The five remaining Supreme Court Judges who did not elect to be covered by the Judges Retirement Plan contribute 4% of total salary to the fund. There were four active County Court Judges at June 30, 1981 who had elected to continue the 4% contribution to the special survivor account in addition to the regular contribution rate. The Judges Contribution Reserve represents member contributions less amounts transferred to reserves for retirement and disability or refunded.

(c) Employer Contributions

Employer contributions are on a "terminal funding basis." The counties pay a basic retirement benefit for county and probate court judges retired prior to January 1, 1974. All other funds necessary for the administration of the Judges Retirement Fund are appropriated from the State's General Fund as needed.

(d) Actuarial Valuations

Actuarial valuations are done yearly and actuarial experience studies are done every four years. The last completed experience study was as of June 30, 1979. The entry age normal method, a projected benefit cost method, is used to value the fund.

(e) Benefit Reserves

The Minnesota Post Retirement Investment Fund (MPRIF) Reserve and the Participation in MPRIF are equal to the retirement fund's required reserves for retired lives. The ''Old Law'' Judges and the Additional Judges and Survivor Benefit Reserves represent the required reserves as determined by the actuary.

(f) Investments

Stock and short-term investments are reflected on the balance sheet at cost. Fixed income investments are reflected on the balance sheet at adjusted amortized cost. Income is recognized over the life of the investment. The cost of investments sold is determined using the original cost for stock and amortized cost for debt securities. Dividend income is recognized based on the payable date for dividends declared.

(g) Basis of Accounting

The basic financial statements were prepared using the accrual basis of accounting.

2. **Market Value**

	June 30, 1981	June 30, 1980
Equities	$ 885,980	$1,172,597
Debt Securities (including G.N.M.A.)	1,387,295	2,149,063
Short Term Investments	1,024,520	561,694
Total	$3,297,795	$3,883,354

3. The retirement funds actual participation in the net assets of the MPRIF at June 30, 1981, was $4,869,044 or $35,796 less than the required reserves. The deficiency is part of the MPRIF and is funded by earnings in excess of the 5% required. The funds actual participation at June 30, 1980 was $3,722,397 or $37,788 less than the required reserves.

4. The ''State Contribution Reserve'' is a balancing item which reflects the assets available for future retirees or the deficit created due to the lack of assets needed to place the currently retired judges and survivors on a funded basis.

5. **MPRI Fund Income**

	FY 1981	FY 1980
Total income	$477,302	$281,415
Deferred from prior year	95,457	–0–
Total Available	$572,759	$281,415
Used for deficiency	1,992	14,345
Deferred to next F.Y.	267,723[a]	95,457[b]
Recognized	$303,044	$171,613

[a]To fund a 7.436% benefit increase effective January 1, 1982.
[b]To fund a 3.209% benefit increase effective January 1, 1981.

CHANGES IN INVESTMENTS
FISCAL YEARS ENDED JUNE 30, 1981 AND 1980

CORPORATE STOCK (At Cost)	1981	1980
Balances as of June 30 P.Y.	$1,083,743.17	$ 754,206.56
Add: Purchases	135,230.18	423,349.90
	$1,218,973.35	$1,177,556.46
Deduct: Frac. stock dividends sold	7.74	38.89
Stock sold	489,888.27	93,774.40
Balances as of June 30 C.Y.	$ 729,077.34	$1,083,743.17
Current Yield	5.3%	5.2%
Market Value, June 30 C.Y.	$ 885,979.50	$1,172,597.25
DEBT SECURITIES (Par Value)		
Balances as of June 30 P.Y.	$2,477,235.94	$2,290,113.71
Add: Purchases	0.00	300,000.00
	$2,477,235.94	$2,590,113.71
Deduct: Maturities and calls	23,213.86	112,877.77
Debt securities sold	425,000.00	0.00
Balances as of June 30 C.Y.*	$2,029,022.08	$2,477,235.94
Avg. Yield to Maturity	9.14%	9.36%
Book value of debt securities	$1,999,725.25	$2,446,116.87
Estimated Current Value	$1,387,294.82	$2,149,063.16
SHORT TERM INVESTMENTS (At Cost)		
Balances as of June 30 P.Y.	$ 554,000.00	$ 613,480.00
Add: Purchases	8,534,000.00	8,023,000.00
	$9,088,000.00	$8,636,480.00
Deduct: Redemptions	8,076,000.00	8,082,480.00
Balances as of June 30 C.Y.	$1,012,000.00	$ 554,000.00
*Distribution of debt securities:		
U.S. Govt. Agency & Govt. Guar.	$ 345,938.64	$ 362,879.18
Canadian Govt. & Govt. Guar.	300,000.00	300,000.00
Corporate obligations	1,383,083.44	1,814,356.76
	$2,029,022.08	$2,477,235.94

RETURN ON INVESTMENTS

In Minnesota, insurance companies calculate earnings using the following formula:

$$\frac{2I}{A+B-I}$$

where, I = Net investment income
A = Sum of invested assets, cash, accrued interest and dividends at the beginning of the year
B = Same as A except sum is at the end of the year

Earnings for the last three years were calculated using the above formula, modified to include the Deferred Yield Adjustment Account in the beginning and ending assets. Income on investments is accounted for on an accrual basis and includes interest on bonds (adjusted for amortization of premiums and accumulation of discounts), interest on short term investments, dividends on corporate stock, premium on bonds called and the sum of these adjusted for amortization of the deferred yield adjustment account. The deferred yield adjustment account represents the capitalized losses on bond sales to be written off against income over the remaining life of the bonds sold.

Earnings	**1981**	**1980**	**1979**
Excluding gain or loss on sales	8.67%	8.61%	8.95%
Including gain or loss on sales	11.53%	8.54%	9.12%

DISTRIBUTION OF INVESTMENTS

The law provides that the aggregate of equity type investments (stock, convertible issues, investments in commingled funds and investments in limited partnerships) cannot exceed 75% of the total invested assets at market value at any time.

