MINNEAPOLIS POLICE RELIEF ASSOCIATION

SPECIAL FUND

December 31, 2000
Actuarial Valuation

May, 2001

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Introduction

Purpose

This report presents the results of the December 31, 2000 valuation for the Minneapolis Police Relief Association. Its primary purposes are:

- to determine the funded status as of December 31, 2000,
- to determine the normal cost for 2000 and the required amortization payment, and
- to present information required to be disclosed under Governmental Accounting Standards Board Statement No. 25 (GASB 25) as of December 31, 2000.

Sources of data

The Relief Association supplied December 31, 2000 data for all active and inactive members, including unit values and historical salary increase rates. The Relief Association has also provided asset information regarding the special fund including historical rates of return. We have relied on this data in preparing this report.

Changes from the previous valuation

The prior actuarial valuation of the plan was prepared as of December 31, 1999. The actuarial assumptions and methods used to prepare this report are the same as those used in the 1999 report, except that the unit value effective January 1, 2001 is 73.13 instead of 72.37. The expected pay increases and resulting unit values used for valuation purposes are shown on page 17. We have used 4% as the rate of increase for years after the term of the current contract.

Summary of valuation results

As of December 31, 2000, the funded status of the plan (actuarial value of assets divided by actuarial accrued liabilities), after adjustment for the benefit increase, is 87.5% (see page 7). The employer normal cost for 2000, after adjustment for member contributions, is $1,055,238 (see page 7). During 2000, the Minnesota legislature changed the adjustment for member contributions. The offset is now the full 8% of pay that members contribute, even though some of the contribution does not go to the Special Fund. The change is shown in both the 1999 and 2000 results (see page 7).

Comments on actuarial methods

The actuarial value of assets has been determined as required by Minnesota state law. The method specified by statute has been criticized by the State Actuary. We concur with this criticism and recommend that Minnesota law be changed to more closely reflect a smoothed market value.

Introduction (continued)

As of December 31, 1999, the actuarial value of assets exceeded the market value by almost $16 million, or 3.8%. The actuarial value of assets was greater than the market value had ever been. Therefore, rather than smoothing volatility, the current method may actually amplify it. The current method is based on book value with adjustments designed to approximate market value. The problem is that book value depends on investment-related transactions and on changes over time that do not necessarily approximate market value. A better method would be one based on market value as a starting point, with adjustments to accomplish some smoothing. Despite these reservations, this year the actuarial and market value are close enough to each other that we believe the calculations required by law are a fair presentation of the financial status of the pension fund.

Actuarial certification

We certify that the actuarial valuation has been prepared in accordance with Minnesota Statutes §§356.20-.23, §423B, and §69.77 as they relate to police department relief associations in cities of the first class in general and the Minneapolis Police Relief Association in particular.

Respectfully submitted,

Mark Meyer by PDK

Mark D. Meyer, FSA, MAAA
Consulting Actuary

Paul D. Krueger, JD, EA
Consulting Actuary

Summary of Results

A. Plan participant data	December 31, 1999	December 31, 2000
1. Number of participants		
a. Active employees	123	97
b. Terminated vested employees	8	3
c. Retirees	668	677
d. Disability	0	0
e. Surviving spouses	247	246
f. Surviving children	2	1
g. Total	1,048	1,024

B. Normal costs	1999 Plan Year	2000 Plan Year
1. Total normal cost		
a. Amount	$1,988,341	$1,581,906
b. Percentage of active payroll	26.50%	24.03%
2. Employer normal cost		
a. Amount	1,388,030	1,055,238
b. Percentage of active payroll	18.50%	16.03%

C. Amortization payments		
1. Unfunded actuarial accrued liability	$20,473,501	$56,002,927
2. Amortization payment	2,624,238	7,767,618

D. Value of plan assets	December 31, 1999	December 31, 2000
1. Market value	$413,332,414	$376,849,745
2. Actuarial value (for calculating contributions)	427,122,128	391,083,455

E. Benefit liabilities		
1. Present value of future benefits	$452,798,436	$450,417,283
2. Actuarial accrued liability	447,595,629	447,086,382

