MANAGEMENT OF PUBLIC EMPLOYEE PENSION FUNDS

Program Evaluation Division
Office of the Legislative Auditor
State of Minnesota

Program Evaluation Division

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May 1986

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JAMES R. NOBLES, LEGISLATIVE AUDITOR

May 30, 1986

Senator Randolph W. Peterson, Chairman
Legislative Audit Commission

Dear Senator Peterson:

In June 1985 the Legislative Audit Commission directed the Program Evaluation Division to evaluate the management of public employee pension funds in Minnesota. The study focused on ten of these funds: the police, fire, and teachers' funds in St. Paul, Minneapolis, and Duluth, and the Minneapolis Employees Retirement Fund. This report describes the management of the funds, analyzes their investment goals and performance, and recommends steps that can be taken by the Legislature to improve state oversight of the funds. State oversight is important because state taxpayers partially finance the funds and are directly or indirectly at risk for their performance.

This study was hampered by the general unavailability of comparable and reliable data on asset mix and investment performance for many of the funds studied.

However, we appreciate the assistance given to us by numerous fund managers, employees of the State Board of Investment, and staff of the Legislative Commission on Pensions and Retirement.

This report was prepared by Elliot Long (Project Manager) and Edward Burek.

Sincerely yours,

James R. Nobles
Legislative Auditor

Roger A. Brooks
Deputy Legislative Auditor
for Program Evaluation

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EXECUTIVE SUMMARY

This report examines the police, fire and teachers' pension funds of Minneapolis, St. Paul, and Duluth plus the Minneapolis Employees Retirement Fund (MERF), a total of ten of the largest local public employee pension funds in Minnesota.

The report analyzes the organizational structure and incentives under which the funds operate, and asks if various organizational interests are properly represented in the existing structure. In particular, it examines the adequacy of pension fund oversight at the local and state levels.

The major focus of the report, however, is an examination of the investment practices and performance of the funds. While policy makers need to consider organizational structure and incentives, it is also important to know how the funds are actually managed and how their investments have performed.

A. PENSION FUND FINANCING

The state contributes tens of millions of dollars each year to the first class cities' pension funds and has established a detailed statutory framework under which they operate. While some argue that local funds are or should be exclusively a matter of local concern, state policy makers feel otherwise because of the size of the state's annual financial contribution and its financial exposure should local pension fund assets be poorly managed.

- The state has an important role in financing all the first class cities' pension funds. The state's total contribution to the first class cities' funds was $38.7 million in 1984.

- The state is either directly or indirectly at risk for the performance of the funds.

Since taxpayers at the state and local level provide most of the financial support of local public employee pension funds, public representatives should *at least* have a significant role on the funds' governing boards, if taxpayers' interests are to be properly represented.

- Considering sources of financing other than investment returns in 1984, the state provided between 21 and 32 percent of all contributions to the police and fire funds. The cities contributed between 54 and 71 percent.

- The state paid the "employer's share" of the first class cities' teachers' funds which amounted to 56 to 58 percent of contributions in 1984.

- In the case of MERF the state paid about 20 percent of contributions in 1984, the city (and certain other local agencies whose employees are members of MERF) paid 52 percent.

- In all the funds employees pay a significant, but much smaller share of annual contributions.

B. GOVERNING BOARD COMPOSITION

During the period examined in this report, 1980 to 1985, state and local oversight of the funds was not uniformly effective.

- Municipal representation on local police and fire fund boards was absent in the case of two fire funds and not actively exercised on several other boards.

Since the cities are directly at risk for poor investment performance or poor management in general, active participation and oversight by local government is essential.

The 1986 Legislature took action to remedy this problem, creating voting positions for municipalities on all local paid police and fire fund boards, and by specifying some of the fiduciary responsibilities of these board members. In the past, however, the existence of a board position has not guaranteed active municipal participation, even though it is the cities, not the active or retired police or fire department employees that are directly at risk for investment and managerial performance.

In the case of MERF it is the state, not the city of Minneapolis, that is required to contribute the amount of money necessary to achieve full funding by a specific future date, after investment returns are taken into account. The state, in the case of MERF, is at risk for investment returns in the same way the cities are for the police and fire funds.

In the case of the teachers' funds, while the state (not the school districts) pays the employer's share, state aid is determined by formula and does not vary according to annual investment performance. Municipal and school district participation has been active on the boards of MERF and the teachers' funds, even though the city and school districts are not directly at risk for fund performance over the short run.

C. INVESTMENT PRACTICES AND PERFORMANCE

An important focus of this report is investment management and performance, an area that we feel has been neglected by the state, municipalities and members of local public employee pension systems.

- Investment performance directly affects the retirement benefits of members of some funds, and over the long run has an indirect effect on all funds.

- Investment performance directly and indirectly influences taxpayer contributions at the state and local level.

The report examines the following questions:

- Have managers set performance standards?

- How have administrators invested pension fund assets, and how have the investments performed?

- Do the funds hold assets or asset mixes not permitted by statute?

- Have administrators adequately monitored and evaluated fund performance?

1. INVESTMENT OBJECTIVES

We performed an extensive analysis of the investment practices of the ten funds and found:

- Many funds had not developed appropriate investment objectives. In our view, the discipline of developing formal objectives is needed if fund administrators and board members are to give adequate consideration to investment goals and performance and if they are to adequately evaluate the performance of internal or external fund managers.

We present an outline for setting performance objectives that we recommend to all the funds:

- Administrators should set a specific total rate of return objective in excess of the rate of inflation.

- Performance objectives which equal or exceed market returns should be set for each asset class and the total portfolio.

- Asset managers should rank in the top half of comparable investors.

- Administrators should set risk objectives. Fund members and taxpayers should not be exposed to more risk than necessary to achieve the desired return.

Closer consideration of the fund objectives now in use reveals some contradictory goals that need to be resolved. For example, the police and fire funds can aim for the higher returns that stocks provide over bonds even though stocks are more volatile, because they do not have to provide annual post-retirement adjustments based on investment performance. By this reasoning, their primary objective should be to maximize longer term returns, minimizing required municipal support over the years. However, fund managers and trustees also must contemplate the day they will merge with PERA, since their funds are closed to new members. This consideration suggests a conservative investment approach. Each fund needs to consciously evaluate these contradictory factors.