The funds assets were invested at market as follows at June 30:

	1981	**1980**	**1979**
Bonds			
Government			
U.S. Government	7.0%	8.0%	12.3%
Canadian Government	5.9%	6.6%	8.1%
Total Government	12.9%	14.6%	20.4%
Corporate			
Public Utilities	9.8%	10.3%	12.8%
Financial	7.4%	12.1%	8.3%
Industrial	9.9%	16.1%	16.4%
Transportation	2.1%	2.2%	2.7%
Total Corporate	29.2%	40.7%	40.2%
Total Bonds	42.1%	55.3%	60.6%
Short Term Investments	31.1%	14.5%	17.6%
Equities[1]	26.8%	30.2%	21.8%
Total Portfolio (%)	100.0%	100.0%	100.0%
Total Portfolio (Millions $)	$ 3.3	$ 3.9	$ 3.6

[1] Investments in commingled funds and limited partnerships were authorized by the 1981 legislature. There were no investments of this type at June 30, 1981 nor were there any investments in convertible issues.

SCHEDULE OF REVENUE BY SOURCE

Year Ending	Employee Contributions	Employer Contributions	Investment Income	Miscellaneous	Total
6-30-74	$231,146	$ 488,218	$ 82,841	$ 0	$ 802,205[1]
6-30-75	309,108	1,875,114	110,844	0	2,295,066
6-30-76	313,898	1,690,994	109,346	0	2,114,238
6-30-77	311,528	1,198,078	328,050	0	1,834,656
6-30-78	423,812	1,319,305	319,324	0	2,062,441
6-30-79	403,497	2,040,717	449,883	0	2,894,097[3]
6-30-80	415,914	1,181,152	496,332	7,143	2,100,541
6-30-81	489,714	1,164,361	742,207	443	2,396,725

SCHEDULE OF EXPENSES BY TYPE

Year	Aggregate Benefit Payments				Admin.	
Ending	Annuities	Disabilities	Refunds	Interest	Expense	Total
6-30-74	$ 12,503	$ 0	$ 74	$ 0	$ 9,008	$ 21,585[1]
6-30-75	1,021,258	0	8,350	0	11,972	1,041,580
6-30-76	1,076,510	0	7,075	0	11,500	1,095,085
6-30-77	996,092	3,239	2,827	0	15,775	1,071,933[2]
6-30-78	1,019,706	11,727	1,726	0	13,694	1,046,853
6-30-79	1,253,320	25,761	4,371	0	15,437	1,298,889[3]
6-30-80	1,322,073	16,560	6,937	198	11,037	1,356,805
6-30-81	1,426,434	16,825	36,622	9,886	34,078	1,523,845

[1]The fund was established January 1, 1974. Even though all plans were not a part of the fund until later years, their revenue and expenses are included retroactively for consistency.

[2]Benefits for two groups of recipients were suspended for part of the year due to a legal challenge and lack of appropriation. Their full benefits were paid during F.Y. 78.

[3]The County Paid Judges Plan was transferred from the counties to the fund effective July 1, 1978.

SUMMARY DATA FOR THE FISCAL YEAR ENDED JUNE 30, 1981

ACTIVE	Number	Increases	Decreases					Net	Number At End Of Year			Average Accumulated
JUDGES	Beg. of Yr.	New	Refunds	Annuities	Disabilities	Inactive	Death	Transfers	Total	Vested	Non-Vested	Contributions
Judges Plan	215	11	4	6	0	1	0	0	215	103	112	$9,983
Supreme Court Judges	6	0	0	1	0	0	0	0	5	5	0	0*
Total	221	11	4	7	0	1	0	0	220	108	112	$9,983

INACTIVE	Number	Increases From	Decreases To			Number At End Of Year			Average Accumulated
JUDGES	Beg. of Yr.	Active	Active	Annuity	Refunds	Total	Vested	Non-Vested	Contributions
Judges Plan	7	1	0	1	1	6	5	1	$4,853

	Number	Increases		Decreases		Number	Average	Average Monthly Benefit
ANNUITANTS	Beg. of Yr.	New	Re-instate	Deaths	Rescinded	End of Yr.	Monthly Benefit	For Fiscal Year New Annuitants
Service	75	9	0	7	0	77	$1,213.83	$1,531.07
Disability	3	0	0	0	0	3	824.58	0.00
Survivors	43	4	0	1	0	46	562.05	757.61
Total	121	13	0	8	0	126	$ 968.85	$1,293.01

	Number of Refunds			Average Age of Member		Average Years of Service Forfeited		Number of Members Forfeiting Vested Rights
REFUNDS	Male	Female	Total	Male	Female	Male	Female	
Judges Plan	5	0	5	53.6	—	6.4	—	0

*Contributions to the survivors fund are not refundable, therefore they are not credited to the individuals accounts.

JUDGES ELIGIBLE TO AN IMMEDIATE ANNUITY ON JUNE 30, 1981

JUDGES PLAN	Male	Female	Total
Full Benefit	13	0	13
Judges Not Eligible to Immediate Benefit	193	9	202
Total	206	9	215

SUPREME COURT JUDGES	Male	Female	Total
Full Benefit	3	0	3
Judges Not Eligible to Immediate Benefit	2	0	2
Total	5	0	5

ANNUITY AND DISABILITY DEATHS

	Average Age At Death				Average Years of Retirement				Number of Deaths	
Year	Annuity		Disability		Annuity		Disability		Annuity	Disability
Ending	Male	Female	Male	Female	Male	Female	Male	Female		
6-30-81	85.8	86.5	—	—	11.0	4.0	—	—	8	0

REFUND STATISTICS

Year	Number of Refunds			Average Age of Judges		Average Years of Service Forfeited		Number of Judges Forfeiting Vested Rights
Ending	Male	Female	Total	Male	Female	Male	Female	
6-30-81	5	0	5	53.6	—	6.4	—	0

SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT
JUNE 30, 1981

Amount of Monthly Benefit	Deferred	Number of Retirees	Type Of Retirement*									Option Selected#			
			1	2	3	4	5	6	7	8	9	Life	I	II	III
$ 1–$200	0	4	0	0	0	0	0	1	3	0	0	0	0	4	0
201– 400	0	11	0	0	2	0	0	5	3	0	1	0	0	11	0
401– 600	1	16	3	0	6	0	0	0	2	0	5	3	1	12	0
601– 800	3	31	7	1	1	0	0	20	0	0	2	5	3	23	0
801–1000	0	9	4	1	0	0	0	2	0	1	1	3	2	4	0
1001–1200	0	15	11	0	0	0	1	0	0	0	3	7	4	3	1
1201–1400	0	7	5	0	0	1	0	1	0	0	0	5	0	2	0
1401–1600	0	21	5	0	0	14	0	0	0	2	0	3	2	16	0
1601–1800	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0
1801–2000	1	6	2	0	0	1	0	0	0	3	0	2	0	4	0
Over 2000	0	5	2	0	0	2	0	0	0	1	0	2	0	3	0
	5	126	40	2	9	18	1	29	8	7	12	31	12	82	1

Deferred—Former member with deferred future benefit

*Type of Retirement

Benefits provided under laws effective January 1, 1974

1—Judges Plan—Service (MPRIF)
2—Judges Plan—Disability (MPRIF)
3—Judges Plan—Survivor

Benefits provided under laws in effect prior to January 1, 1974

4—Supreme and District Court Judges Plan—Service
5—Supreme and District Court Judges Plan—Disability
6—Survivor of Supreme and District Court Judges Plan
7—Survivors of County Court Judges Plan
8—Judges Plan—Service
9—County Paid Judges Plan—Service

#Option Selected

Life
Option I —Joint & Survivor
Option II —Life plus 50% Survivor
Option III—Period Certain

SCHEDULE OF AVERAGE ANNUITY AND DISABILITY BENEFIT PAYMENTS AUTHORIZED WITHIN A FISCAL YEAR

	YEARS OF CREDITED SERVICE					
Retirement Effective Dates	**10-15**	**15-20**	**20-25**	**25-30**	**30-35**	**TOTALS**
Period 7/1/79—6/30/80						
Average Monthly Benefit	0.00	1508.49	1571.65	0.00	0.00	1546.39
Average Final Salary	0.00	3325.61	2946.47	0.00	0.00	3098.13
Average Age At Retirement	0.0	67.2	68.3	0.0	0.0	67.8
Number Retired	0	2	3	0	0	5
Period 7/1/80—6/30/81						
Average Monthly Benefit	865.72	1065.62	1815.93	1300.53	2750.00	1531.07
Average Final Salary	3559.26	3261.65	3278.75	2842.21	4333.33	3474.63
Average Age At Retirement	70.9	64.3	66.1	66.0	66.3	66.8
Number Retired	2	2	1	2	2	9

Touche Ross & Co.

January 15, 1982

Board of Directors
Minnesota State Retirement System
529 Jackson at 10th Street
St. Paul, Minnesota 55101

Ladies and Gentlemen:

We have performed an actuarial valuation of the Minnesota State Retirement System Judges' Retirement Fund as of June 30, 1981.

The valuation was performed on the basis of accepted actuarial methods and procedures, in accordance with the applicable provisions set forth in Minnesota Statutes (Chapter 356) and stipulated in the Contract between the State of Minnesota and Touche Ross & Co.

We hereby certify that the entry age normal cost method was utilized in determining the accrued liability for all benefits payable under the Fund.

We further certify the following:

The actuarial valuation determines a contribution amount which includes the normal cost (computed as a level percentage of payroll on a variation of the Entry Age Normal actuarial cost method) and a level dollar amortization of the unfunded actuarial liability by the year 2009.

Participants contribute amounts specified by state law. State employer contributions to the fund are made on a "terminal funding" basis. Total contributions for the year ended June 30, 1981 were less than the amount determined as of June 30, 1980 by the method described in the above paragraph.

There have been no significant changes since the previous valuation in the nature of this plan, or actuarial assumptions or methods. Benefits paid to some retirees and beneficiaries were increased 3.209% on January 1, 1981 in accordance with Chapter 11A of the Minnesota Statutes.

Actuarial valuations are performed once a year. The most recent valuation was as of June 30, 1981.

Plan assets are valued at cost value for stock and short-term investments, and adjusted amortized cost for fixed income investments.

All employee and financial data were provided by the plan administrator, and we relied on that data, performing only general checks of reasonableness.

In general, the actuarial assumptions were specified by the administrative board of the plan with the recommendation of the previous actuary on the basis of an experience study performed as of June 30, 1979. However, the interest and salary scale assumptions are set by state law.

It is our opinion that the assumptions used produce results which, in the aggregate, relate reasonably to the past and anticipated experience of the plan.

The schedules presented in the Actuarial Section of the report as of June 30, 1981, were prepared by Touche Ross & Co.

TOUCHE ROSS & CO.

John H. Flittie

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AF:llf

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Summary of Actuarial Assumptions and Methods

A. Judges Retirement Plan

1. Mortality:	1971 Group Annuity Mortality Table with ages set back 8 years for females. Adopted 1980
2. Withdrawal:	None. Adopted 1980
3. Disability:	Graded rates based on actual experience, as adjusted by the June 30, 1979 experience analysis. Adopted 1980
4. Expenses:	.16% of payroll. Adopted 1980
5. Interest Rate:	Set by statute at 5% per annum. Adopted 1973.
6. Salary Scale:	Set by statute at 3½% per annum. Adopted 1973.
7. Assumed Retirement Age:	Age 68. Adopted 1980.
8. Actuarial Cost Method:	Individual level dollar entry age cost method, modified to approximate a level percentage of future payroll normal cost. Prescribed by statute.
9. Social Security:	
a. Primary amount:	$677.00 per month, increasing with salary scale. Adopted 1974.
b. Level contribution rate:	6.99% assumed for all future years. Adopted 1974.
c. Covered annual wages:	$29,700 increasing with salary scale. Adopted 1974.