F. Funded status		
1. Market value of assets as a % of liabilities	92.3%	84.3%
2. Actuarial value of assets as a % of liabilities	95.4%	87.5%

Funding Basis

Actuarial Value of Assets

A. Average unrealized gain

Year Ending December 31:	Market Value	Book Value	Unrealized Gain (Market - Book)
1998	395,747,319	335,906,708	$59,840,611
1999	413,332,414	380,356,320	32,976,094
2000	376,849,745	354,618,330	22,231,415
		Average:	$38,349,373

B. Book value of assets December 31, 2000 $354,618,330

C. Excess investment income

1. Salary increases and time-weighted rate of return on assets

Fiscal Year		Salary Increase	Asset Return
1996		2.927%	12.494%
1997		6.097%	12.660%
1998		3.656%	11.030%
1999		12.459%	11.600%
2000		1.418%	-1.641%
	Arithmetic average:	5.311%	9.229%

2. Determination of excess investment income

a. Excess of asset return over salary increase	3.918%
b. Excess minus 2%	1.918%
c. Lesser of 0.5% or 2.b., times market value of assets	1,884,249
d. December 2000 monthly benefits paid	2,262,519
e. Adjustment to assets (lesser of c. or d.)	1,884,249

D. Actuarial value of assets December 31, 2000 $391,083,455
(A. + B. - C.2.e.)

Summary of Member Data

	December 31, 1999	December 31, 2000
A. Active members		
1. Number		
a. Fully vested	123	97
b. Nonvested	0	0
c. Total	123	97
2. Average age	51.3	51.7
3. Average years of service	26.6	27.2
4. Total annual payroll for the year beginning on valuation date	$7,804,036	$6,583,342
5. Average annual salary	$63,447	$67,870
B. Vested terminated members		
1. Number	8	3
2. Total annual deferred benefits	$169,375	$64,496
C. Retirees		
1. Age & service	668	677
2. Disability	0	0
3. Total	668	677
4. Total annual benefits	$22,099,660	$23,300,668
5. Average annual benefit	$33,083	$34,418
D. Beneficiaries		
1. Spouses	247	246
2. Children	2	1
3. Total	249	247
4. Total annual benefits	$4,601,679	$4,742,992
5. Average annual benefit	$18,481	$19,202
E. Total number of members (A.1. + B.1. + C.3. + D.3.)	1,048	1,024

Summary of Changes in Membership

	Actives	Vested Terminees	Retirees	Beneficiaries	Total
A. Number of members on December 31, 1999	123	8	668	249	1,048
B. Changes in membership					
1. Retirements	(26)	(5)	31		0
2. Vested terminations					0
3. Retiree deaths			(22)	16	(6)
4. Beneficiary deaths				(17)	(17)
5. Expiration of surviving child benefits				(1)	(1)
6. Corrections					0
7. Total changes	(26)	(5)	9	(2)	(24)
C. Number of members on December 31, 2000	97	3	677	247	1,024

Funding Basis

Actuarial Values Used to Determine Contribution

	December 31, 1999	December 31, 2000
A. Actuarial present value of projected benefits (the value of all future benefits to be paid to the current group of members)		
1. Active members	$78,350,308	$63,694,272
2. Vested terminated members	4,670,084	1,660,256
3. Retired members	324,208,094	340,595,777
4. Spouses and children receiving benefits	45,569,950	44,466,978
5. Disabled members receiving benefits	0	0
6. Total present value of projected benefits	452,798,436	450,417,283
B. Actuarial accrued liability (the cost allocated to all prior years)		
1. Active members	$73,147,501	$60,363,371
2. Vested terminated members	4,670,084	1,660,256
3. Retired members	324,208,094	340,595,777
4. Spouses and children receiving benefits	45,569,950	44,466,978
5. Disabled members receiving benefits	0	0
6. Total actuarial accrued liability	447,595,629	447,086,382
C. Amortization of unfunded actuarial accrued liability		
1. Total actuarial accrued liability (B.6.)	$447,595,629	$447,086,382
2. Actuarial value of assets	427,122,128	391,083,455
3. Unfunded actuarial accrued liability (1. - 2.)	20,473,501	56,002,927
4. Funded status (2. ÷ 1.)	95.4%	87.5%
5. Years left in amortization period	10	9
6. Amortization payment	2,624,238	7,767,618
D. Normal cost (the cost allocated to the current year)		
1. Present value of future normal costs (A.6. - B.6.)	$5,202,807	$3,330,902
2. Normal cost as a dollar amount		
a. Total normal cost	1,988,341	1,581,906
b. Expected member contributions	600,310	526,667
c. Employer normal cost (a. - b.)	1,388,030	1,055,238
3. Payroll for year ending on valuation date	7,503,881	6,583,342
4. Normal cost as a percent of active payroll		
a. Total normal cost (2.a. ÷ 3.)	26.50%	24.03%
b. Expected member contributions (2.b. ÷ 3.)	8.00%	8.00%
c. Employer normal cost (2.c. ÷ 3.)	18.50%	16.03%