2. PENSION FUND ADMINISTRATION

The ten funds varied quite widely in their approach to pension fund administration. The three teachers' funds and MERF, as a generalization, used more sophisticated investment approaches than the police and fire funds, and chose to manage more assets in-house. The Duluth Fire Fund was noteworthy for its weak managerial performance; it turned over a large measure of investment advisory responsibility to a brokerage firm that also was permitted to make trades without prior approval by fund management. The management of this fund could serve as a textbook example of what not to do.

While some variation is to be expected, some practices should be observed by all funds. For example, investment advice should be obtained separately from brokerage services and there is considerable merit in obtaining separate performance evaluation services, given the urgent need for objective, complete information on investment performance.

3. ADMINISTRATIVE EXPENSES

Our study examined the administrative expenses reported by each fund. These have been a subject of considerable interest. Administrative expenses varied widely across the ten funds as should be expected given wide variation in the funds' strategies, assets, and investment approaches. None of the funds administrative expenses, which varied between .10 percent and .66 percent of assets in 1984, are higher than those incurred by most mutual funds as reported in recent surveys.

We recommend that fund governing boards, especially the members representing employers (and thus taxpayers) carefully review expenses to ensure they are proper. Also, the State Auditor (or private firm in the case of the teachers' funds) should review the adequacy of each fund's policies regarding administrative expenses and periodically test compliance with those policies and applicable laws.

4. PERFORMANCE DATA

Every fund needs data on investment returns suitable for evaluating fund performance against fund objectives. Performance data are needed for proper investment management and certain performance data is required, in any case, by state law. However, we found that:

- Some funds fail to produce appropriate public information on investment performance. Also, some do not produce information we feel is needed for proper internal management decisions.

Each public fund in Minnesota is required by law to compute investment returns, although the State Board of Investment has not adequately promulgated official formulas to be used for this purpose. The statutory language on this point is somewhat vague, but we believe that proper internal management and external reporting requires funds to regularly report time-weighted rates of return.

In general the funds examined here had considerable difficulty providing information on investment returns. Two exceptions were the St. Paul Teachers' Fund and the St. Paul Fire Fund. Some funds had never calculated time-weighted returns, and a few funds had trouble presenting market values for certain assets. The numbers provided by MERF changed materially as this report was in the final review process.

We attribute part of the problem in providing adequate information on investment and returns to a lack of vigorous oversight of the funds by their governing boards, the cities in which they are located, and the state. In the absence of active oversight and clear reporting requirements, we do not think that all pension fund managers will report needed information on performance. Many funds will be tempted to report information selectively and in a way that makes an evaluation of investment management difficult. More active oversight will also prompt the funds to establish investment objectives that are consistent with the needs of each fund and applicable state laws.

As a result of our study a number of funds have taken steps to obtain better performance data and to set out clearer objectives. No fund took the position that an absence of basic performance information could be defended as prudent.

5. ASSET MIX AND INVESTMENT RETURNS

We put together the best available data, for each fund, on portfolio composition (asset mix) and investment performance for total portfolio and separate asset classes.

The primary purpose of this task was not to compare the funds but to see if each fund's assets were invested in a way that was consistent with fund objectives. Also, we sought to see if asset classes were achieving a return equal to market averages or the funds managed by SBI. If a fund is willing to settle for average stock market returns it can invest in equity index funds designed for this purpose. The police and fire funds can let SBI manage their assets and some do.

Our review of assets held by the funds showed wide variation, even among funds with similar needs. Among the teachers' funds, the big difference during the 1980 to 1985 period is between the Minneapolis Teachers' Fund and the other two funds. Minneapolis Teachers holds about 30 percent of its assets in equity real estate and a correspondingly smaller proportion of its assets in bonds.

There is a sizable difference among the police and fire funds in their stock and bond positions and the willingness of the funds to shift among asset classes. For example, in 1985 the St. Paul Police Fund held seven percent of its assets in bonds compared to the Duluth Police Fund which held 79 percent of its assets in bonds.

MERF manages two funds, a Deposit Accumulation Account invests the assets of active members. Its asset mix reflects a growth-oriented objective. MERF's Post-Retirement Account invests the assets of retired members and pays post-retirement benefits and benefit increases if satisfactory investment yields are obtained. This account has a high bond component reflecting the objective of obtaining consistent investment yields.

Comparisons between funds on asset mix and investment results must be made with care.

- Fund objectives and needs differ. Some funds are closed to new members, some open. Benefits are tied to performance for some, but not others.

- Data quality and completeness varies.

- The five and one-half year period reviewed here is too short for proper evaluation of long-term results.

- Not all portfolios are valued in the same way; not all returns are calculated in the same way.

With these singificant qualifications in mind, it is worth noting:

- On the whole, performance of most funds is quite reasonable.

- Considering police and fire funds, rough figures for annualized total returns based on the period January 1980 to June 1985 range from 15.9 percent for the Minneapolis police to 11.9 percent for the Minneapolis Fire Fund. While a five and one-half year annualized return number is not available for the Duluth Fire Fund, its annualized return for January 1981 through December 1984 is 4.8 percent, less than half the rate of any other fund for the same period.

Thus the performance of the Duluth Fire Fund is significantly below the other funds. As this report discusses in some detail, there are several serious problems with the management of this fund.

- Considering the teachers' funds, five and one-half year annualized returns range from 15.2 percent for the Duluth Teachers' Fund to 14.3 for the Minneapolis Teachers' Fund (excluding its sizeable real estate component) to 13.8 percent for the St. Paul Teachers' Fund. On the whole these numbers are higher than most of the police and fire funds.

- The annual return on MERF's total assets exceeds 15 percent, a rate that equals or exceeds the other funds reviewed here. However, there are considerable differences between the two MERF accounts. And we have unanswered questions about the accuracy of the data submitted by MERF.

The MERF Post-Retirement Account, where MERF's retirees are at risk, performed very well. The Deposit Accumulation Account, where the state bears much of the investment risk, showed notably lower returns, although these are about equal to the average of the police and fire funds.

In the case of MERF we have had difficulty obtaining accurate performance data. We detected inaccuracies in the first data set submitted. And just before this report was to be published, MERF submitted significant further revisions.

As a point of comparison with the first class cities' funds, the SBI basic retirement fund has achieved a 13.3 percent annualized rate of return over the same five and one-half year period. More than half of the local funds have done as well--although this comparison is rough and other equally valid comparisons of the funds using other statistics might show a different result.