B. Supreme Court Justices Only

1. Retirement Age:	Latest of: —attainment of age 70 —completion of 12 years of service, or —one year from valuation date. Adopted 1979.

Chapter 356 Balance Sheet as of June 30, 1981

ASSETS AND UNFUNDED ACCRUED LIABILITY

Touche Ross & Co.

A. ASSETS[1]		
1. Cash		$ 22,247.08
2. Short term investments (at cost)		1,012,000.00
3. Accounts receivable:		
a. Accrued judges' contributions	$ 2,300.81	
b. Miscellaneous	40.00	2,340.81
4. Accrued interest on investments		52,310.54
5. Dividends declared and payable, but not yet received		6,082.50
6. Investment in debt securities at amortized cost		1,754,037.28
7. Investment in G.N.M.A.'s at amortized cost		245,687.97
8. Investment in equities at cost		729,077.34
9. Deferred yield adjustment account		88,337.51
10. Participation in MPRI Fund[2]		4,904,840.00
11. Total assets		$ 8,816,961.03
B. UNFUNDED ACCRUED LIABILITY		
1. Total unfunded accrued liability		$24,101,310.00
2. TOTAL ASSETS AND UNFUNDED ACCRUED LIABILITY		$32,918,271.03

CURRENT LIABILITIES AND RESERVES REQUIRED

C. LIABILITIES	
1. Due SER Fund	$ 34,077.95
2. Due MPRI Fund	190,399.60
3. Due General Fund	0.00
4. Deferred Credits and County Reimbursement	78,542.79
5. Total liabilities	$ 303,020.34
D. RESERVES REQUIRED	
1. Total reserves required per attached Table 3(b)	$32,615,250.69
2. TOTAL CURRENT LIABILITIES AND RESERVES REQUIRED	$32,918,271.03

[1]Accumulated contributions, without interest, of members not yet retired amounted to $2,177,802.37 as of June 30, 1981 (includes accrued but unpaid contributions).

[2]Participation equals Required Reserves for retired lives participating in the MPRI fund as of June 30, 1981, excluding the January 1, 1982 benefit increases.

Table 3(b)
Determination of Accrued Liability and Unfunded Accrued Liability as of June 30, 1981

Touche Ross & Co.

	Present Value of Benefits	Present Value of Applicable Portion of Normal Cost Contribution	Accrued Liability Equals Reserves Required (1)-(2)
A. DETERMINATION OF ACCRUED LIABILITY			
1. Active Members			
a. Retirement benefits	$30,685,814	$13,291,677	$17,394,137
b. Disability benefits	1,719,240	1,187,487	531,753
c. Refundments due to death or withdrawal	—	—	—
d. Surviving spouse benefits	4,598,192	3,241,185	1,357,007
2. Deferred annuitants	159,527	—	159,527
3. Former members without vested rights	17,193	—	17,193
4. Retirement and survivors benefits from Judges' Fund	8,250,794	—	8,250,794
5. Participation in MPRI Fund	4,904,840	—	4,904,840
6. Total	$50,335,600	$17,720,349	$32,615,251
B. DETERMINATION OF UNFUNDED ACCRUED LIABILITY			
1. Accrued Liability	—	—	$32,615,251
2. Valuation assets	—	—	8,513,941
3. Unfunded accrued liability (1-2)	—	—	24,101,310

Analysis of Income and Deductions from Income and Effect on the Unfunded Accrued Liability

Touche Ross & Co.

A. INCOME		
1. From Judges' contributions		$ 489,713.52
2. From Employer contributions		1,069,137.79
3. From investments		
a. Interest on securities, short term and GNMA's	$ 273,188.69	
b. Dividends on corporate stock	61,500.13	
c. Gain on sale of stock	109,442.44	
d. Loss on sale of short term securities	(4,968.75)	439,162.51
4. Participation in MPRI Fund income		303,044.32
5. Other revenues		
a. County reimbursements	$ 95,223.06	
b. Interest on back payments	0.00	
c. Prior year reimbursements	443.00	95,666.06
6. TOTAL INCOME		$ 2,396,724.20
B. DEDUCTIONS FROM INCOME		
1. Benefits		
a. Judges' Plan service retirement annuities	$ 622,870.45	
b. Judges' Plan disability retirement benefits	16,825.20	
c. Judges' Plan survivor benefits (spouses)	50,392.74	
d. Supreme and District Court Judges' Plan retirement annuities	409,441.47	
e. Supreme and District Court Judges' Plan survivor benefits	214,823.03	
f. County Paid Judges' Plan retirement annuities	105,168.54	
g. County Court Judges' Plan survivor benefits	23,737.82	$ 1,443,259.25
2. Refundments (employee contributions)		
a. Left service	$ 21,320.34	
b. Erroneous deductions	1,221.80	
c. Employee death	14,079.63	
d. Interest paid	9,885.83	46,507.60
3. Administrative expenses		34,077.95
4. Increase in total reserves required		
a. Reserves required 6/30/80	$31,367,041.00	
b. Reserves required 6/30/81	32,615,250.69	1,248,209.69
5. TOTAL DEDUCTIONS FROM INCOME		$ 2,772,054.49
6. EXCESS OF DEDUCTIONS FROM INCOME OVER INCOME		$ 375,330.29
C. INCEASE IN UNFUNDED ACCRUED LIABILITY		
1. Unfunded accrued liability 6/30/80		$23,725,979.33
2. Unfunded accrued liability 6/30/81		24,101,309.62
3. INCREASE IN UNFUNDED ACCRUED LIABILITY		$ 375,330.29

DEPTH OF FUNDING—PLAN CONTINUATION BASIS

The Plan Continuation Ratio is an indication of the extent to which the benefits *earned to date* are funded. The value of the benefits earned to date are calculated on a plan continuation basis applying all ongoing actuarial assumptions including assumed future salary increases and turnover. It is measured by the ratio of the valuation assets to the present value of accrued benefits.