Accounting Basis

Statement of Plan Net Assets

	Market	Book
A. Investment assets		
Pension cash	$8,466,556	$8,466,556
Galliard	51,729,180	51,384,830
Alliance	119,368,435	106,029,845
State Street	35,532,193	32,704,559
IAI International	8,164	8,164
Nicholas Applegate	17,053,397	16,894,090
Venture Capital	7,250,397	3,029,742
SBI	98,160,054	98,039,016
Brandywine	18,607,415	18,314,313
Fidelity	20,750,399	19,823,660
Total	376,926,190	354,694,775
B. Checking account	10,037	10,037
C. Accrued/payable		
Accrued contributions	173,500	173,500
Accounts payable	(259,982)	(259,982)
Total	(86,482)	(86,482)
D. Total pension assets (A. + B. + C.)	$376,849,745	$354,618,330

Accounting Basis

Statement of Changes in Plan Net Assets

	December 31, 1999	December 31, 2000
A. Additions		
1. Contributions		
a. Employer	$3,719,453	$4,563,133
b. Plan members	559,381	166,325
c. Total	4,278,834	4,729,458
2. Investment income	41,614,135	(9,772,799)
3. Unclaimed property	815,610	500,000
4. Total additions	46,708,579	(4,543,341)
B. Deductions		
1. Benefits paid	26,213,944	30,697,541
2. Refund of contributions	0	0
3. Expenses	1,419,117	1,241,787
4. Total deductions	27,633,061	31,939,328
C. Net increase (A.4. - B.4.)	19,075,518	(36,482,669)
D. Net assets held in special fund		
1. Beginning of year	$392,306,987	$413,332,414*
2. End of year	$411,382,505	$376,849,745

* Differs from 12/31/1999 value because of adjustments by State Auditor

Accounting Basis

Schedule of Funding Progress
(Dollar amounts in thousands)

As of December 31:	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
1992	$265,307	$325,891	$60,584	81.4%	$16,913	358.2%
1993	288,942	347,879	58,937	83.1%	16,577	355.5%
1994	280,772	344,087	63,315	81.6%	14,799	427.8%
1995	294,692	358,657	63,965	82.2%	13,938	458.9%
1996	320,686	382,957	62,271	83.7%	13,003	478.9%
1997	362,683	398,728	36,045	91.0%	10,818	333.2%
1998	387,530	414,694	27,164	93.4%	8,857	306.7%
1999	427,122	447,596	20,474	95.4%	7,504	272.8%
2000	391,083	447,086	56,003	87.5%	6,583	850.7%