Based on five and one-half years of data on performance, there is no compelling reason to urge local funds as a whole to invest in SBI-managed funds or merge with PERA whose assets are managed by SBI. Of course, the next five years could tell a different story and some other findings of this study suggest that SBI could bring a higher level of professionalism to the management of pension fund assets.

Our review of investment returns and management practices of these ten pension funds reveals a clear benefit to careful planning and management.

- The funds with the highest returns were managed by administrators who are knowledgeable investors and who carefully monitor investment performance against clearly articulated objectives.

Examples of such funds are the three teachers' funds and the Minneapolis Police Fund. Also, the MERF Post-Retirement Account management style and portfolio mix is geared toward its objectives, and investment performance is strong.

We also conclude:

- Incentives are important. Where the fund membership stands to gain or lose from investment performance, administrators tend to be accountable.

This is the case in the MERF Post-Retirement Fund and the teachers' funds. All these funds showed above-average performance.

In contrast, the state or cities bear the investment risk for MERF's Deposit Accumulation Account and the police and fire funds.

- These arrangements weaken accountability and reduce incentives for strong performance.

D. STATE OVERSIGHT

Various state entities are responsible for local pension fund oversight and policy making, including the State Auditor, the Legislative Commission on Pensions and Retirement (LCP&R), and the Departments of Revenue and Finance. The Legislative Auditor's Office has also become involved through this study and could be involved in the future at the direction of the Legislative Audit Commission.

We have concluded that state oversight of local pensions funds is inadequate, given the size of the state's financial commitment and exposure. While there is general recognition among various state entities of the importance of a variety of local pension system issues, changes still need to be made.

We feel officials at the state and local level need to receive regular reports of investment returns designed to clearly show the performance of investment managers against well articulated objectives appropriate for each fund. Therefore,

- As called for by Minn. Stat. 11A.04, the State Board of Investment should promulgate a formula or formulas for computing time-weighted returns to be used by all public pension funds in the state.

- Each of the funds should at least annually report these numbers.

- The LCP&R and the Department of Finance should monitor fund objectives and performance closely, both to send a message that there is continuing state-level interest in matters affecting state taxpayers directly or indirectly, and to see if policy changes are needed since it is the state that establishes investment guidelines governing many of the funds.

- The 1986 Legislature took steps to strengthen state audit jurisdiction over all paid police and fire funds. Now the State Auditor's Office or a private firm hired by the State Auditor is responsible for annual financial and compliance audits. Only the three first class city teachers' funds continue to hire their own auditors. We think these funds also should be audited by the State Auditor.

ORGANIZATION AND FINANCING

CHAPTER 1

A. INTRODUCTION

This study examines the police, fire and teachers' funds of Minneapolis, St. Paul and Duluth and the Minneapolis Employees' Retirement Fund (MERF), a total of ten of the largest local public employee pension funds in Minnesota. This limitation of scope was necessary because, in effect, a separate study of each of these ten funds is necessary to generalize about the group.

Many of the questions we raise in connection with the first class cities' funds might also apply to other paid police and fire funds. It is reasonable to suppose that the first class cities' funds are more likely to be professionally managed than the smaller funds we did not study. Many of our conclusions and recommendations relating to local and state oversight could apply to other local police and fire funds in Minnesota.

Discussions with legislators and others in state government knowledgeable and concerned about public employee pension systems led us to focus the study on:

- governance and administration of the funds,
- investment practices and performance, and
- the adequacy of state oversight.

The remainder of this chapter describes how the funds are organized and financed.

Chapters 2 through 4 focus on investment practices and ask:

- What investment strategies and objectives are set for each fund?
- Are the funds invested in a way that meets these objectives?

- Have fund administrators adequately monitored fund performance and what does the performance record show?

Within limits, comparisons are made among the local funds, and between the local funds, state managed funds, and indexes of investment performance.

The final chapter presents a description of state oversight of public employee pensions. It notes several deficiencies and suggests several reforms.

B. ORGANIZATION AND FINANCING

The central questions addressed in this chapter are:

- Who finances the first class cities' public employee pension funds?

- Who is at risk for poor administration or management (including poor investment performance)?

- How are the funds governed and administered?

- Are various organizational interests adequately represented in the existing organizational structure?

Table 1.1 presents some basic information on the first class cities' pension funds that are the basis of this study. Additional descriptive information on each fund's history, organization and benefits appears in Appendix A.

In recent years the Legislature has moved toward consolidation of public employee pension funds in Minnesota. All teachers' funds except those of the three first class cities have been consolidated into the statewide Teachers Retirement Association. All local police and fire funds are either consolidated into the state-managed Public Employees Retirement Association, or are closed to employees hired since June 1980. MERF was also closed to new employees in 1979.

Even though most of the first class cities' funds are closed to new members, they control sizeable and growing assets, provide benefits for thousands of members, and are financed by annual state aid expenditures that totalled $38,690,747 in 1984.

1. ASSETS

Table 1.1 shows that the total assets of the first class cities' public employee funds totalled $1.16 billion in 1984. MERF's assets totalled over $500 million; the smallest of these funds, the Duluth Fire Fund, totalled about $8.8 million.

TABLE 1.1

FIRST CLASS CITIES PENSION FUNDS MEMBERSHIP, ASSETS, AND PERCENT FUNDED

1984

Fund	Membership 1984 Active	Membership 1984 Retired	Membership 1984 Survivors	Total Assets Dec. 31, 1984 (000s)	Percent Funded 1984
1. MERF	4,107	4,017	311	$ 502,267	70.1%
2. Minneapolis Teachers	3,099	2,216	155	212,141	47.2
3. St. Paul Teachers	2,426	955	106	142,633	55.2
4. Duluth Teachers	1,137	531	98	47,073	65.4
5. Minneapolis Police	641	430	252	99,019	38.0
6. St. Paul Police	470	238	186	50,831	41.8
7. Duluth Police	118	73	44	12,428	40.0
8. Minneapolis Fire	431	334	193	45,169	33.0
9. St. Paul Fire	369	261	160	41,565	34.2
10. Duluth Fire	133	96	65	8,791	22.1
TOTALS	12,931	9,151	1,570	$1,162,117	

Source: Pension Fund annual reports.