On this basis, a ratio of 100% indicates full funding of all benefits earned to date.

Valuation Date	Present Value of Accrued Benefits: Active, Deferred, Inactive	Retirees and Beneficiaries	Total	Reported Assets	Portion of Benefits Earned To Date Covered By Reported Assets
6-30-77	$12,699,612	$ 3,187,489	$15,887,101	$3,946,736	24.8%
6-30-78	13,422,248	3,844,849	17,267,277	4,933,299	28.6
6-30-79	17,665,090	10,648,749	28,313,839	6,845,192	24.2[1]
6-30-80	20,698,947	11,924,903	32,623,850	7,641,062	23.4
6-30-81	24,231,198	13,155,634	37,386,832	8,513,941	22.8

[1]Several law changes subsequent to the establishment of the fund brought all Judges and Judges Survivors plans into the fund. This is the first valuation that recognized all of the various Judges plans.

SOLVENCY TEST—FUNDING RATIO

One of the tests of financial solvency is to determine what portion of the accrued liabilities are covered by current assets. If the funding is on a sound basis, the retirement fund will pay all promised benefits when due.

In a short term solvency test, the funds current assets are compared with the liabilities for active member contributions (liability 1), the liabilities for future benefits to present retired lives (liability 2) and the employer liability for service already rendered by active employees (liability 3). Generally, if the fund has been using level cost financing, the funded portion of liability 3 should increase over time with liability 1 and 2 being fully funded. Liability 3 being fully funded is very rare.

Valuation Date	Aggregate Accrued Liabilities For: (1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Accrued Liabilities Covered By Reported Assets (1)	(2)	(3)	Funding Ratio (1) + (2) + (3)
6-30-74	$ 231,072	$ 679,945	$13,651,955	$ 780,620	100%	80.8%	0%	5.4%[1]
6-30-75	398,946	1,464,278	12,374,606	1,970,436	100	100	.9	13.8
6-30-76	726,518	1,635,315	12,874,727	2,375,815	100	100	.1	15.7
6-30-77	920,246	3,187,489	15,124,130	3,946,736	100	94.9	0	20.5
6-30-78	1,263,739	3,844,849	15,276,202	4,933,299	100	95.4	0	24.2
6-30-79	1,553,850	10,648,749	16,976,458	6,845,192	100	49.7	0	23.5[2]
6-30-80	1,867,726	11,924,903	17,574,412	7,641,062	100	48.4	0	24.4
6-30-81	2,177,802	13,155,634	17,281,815	8,513,941	100	48.2	0	26.1

[1]The fund was established January 1, 1974.
[2]Several law changes subsequent to the establishment of the fund brought all Judges and Judges Survivors plans into the fund. This is the first valuation that recognized all of the various Judges plans.

CURRENT SUPPORT

Judges pay the social security tax rate, applied to their entire salary, plus an additional ½% subject to a minimum of 7% in total.

All judges appointed after January 1, 1974 and those judges that elected to be covered by Social Security after the fund was established first pay up to the maximum at the social security rate to Social Security with the remainder paid to the Judges Fund. For those judges that did not elect Social Security coverage, their entire contribution is paid to the Judges Fund. Any additional funds needed for the administration of the fund are appropriated from the State General Fund as needed.

UNFUNDED ACCRUED LIABILITY (UAL)

The unfunded accrued liability is the total liability of a fund for benefits earned in the past as well as those earnable in the future, less the assets on hand, less the present value of future employee contributions and less the present value of future employer normal cost contributions.

Looking at just the dollar amounts of the UAL can be misleading. By dividing the unfunded accrued liability by the active employee payroll, we can provide an index which indicates whether the fund is becoming financially stronger or weaker. The smaller the ratio of unfunded liabilities to active member payroll the stronger the fund.

Valuation Date	Aggregate Accrued Liabilities	Reported Assets	UAL	Active Member Payroll	UAL As A % of Active Member Payroll
6-30-74	$14,562,972	$ 780,620	$13,782,352	$ 5,940,432	232.0%[1]
6-30-75	14,237,830	1,970,436	12,267,394	5,645,172	217.3
6-30-76	15,146,560	2,375,815	12,770,745	6,058,740	210.8
6-30-77	19,231,865	3,946,736	15,285,129	9,041,000	169.1
6-30-78	20,384,790	4,933,299	15,451,491	9,089,988	170.0
6-30-79	29,179,057	6,845,192	22,333,865	9,606,000	232.5[2]
6-30-80	31,367,041	7,641,062	23,725,979	10,278,000	230.8
6-30-81	32,615,251	8,513,941	24,101,310	10,618,500	227.0

[1]The fund was established January 1, 1974

[2]Several law changes subsequent to the establishment of the fund brought all Judges and Judges Survivors plans into the fund. This is the first valuation that recognized all of the various Judges plans.

NORMAL COST

The entry age normal cost method of funding is required by statute for valuation purposes. Under this method, a level contribution rate is determined, which, if contributed on behalf of all employees from date of entry into service to date of separation, will be adequate to provide the full funding of prospective benefits. Factors of great importance in such determinations are the projected rate of earnings of the fund, the rates of separation from active service, salary progression scales and mortality rates.