Accounting Basis

Schedule of Employer Contributions

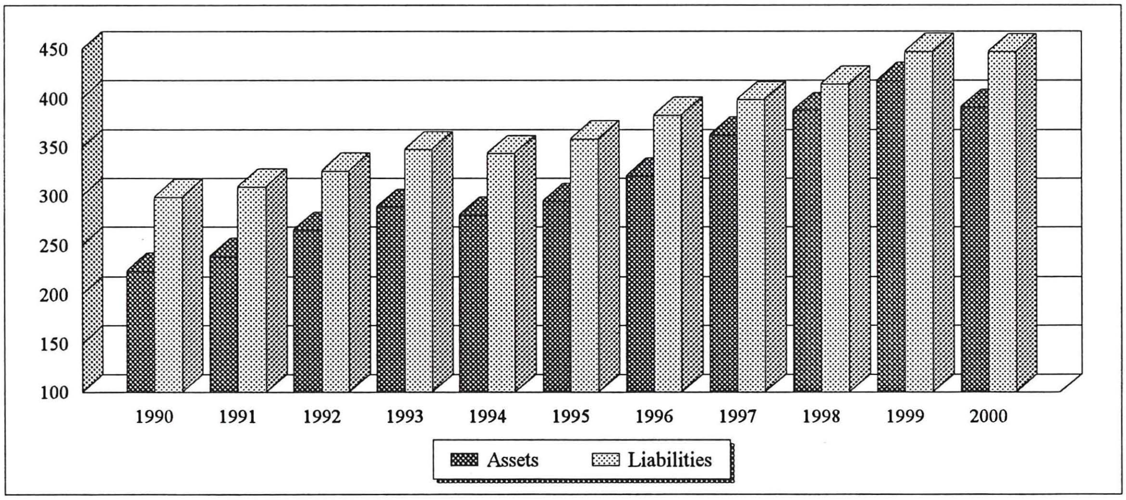
Year Ended December 31:	Annual Employer Contributions
1992	$8,281,262
1993	8,859,961
1994	6,239,591
1995	8,359,115
1996	5,544,721
1997	7,298,118
1998	6,207,956
1999	3,719,453
2000	4,563,133

Historical Tables

Historical Funding Ratio Schedule
(Dollar amounts in thousands)

As of December 31:	Actuarial Accrued Liability	Actuarial Value of Assets	Percent Funded
1989	$290,537	$211,081	72.7%
1990#	299,151	223,919	74.9%
1991	309,429	238,975	77.2%
1992#	325,891	265,307	81.4%
1993#	347,879	288,942	83.1%
1994#	344,087	280,772	81.6%
1995	358,657	294,692	82.2%
1996	382,957	320,686	83.7%
1997	398,728	362,683	91.0%
1998#	414,694	387,531	93.4%
1999	447,596	418,122	95.4%
2000	447,086	391,083	87.5%

#After change in benefit provisions



Historical Tables

History of Employer Contributions

Valuation December 31:	Normal Cost as a Percent of Payroll	Amortization of Unfunded Actuarial Liability
1989	24.53%	$6,727,495
1990	25.61%	6,547,850
1991	25.58%	6,319,193
1992	25.62%	5,615,587
1993	25.57%	5,663,676
1994	25.43%	6,331,000
1995	24.91%	6,683,106
1996	24.83%	6,831,165
1997	24.66%	4,175,261
1998	26.53%	3,344,809
1999	26.50%	2,624,238
2000	24.03%	7,767,618

Historical Tables

Comparative Schedule of Active Members

Valuation December 31:	Number of Active Members	Projected Payroll	Averages Age	Averages Service	Averages Pay
1989	460	$18,421,160	46.6	21.0	$40,046
1990	433	17,859,951	47.3	21.8	41,247
1991	410	17,658,290	48.0	22.5	43,069
1992	381	16,913,352	48.5	23.2	44,392
1993	349	16,576,802	49.2	24.0	47,498
1994	307	14,799,242	49.8	24.6	48,206
1995	278	13,937,530	50.3	25.3	50,135
1996	239	13,002,556	50.9	25.9	54,404
1997	188	10,817,520	51.1	26.3	57,540
1998	148	8,856,616	51.5	26.8	59,842
1999*	123	7,804,036	51.3	26.6	63,447
2000	97	6,583,342	51.7	27.2	67,870

*Payroll used to calculate normal cost for calendar year 1999 is $7,503,881.