2. MEMBERSHIP

Table 1.1 shows the number of active and retired members and the number receiving survivors benefits for 1984. Total active membership totals about 13,000. MERF, the largest fund, had over 8,500 active and retired members in 1984; the smallest, the Duluth Police Fund, had 118 active members and 73 retired.

3. UNFUNDED LIABILITY

The pension systems examined here are defined benefit plans. Benefits are determinable by a formula based on salary and years of service. At any point in time the accrued liability of such plans can be determined using assumptions about mortality, salary increases, investment yields, and other factors. The unfunded accrued liability of a fund can be computed as a global measure of a plan's financial status. In the case of MERF and the police and fire funds, annual computations of unfunded liability determine, in part, local financing for the police and fire funds and state and local financing of MERF.

The right-most column of Table 1.1 shows the status of each fund's unfunded liability as of the end of 1984. The police and fire funds are structured to eliminate the unfunded liability (for basic benefits, not certain recent increases in benefits) by 2010. The cities will have to contribute an amount of money necessary to keep to this schedule to the extent that formula driven state aids and employee contributions along with investment returns fall short. MERF is similarly structured, except it is the state, not the city, that makes the variable contribution necessary to retire the unfunded liability and MERF's target date is 2017.

In the case of the teachers' funds the statutory target date for retiring the funds' unfunded liabilities is 2009. The state pays the employer's share directly until mid-1986, then the state will pay it indirectly through an aid formula. But the employee's and employer's contribution is set by a formula that is not tied to yearly calculations of the funds' unfunded liability.

4. FINANCING

Each year the pension funds receive income from dividends, interest, and the sales of securities, and from contributions by employees, employers, and the state. They pay out money for service and disability pensions, survivors benefits, and administrative expenses.

Tables 1.2 and 1.3 look at non-investment sources of pension fund financing in 1984. Data presented here show:

- The state of Minnesota has an important role in financing the first class cities' pension funds.

- The biggest financial contribution is the employer's share made by cities in the case of police and fire funds and by the state in the case of the teachers' funds.

- Employees contribute significantly, but much less than the state or city.

Table 1.2 presents, for police and fire funds, data on contributions by the state, the city, and employees. Table 1.2 shows that the state contributions across the six funds considered here varied between 21 and 32 percent of contributions from these three sources in 1984.[1] The cities contributed between 54 and 71 percent, members between about 8.5 and 15 percent.

TABLE 1.2

FIRST CLASS CITIES FIRE AND POLICE PENSION FUNDS
CONTRIBUTIONS, 1984

	State	City	Members	Total Percent	Total Amount
Fire Funds					
Minneapolis	24.7%	66.8	8.5	100%	$11,474,928
St. Paul	22.4%	66.7	10.9	100%	7,172,412
Duluth	20.7%	70.9	8.4	100%	2,802,265
Police Funds					
Minneapolis	23.9%	66.3	9.8	100%	$16,426,458
St. Paul	30.9%	53.9	15.2	100%	7,298,360
Duluth	32.0%	59.3	8.6	100%	2,868,322

Source: Annual Financial Reports to the Minnesota Department of Revenue.

Table 1.3 shows similar information for the first class cities' teachers funds and MERF. The state, however, currently pays the "employer's share," for the teachers' funds which amounts to 56 to 58 percent of contributions. Members pay betwen 40 and 42 percent, and the district

[1]As noted, funds have other revenues, chiefly investment income and capital gains. These sources are not considered here.

pays less than four percent.[2] Effective July 1, 1986, the school districts will become responsible for what is now the state's contribution. The state will compensate the school districts through a new aid formula based on average, per-pupil, retirement costs. In general, this aid will replace the state's current contribution if pupil/staff ratio do not decline.

TABLE 1.3

FIRST CLASS CITIES TEACHERS FUNDS CONTRIBUTIONS

1984

	State	District	Members	Total Percent	Total Amount
Minneapolis	55.9%	3.6	40.5	100%	$17,783,261
St. Paul	57.5%	3.0	39.5	100%	13,844,478
Duluth	56.8%	1.3	41.9	100%	2,900,352

Minneapolis Employees Retirement Fund, FY 1984

	State	City	Members	Total Percent	Total Amount
MERF	19.9%	51.7	28.4	100%	$35,395,256

Source: Annual Financial Reports.

In the case of MERF, the state paid about 20 percent of contributions in 1984, the city (and other employers) 52 percent, and members paid 28 percent of contributions from these three sources.

The main point to be drawn from Tables 1.2 and 1.3 is that the state and city are largely responsible for pension fund financing. Together they contribute, across the police and fire funds examined, between 85 and 92 percent of contributions in 1984. For the teachers' funds, the state and district contributed about 55 percent and members contributed about 40 percent in 1984. For MERF, the employer contributed about 50 percent in fiscal 1984, members 28 percent, and the state about 20 percent of non-investment revenues.

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[2]The district contribution is basically a pass-through of federal aid.

As we will see in a later section, although the state and city make the largest annual contributions, governance and management of the funds is largely in the hands of members. The state maintains significant indirect control over all public employee pension funds through special and general state laws that specify how the funds are to be set up and run. The cities' role is more problematic, even though for many of the funds it is the city that has the biggest and most direct financial stake in how well the funds are run.

5. WHO IS AT RISK?

The previous section has reviewed how the burden of financing the first class cities' funds is borne by members, the state, and the cities. The issue here is: who is at risk for good or poor fund administration and performance? Who pays if funds are poorly invested or inefficiently or dishonestly managed?

a. *MERF*

Membership in MERF consists of several categories of Minneapolis employees plus employees of the Metropolitan Waste Control Commission and the Metropolitan Airports Commission. The fund is closed to employees hired after June 1979.

Under state law, employees contribute 9.78 percent of their earnings to MERF. The employer matches the employee contribution and contributes an additional 2.5 percent of covered payroll, plus $3.9 million required by statute to be applied against the unfunded liability.

The state contributes an amount based on an annual calculation of how much is required to eliminate the unfunded liability of the fund by the end of the year 2017.

Thus the employer's share is fixed while the state's annual contribution will increase to compensate for weak investment returns.[3] The state is directly at risk for investment performance and efficient administration of MERF. This is not an arrangement that promotes accountability since the state is far removed from the management of MERF.