Comparative normal cost figures, including administrative expenses, were as follows:

Valuation Date	Normal Cost
6-30-77	13.27%
6-30-78	12.79
6-30-79	13.67
6-30-80	15.32
6-30-81	14.89

MINNESOTA STATE RETIREMENT SYSTEM
UNCLASSIFIED EMPLOYEES RETIREMENT PLAN

FINANCIAL
STATISTICAL

SECTION
V

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
Veterans Service Building
St. Paul, Minnesota 55155

GERALD W. CHRISTENSON
Legislative Auditor

(612) 296-4708

Francis D. Hage, Chairman
Board of Directors
Minnesota State Retirement System

and

Paul L. Groschen, Executive Director
Minnesota State Retirement System

We have examined the Statement of Assets and Liabilities of the Unclassified Employees Retirement Plan as of June 30, 1981 and 1980, and the related Statements of Operations and Changes in Net Assets for the fiscal years then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements fairly present the net assets of the Unclassified Employees Retirement Plan as of June 30, 1981 and 1980, and the results of operations and the changes in its net assets for the fiscal years then ended in conformity with generally accepted accounting principles (GAAP) applied on a consistent basis after restatement for the changes, with which we concur, in the format of the fiscal year 1980 financial statements as described in Notes 1 (b), 2, and 4 of the financial statements.

The accompanying supplemental statistical information for members of the Unclassified Employees Retirement Plan is not necessary for a fair presentation of the financial statements in conformity with GAAP. This information has not been subjected to sufficient audit procedures and tests to express, and we do not express, an opinion on this supplemental statistical information.

Sincerely,

Gerald W. Christenson

Gerald W. Christenson
Legislative Auditor

January 15, 1982

STATEMENT OF ASSESTS & LIABILITIES
JUNE 30, 1981 AND 1980

ASSETS	1981	1980
Participation in Minnesota Supplemental Investment Fund		
Income account shares (702,727 and 627,932 shares with a market value of $11.16 and $10.50/share respectively)[2]	$ 7,842,433.32	$ 6,593,286.00
Growth account shares (406,781 and 384,528 shares with a market value of $8.63 and $7.18/share respectively)[2]	3,510,520.03	2,760,911.04
Fixed return account[2]	2,376,158.73	1,945,296.39
Cash	4,329.59	3,634.08
Receivables		
Accrued employee contributions	24,213.15	0.00
Accrued employer contributions	36,319.66	0.00
Due from SER Fund	286,150.90	166,163.71
Total Assets	$14,080,125.38	$11,469,291.22
LIABILITIES		
Payables		
Administrative expense	$ 7,463.75	$ 3,971.55
Net Assets	$14,072,661.63	$11,465,319.67

The footnotes are an integral part of the financial statements.

STATEMENT OF OPERATIONS
FOR FISCAL YEARS ENDED JUNE 30, 1981 and 1980

INVESTMENT INCOME	1981	1980
Fixed return earnings	$ 233,747.94	$166,993.41
Investment gain on share accounts[3]		
Realized on withdrawals[4]	191,408.44	110,250.61
Unrealized[2]	831,958.17	722,727.65
Net Investment Income	$1,257,114.55	$999,971.67
OTHER INCOME AND EXPENSE		
Income		
Contributions withheld for administrative expenses	$ 45,984.01	$ 40,683.64
Expenses		
Administrative expenses	47,900.33	40,683.64
Net Other Income and Expense	$ (1,916.32)	$ 0.00

The footnotes are an integral part of the financial statements.

STATEMENT OF CHANGES IN NET ASSETS FOR FISCAL YEARS ENDED JUNE 30, 1981 and 1980

ADDITIONS FROM OPERATIONS	1981	1980
From investment income	$ 1,257,114.55	$ 999,971.67
From other income & expense	(1,916.32)	0.00
Increase from Operations	$ 1,255,198.23	$ 999,971.67
ADDITIONS FROM CAPITAL TRANSACTIONS		
Net contributions from employer	$ 1,437,080.79	$ 1,454,740.56
Net contributions from members	960,515.86	1,049,748.30
Interest on past contributions	11,847.44	109,470.08
Less—Member withdrawals(at market)[4]	(872,399.90)	(803,848.73)
—Transfers to SER Fund(at market)[4]		
contributions	(175,464.91)	(104,064.30)
administrative expense	(1,916.32)	0.00
—Uninvested balances withdrawn	(384.07)	(533.40)
—Interest paid on withdrawals	(7,135.16)	(5,403.32)
Increase from Capital Transactions	$ 1,352,143.73	$ 1,700,109.19
Increase in Net Assets	$ 2,607,341.96	$ 2,700,080.86
Net Assets—Beginning	11,465,319.67	8,765,238.81
Net Assets—Ending	$14,072,661.63	$11,465,319.67

The footnotes are an integral part of the financial statements.

Notes to Financial Statements

1. Summary of Significant Accounting Policies

(a) The Unclassified Employees Retirement Plan is a defined contribution plan covering certain unclassified employees of the State of Minnesota. Benefits are determined based upon the participants age and value of assets accrued to the employee. Prior to termination of service, if the participant has at least ten years of service between the Unclassified Plan and the State Employees Retirement Fund (SERF), he may tranfer back to SERF and be covered by its benefit formula. Employee and Employer contributions are the same as for SERF, and all contributions less a 2% administrative charge, are used to purchase shares in the Minnesota Supplemental Investment Fund. Such shares are credited to the participant's account and may be withdrawn subsequent to termination of employment in lieu of a monthly benefit. The accrual basis of accounting is used to record assets, liabilities, revenues and expenses.

(b) The Statement of Operations and Statement of Changes in Net Assets have been restated for FY 1980 from prior statements. Uninvested balance withdrawals and interest on withdrawals are now shown as capital transactions and the Statement of Operations reflects only those items which are proper. These changes have no effect on net assets of the plan.

2. Cost of income and growth shares and Unrealized Gain at June 30.

	FY 1981	FY 1980
Market Value		
Income Shares	$ 7,842,433.32	$ 6,593,286.00
Growth Shares	3,510,520.03	2,760,911.04
Cost		
Income Shares	(6,238,640.48)	(5,325,078.68)
Growth Shares	(2,401,886.02)	(2,148,649.68)
Cumulative Gain—Current Year	$ 2,712,426.85	$ 1,880,468.68
Cumulative Gain—Prior Year	(1,880,468.68)	(1,157,741.03)
Net Unrealized Gain—Current Year	$ 831,958.17	$ 722,727.65

Interest earned on the Fixed Return Account is added to each individual's participation, similar to a savings account, and is recognized in the year received. The share values for the Fixed Return Account remain constant at $5.00, and earnings increases the number of shares outstanding.