Historical Tables

Comparative Schedule of Inactive Members

	Number of Retirees and Beneficiaries			Actual	Projected	
As of December 31:	Added to Rolls	Removed from Rolls	On Valuation Date	Annual Benefits	Annual Benefits	Present Value of Benefits
1989	40	31	752	$12,988,156	$12,007,149	$163,236,324
1990	33	33	752	13,179,656	12,579,039	169,649,676
1991	30	25	757	12,726,042	13,152,752	175,237,680
1992	55	28	784	14,764,375	14,352,332	192,504,840
1993	45	33	796	15,646,456	15,690,269	212,051,856
1994	56	40	812	18,040,942	17,238,698	226,104,506
1995	35	39	808	17,597,704	17,375,347	235,698,327
1996	51	28	831	20,240,597	19,435,342	263,685,600
1997	82	35	878	25,513,260	21,662,581	298,497,984
1998	65	23	920	24,511,366	24,020,183	330,745,536
1999	34	37	917	26,213,944	26,701,339	368,568,524
2000	34	37	924	30,697,541	28,043,660	385,062,755

Actuarial Methods and Assumptions

1. Mortality

The UP-1984 Mortality Table set forward 2 years for males and set back 3 years for females.

2. Withdrawal

The rate of withdrawal is 6% at age 20 decreasing uniformly to zero at age 50 with no withdrawal after that age.

3. Disability

Rates varying by age. Sample disability rates are as follows:

Age	Rate
25	0.08%
30	0.08
35	0.08
40	0.20
45	0.26
50	0.49
55	0.89

4. Retirement age

Members are assumed to retire at age 54, or attained age if older.

5. Interest rate

6% compounded annually.

6. Salary scale

Actual contract for 2000-2002 (see page 17) and 4% annually, thereafter. Inactive benefits are assumed to increase at the same rate.

7. Actuarial cost method

The Entry Age Normal Cost Method. Under this method, the normal cost for an individual member is the level annual dollar amount required, beginning on the date of joining the association, to accumulate the funds needed to pay the member's accrued benefits by their assumed retirement age. The actuarial accrued liability is the accumulated value of these annual normal costs on a given date. The normal cost and accrued liability for the plan is the total of these values for all members.

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Actuarial Methods and Assumptions (continued)

8. Contract salary scale - resulting unit values

Effective Date	Units*	Resulting Units	Corresponding Pay**	Increase Rate
01/01/2001	73.13	73.53	$70,584.29	
10/15/2001	74.98			
01/01/2002	75.01	75.13	$72,124.51	2.1821%
10/15/2002	75.57			
01/01/2003	78.13	78.13	$75,009.49	4.0000%

* *Units as of 1/1/2001 provided by Relief Association, others based on 3/2, 3/14, and 3/27/2000 spreadsheets provided by the Police Federation negotiator.*
*** Pay equals units times 80 times 12.*

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Summary of Plan Provisions

1. Normal retirement benefit	Annual benefit of 30.40/80 of base pay for first 19 years of service. An additional 3.60/80 unit is awarded for the 20th year of service. For service years in excess of 20, an additional 1.60/80 is granted; to a maximum of 25 years of service and 42/80 of base pay. "Base pay" for this purpose means the maximum monthly salary of a first class patrolman. Members must be at least age 50 with 5 years of service to receive this benefit.
2. Deferred vested benefit	Annual benefit equal to the accrued normal retirement benefit, deferred to age 50 for members with at least 5 years of service.
3. Disability benefit	Annual benefit of 34/80 of base pay for members no longer able to perform the duties of a policeman due to disability.
4. Surviving spouse's benefit	Annual benefit of 22/80 of base pay for the surviving spouse of an active or retired member.
5. Surviving children's benefit	Annual benefit of 8/80 of base pay for each surviving child of an active or retired member. Benefits continue to age 18, or to age 22 if the child is a full-time student. The total benefit for surviving children and spouse combined is limited to 40/80 of base pay.
6. Member contributions	Members are required to contribute 8% of base pay. After 25 years of service, member contributions are paid to a separate health insurance account. In the event of death without survivorship, member contributions are refundable including 5% interest from the month the contribution is made. Termination after 5 years of service but before benefit eligibility results in a $500 refund, plus an additional $100 for each full year of service over 5 years.