The incentives operating on MERF's fund administrators is somewhat complex. MERF administers two funds: a Deposit Accumulation fund, that takes contributions from employees, employers, and the state and invests them; and a Post-Retirement fund that pays retirement benefits.

In the case of the Deposit Accumulation fund, state aid will compensate for poor investment performance. In the case of the Post-Retirement fund,

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[3]Laws of 1985, Special Session, Ch. 13, Sec. 331, now puts the Metropolitan Airports Commission and Waste Control Commission at risk for a proportionate share of the cost of retiring MERF's unfunded liability by 2017.

benefit increases are tied to performance. The fund can pay a permanent retirement benefit increase if the fund's return exceeds five percent. Thus, MERF's retirees are at risk for poor performance of the Post-Retirement fund. MERF has a clear incentive to invest for good, consistent returns in the case of the retirement fund, but no such direct incentive for the Deposit Accumulation fund. This is not to say that MERF's directors are indifferent to the performance of the Deposit Accumulation Fund, only that a strong, direct financial incentive is lacking.

Data on investment returns presented in the next chapter show a major difference in performance between the Deposit Accumulation fund and the Post-Retirement fund. The latter has greatly out-performed the former. We do not fully understand the reasons for this difference in performance except to note it is consistent with incentives present in the structure of MERF.

It has been suggested that asset transfers have been carried out between the funds in a way which enhances the performance of the Post-Retirement fund at the expense of the Deposit Accumulation fund. The State Auditor's Office has looked into this question and has concluded that asset transfers are properly handled and accounted for.

b. *Teachers' Funds*

Teachers' retirement benefits are coordinated with social security in Duluth. In Minneapolis and St. Paul there are both coordinated and basic programs. All teachers appointed after June 1978 participate in social security.

The coordinated programs in the three cities are financed by a 4.5 percent of salary contribution from employees. In the coordinated programs the state pays the employer share of social security and 5.79 percent of salary in Duluth, and 4.5 percent of salary in Minneapolis and St. Paul.

For basic members, the state contributes 13.35 percent of salaries in Minneapolis and 12.63 percent in St. Paul. Employees in the basic plan pay 8.5 percent of salary in Minneapolis and 8 percent in St. Paul.

Effective mid-1986, the school districts will pick up the state paid employer obligations described above. The state will reimburse districts through an aid formula that will provide the same per pupil assistance as in the past if pupil/staff ratios do not decline.

This financing structure contains:

- An incentive for consistent investment performance. If returns achieve a six percent level, the fund pays out one percent to retirees in the form of a 13th check each year.

- An incentive favoring consistency over maximizing investment returns.

- No clear assignment of risk if investment return is unsatisfactory over the long run. As a practical matter, changes in contribution formulas are periodically decided by the Legislature.

c. *Police and Fire Funds*

As we saw in Table 1.2, police and fire funds are financed by state aid, city contributions, and contributions by members. Members' contributions and state aid are fixed by law. Members contribute eight percent of the top salary of a patrolman or firefighter. The state contributes aid derived from insurance premium taxes and additional amortization aids. These aids are computed on the basis of a formula not tied to investment performance.

The cities' contribution is not fixed, rather it is calculated each year as the amount necessary to eliminate the funds' unfunded liability by 2010 after members' contributions, state aids, and investment returns are considered.

Thus, the cities' annual contribution is directly tied to investment performance and the effectiveness of fund management in minimizing administrative expenses. In other words, the city is directly at risk for poor investment performance. Given this fact, cities should take a great deal of interest in the management and performance of their police and fire funds. Arguably, cities should be represented on the funds' governing boards and they are in four out of six first class cities' police and fire funds.

In the recent case of alleged criminal mismanagement in the Winona police fund, the city did not actively exercise its right to sit on the fund's board nor carefully review annual financial statements and audit reports that would have alerted city administrators to questionable practices in the management of the fund.

6. GOVERNANCE

The first class cities' pension funds operate according to state statutes which establish the way they are financed and governed.

This section asks:

- Who is represented on the funds' governing boards?
- Are various organizational interests adequately represented?

The governing boards of the ten funds vary considerably in size and composition. Each board, however, consists mainly of active and retired employees rather than representatives of the city. No fund has a state official on the board.

Table 1.4 provides a comparative view of the composition of the boards. Appendix A provides additional information. Board size varies between

TABLE 1.4

FIRST CLASS CITIES' PENSION FUNDS COMPOSITION OF GOVERNING FUNDS
Number of Board Members

		Employee Representatives		Employer Representatives	
	Total	Active	Retired		
Minneapolis Police	9	5	1	3[a]	Mayor, Chief of Police, City Finance Director
St. Paul Police	9	5	1	3	Mayor, Chief of Police, City Treasurer
Duluth Police	8	5		3	Chief of Police, City Treasurer, City Administrative Asst.
Minneapolis Fire	9	6		3[b]	City Attorney, Fire Chief, Medical Advisor
St. Paul Fire	28	23	5		
Duluth Fire	13	12	1		
Minneapolis Teachers	7	4	2	1	Appointee of the School Board President
St. Paul Teachers	10	7	2	1	School Board Chairman
Duluth Teachers	9	5	2[c]	2	Superintendent of Schools, School Board Appointee
MERF	7		5[d]	2	Mayoral and Council Designees

[a]The Finance Director is included as a board member in the fund's by-laws but is no longer an ex officio member by statute.
[b]Positions established by fund by-laws.
[c]Two members must be retired.
[d]Two members must be retired.

seven and 13 members for all funds except the St. Paul fire fund which has 28 members.

As Table 1.1 showed, all funds have substantial numbers of retired members. The closed funds--MERF and the police and fire funds--will have proportionately more retired members in the future. Table 1.4 shows that retired members are represented on all boards except one.[4]

In the case of the police and fire funds, retired and active members vote separately for their own representatives. State law now provides for increasing representation of retired members. The interests of active and retired members differ. Arguably, active and retired members should be represented roughly in proportion to their representation in the membership. In the police and fire funds this is not presently the case. While the funds are moving in the direction of more representation of retired members, retired members will not achieve proportional representation anytime soon.

MERF and the teachers' funds elect board members from the total membership, active and retired. MERF requires that at least two members be retired; all five currently are. All three teachers' funds have two retired members. The Duluth Teachers' Fund has a requirement that two members must be retired.

a. *Employer Representation*

For police and fire funds the cities are at risk for poor investment results and poor fund management in general. They profit directly from efficient administration and positive investment performance.