3. Investment gain includes interest, dividends, accruals and capital appreciation on investments, as reflected by the share values.

4. Cost of income and growth shares withdrawn or transferred and the realized gain on those shares was as follows:

	FY 1981	FY 1980
Withdrawals & Transfers	$839,812.62	$736,291.22
Cost of Shares	648,404.18	626,040.61
Realized Gains	$191,408.44	$110,250.61

Interest earned on the Fixed Return Account is added to each individual's participation, similar to a savings account, and is recognized in the year received. The share values for the Fixed Return Account remain constant at $5.00, and earnings increases the number of shares outstanding.

In addition to the $839,812.62 withdrawal of income and growth shares in FY 1981 was a $213,960.19 withdrawal from the fixed return account. Of the total withdrawn, $3,591.47 was a prior year accrual and $400.21 was cancelled and re-invested.

STATISTICAL DATA FISCAL YEAR 1981

Certain employees in the Unclassified State service who are eligible for coverage under the General Employees Retirement Plan may elect to participate in the Unclassified Employees Retirement Plan. Both employee and employer contributions are used to purchase shares in the Supplemental Retirement Fund. The following provides information on the activity within this plan during the fiscal year ending June 30, 1981.

CURRENT PARTICIPANTS

On June 30, 1981, there were 1,161 participants in the Unclassified Employees Retirement Plan with shares to their credit. Of the 1,161 participants, 857 were active on June 30, 1981, and 304 were inactive.

The distribution of participants selecting the various investment options follows:

	June 30, 1980	June 30, 1981
100% Income shares	36.4%	34.4%
75% Income shares, 25% Growth shares	12.8%	14.4%
50% Income shares, 50% Growth shares	28.5%	29.2%
100% Fixed return	15.0%	15.0%
75% Fixed return, 25% Growth shares	7.3%	7.0%

WITHDRAWALS

During fiscal year 1981, there were 116 participants who withdrew employee and employer shares to their credit in the Unclassified Employees Retirement Plan compared to 161 in fiscal 1980.

ANNUITANTS

Four former participants are receiving monthly benefits from the Unclassified Employees Retirement Plan as of June 30, 1981. One retired in fiscal 1975, one in 1976, one in 1978, and the other in 1979. Their averge service credit at retirement was 6 years 1 month, their average age is 67.5 years, and their average monthly benefit is $92.59. One of the four elected a 15 year period certain annuity, three elected straight life annuities.

MINNESOTA STATE RETIREMENT SYSTEM
DEFERRED COMPENSATION PLAN

FINANCIAL
STATISTICAL

SECTION
VI

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
Veterans Service Building
St. Paul, Minnesota 55155

GERALD W. CHRISTENSON
Legislative Auditor

(612) 296-4708

Francis D. Hage, Chairman
Board of Directors
Minnesota State Retirement System

and

Paul L. Groschen, Executive Director
Minnesota State Retirement System

We have examined the Statements of Assets and Liabilities of the Deferred Compensation Plan as of June 30, 1981 and 1980, and the related Statements of Operations and Changes in Net Assets for the fiscal years then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Realized and Unrealized investment gains on the share accounts are not segregated as required by generally accepted accounting principles (GAAP) and explained in Note 4 to the financial statements. Consequently, readers of the Statement of Operations are unable to determine the contribution that each of these elements of investment activity has had to the overall income of the plan.

In our opinion, the aforementioned financial statements fairly present the net assets of the Deferred Compensation Plan as of June 30, 1981 and 1980, and, except for the effects of the matter discussed in the preceding paragraph, the results of operations and the changes in its net assets for the fiscal years then ended in conformity with GAAP applied on a consistent basis after restatement for the changes, with which we concur, in the format of the fiscal year 1980 financial statements as described in Note 1 (d) of the financial statements.

The accompanying supplemental statistical information for members of the Deferred Compensation Plan is not necessary for a fair presentation of the financial statements in conformity with GAAP. This information has not been subjected to sufficient audit procedures and tests to express, and we do not express, an opinion on this supplemental statistical information.

Sincerely,

Gerald W. Christenson

Gerald W. Christenson
Legislative Auditor

January 15, 1982

STATEMENT OF ASSETS AND LIABILITIES
JUNE 30, 1981 AND 1980

ASSETS	1981	1980
Participation in Minnesota Supplemental Investment Fund		
Income account shares (757,845 and 713,561 shares at market value of $11.16 and $10.50/share respectively)[2]	$ 8,457,550.20	$ 7,492,390.50
Growth account shares (894,435 and 820,218 shares at market value of $8.63 and $7.18/share respectively)[2]	7,718,974.05	5,889,165.24
Fixed return account	19,620,444.56	13,242,514.00
Short term investments[3]	339,000.00	329,000.00
Cash	1,223.66	(64,387.69)
Receivables		
Interest Receivable	193.52	176.53
Due from SER Fund	200.46	34.54
Total Assets	$36,137,586.45	$26,888,893.12
LIABILITIES		
Payables		
Administrative expense	$ 16.99	$ 0.00
Net Assets	$36,137,569.46	$26,888,893.12

The footnotes are an integral part of the financial statements.