Arguably, because the cities contribute most of the funds' financing, they should have control of the funds. Such a proposal has been advanced by the Minnesota League of Cities. Employers typically have control of defined benefit plans in the private sector.

The best reason we can think of for the cities not assuming control of the investment of first class cities' police and fire funds and MERF is that these funds will ultimately disappear or be merged with state-managed funds. In addition, there is great opposition to materially changing the terms of the political compromise that resulted in the current arrangement.

In any case, we strongly believe that cities should be actively represented on pension funds' governing boards.[5] As Table 1.4 shows, during the period covered by this report the cities have had three board positions on the three police funds, however in Duluth and Minneapolis, city

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[4]As of late 1985. The by-laws of this fund were being amended to permit the election of retired members.

[5]Laws of 1986, Ch. 359 now requires municipal representatives on police and fire funds.

representatives do not attend board meetings or perform anything like the fiduciary role normally expected of a pension fund board member. The Minneapolis Finance Department does receive and file reports from the board but does not take an active role. In Duluth the city's role is even less visible. In St. Paul the city treasurer is active in attending board meetings and otherwise in monitoring and participating in board activities.

Until 1986, there was no statutory provision for city representatives on the boards of the fire funds although the Minneapolis fire fund by-laws provide for representation of two city officials, the Fire Chief and the City Attorney. There was no city representation on the St. Paul and Duluth fire funds. This arrangement was questionable given the cities' financial exposure. There are, of course, effective ways to oversee fund management without a seat on the board, and a seat on the board is no guarantee that the city is paying attention.

The three teachers' funds have one or two seats for an employer representative. The school board chairman and superintendent of schools are *ex-officio* members of the Duluth board, the school board chairman is an *ex-officio* member of the St. Paul board. An appointee of the Minneapolis board president sits on the Minneapolis Teachers Retirement Association board. Participation by these representatives is active.

We conclude that the cities should take an active role on the pension funds boards, and they should be represented on the two boards where they are not. A bill passed by the 1986 Legislature calls for voting representation by the cities on police and fire fund boards and affirms the fiduciary responsibility of board members.

If nothing else, board membership symbolizes the cities' right to full access to all records pertaining to the operation of the pension systems. Since millions of dollars are at stake, the cities should be highly interested in board decisions that can effect the flow of city dollars.

The MERF board must contain two retired members. Currently all five employee members are retired. The city has two seats filled by designees of the Council and Mayor. As discussed elsewhere, MERF, especially its all-retired employee board representatives, have a clear incentive to achieve good results in the Post-Retirement Fund, but less of a direct financial incentive to achieve similar results in the Deposit Accumulation Fund.

In conclusion, there are defects in the representation of certain organizational interests on the first class cities' pension funds.

- Employer representatives are absent from the Duluth and St. Paul Fire funds.

- Retired members are under-represented on the police and fire funds in general, although progress has been made in this area.

- The state is not represented on MERF's board, although it is directly at risk for fund performance. The state also pays the employer's share of the teachers' retirement funds and provides significant financing for the police and fire funds. State representation on these boards would serve a purpose but present an awkward organizational arrangement.

The question of what the state's current oversight role is, and our recommendations for what changes need to be made are taken up in Chapter 5.

7. ADMINISTRATIVE EXPENSES

For the same reason they are interested in investment returns, taxpayers and their representatives at the state and local level have an interest in the efficiency with which the first class cities' funds are administered. Needless administrative expenses reduce the total return of the funds and require increased taxpayer contributions.

Table 1.5 presents data on what each fund reported in administrative expenses for 1984. We did not perform a financial audit which could independently attest to the accuracy of this information, or whether these expenses conform to each fund's policies relating to administrative expenses. However, each fund is audited annually either by the State Auditor (in the case of MERF and the police and fire funds) or a private CPA firm (in the case of the teachers' funds). The data we report are drawn from audited financial statements as well as police and fire fund reports to the Revenue Department.

The funds vary in their definitions and categorization of administrative expenses. This variation is most significant in the treatment of investment expenses. For example, MERF and the Minneapolis teacher's fund manage a large portfolio in-house, causing a significant part of the cost of investment management to show up as salary expense. Most of the other funds rely more heavily on outside investment managers. In these cases separately designated investment analysis and management fees are relatively higher. The Duluth Fire fund uses a broker to provide both investment advice and to execute trades. Compensation is through brokerage fees, thus no investment analysis or management fees appear in Table 1.5.

Significant differences in investment expenses can also be due to the types of assets held in a fund's portfolio. The Minneapolis Teacher's fund, for example, holds a substantial share of sale/leaseback real estate requiring high travel expenses and legal fees.

In summary:

- Available information on administrative expenses varies widely in categorization and detail. The fact that some funds break out money spent on postage or parking and others do not does not mean that these funds do not incur such expenses.

TABLE 1.5

FIRST CLASS CITY PENSION FUNDS
ADMINISTRATIVE EXPENSES 1984

	FUNDS									
EXPENSE ITEMS	MERF	MTRFA	STPTRFA	DTRFA	MPLS. F*	ST. P. F*	DLTH F*	MPLS. P	ST. P. P	DLTH P
Salaries	$353,260	$203,553	$117,809	$71,054	$22,519	$15,774	$11,700	$12,773	$ 5,242	$ 3,827
Meetings, Conventions										
Travel		15,655								
Hotels & Meals		46,065								
Tuition		13,824								
Other										
TOTAL	$ 27,135	$ 75,544	$ 7,935	$11,845	$33,604	$32,985	$17,263	$19,810	$ 7,532	$ 5,054
Fund Membership Dues						$ 720	$ 1,045		$ 795	$ 584
Administration Expenses:										
Rent	$ 27,690	$ 60,447	$ 4,787		$ 4,867					
Actuarial Fees	9,599	42,176	10,500	$18,376	7,870					
Accounting Fees	51,900	44,425	7,600	10,500	32,215	$ 6,720	$ 4,145	$ 12,170	$ 9,735	$ 4,076
Legal Fees	14,998	26,642	2,610	2,087	12,657		9,160	93,181		
Medical Exams	6,195									
Dataprocessing	16,412	14,976	690		1,345					
Payroll Taxes	9,299	12,842	8,182	5,094	2,418		2,032			
Office Supplies & Equip.	29,526	10,946	4,123	10,900	1,848		1,732		2,607	
Stationary/Printing	30,646	31,853	2,423		3,988					
Postage	28,988	14,221	3,859		3,029					
Subscriptions & Memberships	5,458		270	1,116	1,430					
Telephone	5,624	10,685	1,476		782					
Insurance	311	35,186	8,755	7,456	551		1,175			
Legislative Expense					8,330					
Parking					696					
Board Activities		5,440			3,287					
Expense Allowance					2,842					
Other	984	3,831	1,930		456	4,241		44,940		
TOTAL	$237,630	$313,670	$ 57,205	$55,529	$88,611	$10,961	$18,244	$150,291	$12,342	$ 4,076

Table 1.5, continued

EXPENSE ITEMS	MERF	MTRFA	STPTRFA	DTRFA	MPLS. F*	ST. P. F*	DLTH F*	MPLS. P	ST. P. P	DLTH P
Investment Expenses:										
Investment Analysis	$ 32,271	$ 43,212	$ 69,089			$ 64,020		$114,213	$26,187	
Investment Management	136,100	13,173		$58,984	$ 99,588					$38,807
Legal Fees		197,096								
Travel, Hotel, Meals		32,348								
Property Taxes		19,412		1,598						
Insurance		27,449								
Utilities		3,078		6,648						
Repairs		28,134		416						
Custodial Fees	150,000	20,966	3,057	3,027	8,940					
Other		4,835								
TOTAL	$318,371	$389,703	$ 72,146	$70,673	$108,528	$ 64,020	———	$114,213	$26,187	$38,807
TOTAL EXPENSES	$936,396	$982,470	$255,095	$209,101	$253,262	$124,460	$48,252	$ 97,087	$52,098	$52,348
FUND ASSETS (000s)	$512,185	$246,709	$152,317	$ 53,868	$ 44,780	$ 41,501	$ 7,289	$ 99,110	$51,014	$12,770
EXPENSE/ASSETS (%)	.18%	.40%	.17%	.39%	.57%	.30%	.66%	.30%	.10%	.41%

Source: Teachers Retirement Fund annual reports. Police and Fire Annual Financial Reports to the Minnesota Department of Revenue.

*Figures for these funds are totals for General and Special subfund expenditures.

NOTE: Caution should be exercised in making comparisons among the funds for reasons stated in the text. Differences among funds in categorization of expenses and differences in portfolio composition means that higher expenses may not mean lower administrative efficiency. In fact, we recommend that certain funds take steps that might increase administrative expenses.

- Administrative expenses for salaries, investment analysis, portfolio evaluation, data processing, and other expenses will vary among funds as a result of differences in each fund's basic style and strategy. Also, expenses vary with the composition of the fund's portfolio.

- Even if absolutely comparable information were available, therefore, significant variation in administrative expenses should be expected among the funds.

We present data on administrative expenses in Table 1.5 For the reasons just explained, we think the only meaningful comparison to be made across the funds--and even this comparison has to be made with caution--is between the funds total expenses as a percent of assets, the final line of Table 1.5

This comparison shows:

- Fund expenses in 1984 as a percent of total assets varies between 0.10 percent for the St. Paul Police Fund to 0.66 percent for the Duluth Fire Fund.

- All the funds report a level of administrative expenses which is quite low as a fraction of fund assets. As a point of comparison, most mutual funds report a higher annual expense rate. This is true of stock funds, bond funds, balanced funds, or money market funds.[6]

Administrative expenses in the funds, even the funds reporting the highest expenses, have a relatively a minor effect on the fund's total return. Insight into why some funds' expenses are high and others low can be gained from reading the next three chapters of this report which discusses the funds' investment practices. Comparison of data on expenses with data on investment performance does not show a systematic relationship between expenses and performance. Some funds with relatively high expenses show good performance, some poor performance. In fact, in the next chapter we suggest that certain funds should take steps that may well increase their administrative expenses. We conclude that state policy-makers should be much more concerned with investment practices and performance than administrative expenses.

This is not to say that administrative expenses should be ignored or treated lightly. Control of administrative expenses should be exercised in the following way. Each fund's governing board should establish a comprehensive policy for administrative expenses covering everything from hotels and travel to staff salaries and investment management. The boards should monitor administrative expenses carefully. Municipal representatives on the boards of police and fire funds have a special incentive to do so, since each dollar of administrative expenses has to be paid by city

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[6]Based on information from Forbes Annual Mutual Funds Survey, *Forbes*, Volume 136, No. 7, September 16, 1985.

taxpayers. Annual audits by the State Auditor or a private firm should determine if annual financial reports fairly present an accounting of these expenses and whether they have been made in a way which is consistent with each fund's own policies and state law. As part of this process the auditors should identify any areas where policies need to be written.

Since this study is not a financial audit, we have focused on the substantive question of whether an inclusive measure of funds' administrative expenses suggests that these are unusually high. The answer is that expenses are generally not out of line.

But it is also true and to be expected that ten funds of varying size and style will report widely different administrative expenses. The ten funds do vary in the size and expertise of in-house staff, thus salaries vary from $353,268 for MERF to $3,827 for the Duluth police fund. Office space used by the funds varies from comfortable to spartan. We think this reflects choices that should be made by the fund's governing boards rather than state policy-makers, assuming that expenses are accounted for properly.

INVESTMENT MANAGEMENT: TEACHERS' FUNDS

CHAPTER 2

A. INTRODUCTION

The pension funds discussed in this study are defined benefit plans.[1] However, they differ in key respects, notably the forms of post-retirement adjustment and whether the funds are closed or open to new members. These differences can result in different objectives and investment strategies. For these reasons, and because of the complexity and length of this material, our discussion of investment management is divided into three chapters. The first chapter addresses the three teachers' funds. Each uses a single fund to accumulate assets of active employees, to service retiree accounts, and to provide supplemental payments to retirees when investment returns are adequate. In order to provide a post-retirement adjustment each year, these funds require consistent investment performance. The police and fire funds, discussed in Chapter 3, have a post-retirement adjustment which is not based on investment earnings. Variable returns will not affect retirees since adjustments in post-retirement benefits are tied to changes in active duty salaries. The Minneapolis Employees Retirement Fund (MERF), discussed in Chapter 4, uses a Deposit Accumulation Account to invest the assets of active employees, and a Post-Retirement Account to invest retiree accounts and to finance post-retirement adjustments based on investment earnings. High but consistent investment performance is desirable for the post-retirement account. The final section of Chapter 4 contains broad conclusions based on our review of all the funds.