STATEMENT OF OPERATIONS
FOR FISCAL YEARS ENDED JUNE 30, 1981 and 1980

INVESTMENT INCOME	1981	1980
Fixed return earnings	$ 1,778,128.25	$ 1,064,766.39
Net realized and unrealized investment gain on share accounts[4]	1,721,915.42	1,273,225.49
Net Investment Income	$ 3,500,043.67	$ 2,337,991.88
OTHER INCOME AND EXPENSE		
Income		
2% administrative charge on contributions	$ 146,016.20	$ 115,601.75
Interest on short term investments[3]	62,078.97	44,119.12
	$ 208,095.17	$ 159,720.87
Expense		
Administrative expenses[5]	208,095.17	159,720.87
Net Other Income and Expense	$ 0.00	$ 0.00

The footnotes are an integral part of the financial statements.

STATEMENT OF CHANGES IN NET ASSETS FOR FISCAL YEARS ENDED JUNE 30, 1981 and 1980

ADDITIONS FROM OPERATIONS	1981	1980
From investment income	$ 3,500,043.67	$ 2,337,991.88
From other income & expense	0.00	0.00
Increase From Operations	$ 3,500,043.67	$ 2,337,991.88
ADDITIONS FROM CAPITAL TRANSACTIONS		
Net contributions from members	$ 7,160,006.99	$ 5,675,049.25
Less—member withdrawals(at market)[2]	(1,397,019.97)	(725,687.00)
—uninvested balances withdrawn	(20.68)	(202.41)
—salary deductions refunded	(5,212.76)	(7,174.00)
—interest paid on withdrawals	(9,120.91)	(3,571.05)
Increase From Capital Transactions	$ 5,748,632.67	$ 4,938,414.79
Increase in Net Assets	$ 9,248,676.34	$ 7,276,406.67
Net Assets—Beginning	26,888,893.12	19,612,486.45
Net Assets—Ending	$36,137,569.46	$26,888,893.12

The footnotes are an integral part of the financial statements.

Notes to Financial Statements

1. Summary of Significant Accounting Policies.

   (a) The Deferred Compensation Plan, open to all public employees in the State of Minnesota, is a tax sheltered savings plan authorized by federal law. The plan allows an employee to have a portion of salary withheld and invested before income taxes. The employee can invest in the Minnesota Supplemental Investment Fund (MSIF) or two annuity programs sponsored by three private insurance companies. These financial statements include *only* the MSI Fund investments. The Executive Director of MSRS may authorize a partial or full withdrawal of an investment for a financial emergency, disability or death.

   (b) MSI Fund

   The administrative expense is 2% of the salary deductions. Withdrawal of an investment starts when the participant reaches a pre-selected age, and over a pre-selected time period. The plan is marketed by an agent who will receive 1% of salary deductions. This marketing was not in effect in FY 1981 and 1980.

   (c) Insurance Company Annuities

   Participant salary deductions to purchase insurance annuities are remitted directly to the insurance companies and therefore are not reflected in the Minnesota State Retirement System financial statements. An administrative charge of $2 per participant for these accounts will accrue to the Deferred Compensation Plan, but the charge was not in effect in FY 1981 and 1980.

   (d) The Statement of Operations and the Statement of Changes in Net Assets have been restated for FY 1980 from prior statements. All miscellaneous withdrawals and refunds are now shown as capital transactions and the Statement of Operations reflects only those items which are proper. These changes have no effect on the net assets of the plan.

   (e) The accrual basis of accounting is used to record assets, liabilities, expenses and revenues with the exception of contribtuions which are recorded on the cash basis. Full accrual is impractical because of the wide variation in payroll periods used by the participating units.

2. The *original* cost of shares purchased is not available for presentation.

3. Contributions can only be invested in the Supplemental Investment Fund once a month. Therefore, the contributions are invested in short term securities until the transfer date to the supplemental fund. The interest earned on these investments is applied to the administrative expense and will defer any increase in the 2% administrative expense applied to contributions.

4. Investment gain includes interest, dividends, accruals, and capital appreciation on investments as reflected by the share values. The original cost of shares is not available, thus segregating realized and unrealized gains is not possible.

5. The administrative charge is equal to 2% of the net contributions adjusted for accruals, plus the short term investment earnings.

STATISTICAL DATA
FISCAL YEAR 1981

The deferred compensation is invested in the Income Share Account, Growth Share Account, or the Fixed Return Account of the Minnesota Supplemental Investment Fund, or in various combinations of these accounts.

On June 30, 1981, there were 3,159 active contributing participants in the Deferred Compensation Plan and 314 in withdrawal status.

Distribution of Amounts Deferred in the Month of June, 1981

Dollars Deferred Per Month	Income Shares	Growth Shares	Fixed Return	Income & Growth	Income & Fix-RT	Growth & Fix-RT	Income, Growth & Fixed Return	TOTALS
$10–$99	32	25	87	535	95	175	12	961
100–199	101	30	138	318	53	98	9	747
200–299	55	18	50	171	11	50	11	366
300–399	50	22	64	182	21	36	11	386
400–499	29	11	27	110	9	30	3	219
500–599	14	10	17	84	7	14	3	149
Over 600	43	18	41	180	16	26	7	331
	324	134	424	1580	212	429	56	3159

Note: There were three payperiods invested for state employees in June, so the total deferred for that group is 50% higher than for a normal two payperiod month.

Distribution by Age Group Of Members In Withdrawal Status at June 30, 1981

Ages	Number of Members	Average Monthly Dollar Value Withdrawn — Income	Growth	Fixed	Total
76–77	4	$ 92.07	$ 45.31	$ 0.00	$137.38
74–75	6	174.88	163.97	10.00	348.85
72–73	18	258.58	80.09	48.89	387.56
70–71	26	99.10	57.73	15.58	172.41
68–69	64	103.56	30.64	39.29	173.49
66–67	90	79.68	42.20	87.61	209.52
64–65	41	49.55	48.16	102.32	200.03
62–63	27	116.51	49.88	154.83	321.22
60–61	11	159.25	87.85	38.19	285.29
55–59	16	103.23	63.69	132.19	299.11
50–54	5	17.86	39.70	31.00	88.56
Under 50	6	94.86	214.28	30.83	339.97
	314	$100.91	$ 53.05	$ 73.23	$227.20