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[1]Defined benefit plans offer a specified benefit at retirement. Contribution levels are adjusted to insure that contributions plus investment earnings are adequate to pay the specified benefits. With this system, contributors bear the investment risk. In contrast, a defined contribution system specifies the contribution level, leaving the eventual retirement benefit uncertain. Employees bear the investment risk. If investment performance is high, they will receive higher benefits when they retire. If returns are low, benefits are lower.

Our study of the investment management of the first class city teachers' funds, the first class city police and fire funds, and MERF addresses the following questions:

- How have administrators invested pension fund assets, and how have the investments performed?
- Do the funds hold assets or asset mixes not permitted by statute?
- Have managers set performance objectives?
- Have administrators adequately monitored and evaluated fund performance?

We interviewed fund managers about their asset mix, investment philosophy and objectives, use of internal and external investment managers, and procedures for monitoring and evaluating performance. Through a written request we asked for:

- year-end asset mix data for 1980 through 1984,
- the asset mix for June 30, 1985, and a listing of each asset held on that date,
- annual time-weighted rates of return[2] based on market value for total portfolio, stocks, bonds, alternative assets (equity real estate, venture capital, oil, gas, minerals), and,
- average rates of return for the periods 1980 through 1984, and 1980 through mid-1985.

To see whether any pension funds held assets or asset mixes not permitted by law, we questioned pension administrators and examined the June 30, 1985 asset list. We found no significant problems. However, funds may have owned questionable assets before or after that date. Also, time did not permit us to determine whether each venture capital and real estate asset met every statutory requirement.

Many funds had difficulty complying with our rate of return request, eventually submitting data of varying quality. As a result, comparisons among funds must be made with care. Three funds submitted dollar-weighted[3]

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[2]Time-weighted rates of return reduce or eliminate the effects of cash inflows and withdrawals on fund performance. Two comparable managers could appear to perform quite differently if one manager received a large cash inflow at a very opportune time, while the other had a large outflow. By eliminating these effects, time-weighted returns can be used to compare performance among managers, and among funds with different cash flow patterns.

[3]A dollar-weighted return, also called the internal rate of return, measures the growth rate of the beginning assets and the net

rather than time-weighted returns. Cash was not handled consistently. Some funds did not incorporate all their cash equivalents into their returns, while others included it in bond or total portfolio returns. A few funds had never calculated returns based on market data, and some had not retained the data. Consequently, stock and bond returns were not provided for all years, or were based on cost rather than market.

B. FUND STRUCTURE: TEACHERS' FUNDS

The Minneapolis Teachers' Retirement Association, the St. Paul Teachers' Retirement Association, and the Duluth Teachers' Retirement Association are organized as non-profit corporations. Each was incorporated in 1909. Of all the pension funds covered in this study, these three are the only funds still open to new members. The teachers' funds have hired executive directors from outside the fund membership. These administrators have considerable knowledge of investing and pension administration.

The Duluth and the St. Paul Teachers' Funds use the same investment guidelines as the State Board of Investment (SBI).[4] The Minneapolis fund follows an independent approach, being guided by the prudent-person standard. The fund has considerable holdings in a form of equity real estate which would not be permissible under SBI investment guidelines.

The three teachers' funds are financed through investment earnings, employee contributions, and an employer contribution. Through 1985 the employeer contribution was paid directly by the state. Starting in July 1986, technically the school district pays the employer share, but the state will provide funds through a new aid formula. The investment risk is shared. If investment performance is weak, there would be pressure on the school district, the state, and the teachers to provide additional funding.

Post-retirement adjustments differ among the three teachers' funds. The Minneapolis and St. Paul funds base their adjustments on investment yields. Up to one percent of fund assets can be distributed annually to retirees as a lump sum payment when investment yields are at least six percent. In addition, the Minneapolis fund grants an automatic 1.5

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contributions necessary to equal the ending assets. While providing a valid measure of asset growth, the measure is affected by the timing of the contributions. Dollar-weighted returns should not be used to compare the performance of managers experiencing different cash flows.

[4]Authorized SBI investments and permissible percentages of the various asset classes are found in Minn. Stat. §11A.24. SBI manages the largest public retirement systems in the state, including the Public Employees Retirement Fund, the Public Employees Police and Fire Fund, the Teachers Retirement Fund, the State Employees Retirement Fund, the Post-Retirement Fund, and several others. Total assets exceed $8 billion.

percent increase. The Duluth fund bases its adjustment on total rate of return. Up to one percent of assets can be distributed among retirees if the total rate of return is at least six percent.[5]

The first class city teachers' funds differ in two ways from the SBI Teachers Retirement Fund, which invests the assets of all other Minnesota public school teachers. The first class city pension systems each use a single fund to accumulate assets, pay retirement benefits, and achieve post-retirement adjustments. Because of this structure the funds must be managed with multiple investment objectives. In contrast, the state uses two funds, permitting each to be managed with separate objectives. The Basic Retirement Fund accumulates assets of active teachers and is managed primarily for growth. The Post-Retirement Fund pays retirement benefits and generates post-retirement adjustments. It is managed for consistent yields.

The second difference is the form of post-retirement adjustment. The three teachers' funds rely on capped, annual, lump sum adjustments. With the SBI Post-Retirement Fund, when earnings exceed five percent the entire excess is used to provide a supplemental annuity, creating higher benefits for the remaining life of the retiree. This increase is permanent, and there is no cap.

To some extent, the post-retirement benefit provisions of the first class city teachers' funds conflict with growth objectives. While aggressive management for maximum growth might reduce the burden on taxpayers, this approach can cause variable total returns and low current yield, which are not acceptable given the forms of post-retirement adjustment. Because of the single fund structure, to achieve annual post-retirement adjustments all assets must be managed for consistent investment performance.

For the Duluth fund the conflict is minimal. High growth requires high average total rates of return, while their post-retirement objectives require consistent total rates of return. In response, administrators have adopted an investment strategy stressing total return objectives and using sizable moves among stocks, bonds, and cash to guard against realized and unrealized investment losses.

The conflict is more serious for the St. Paul and Minneapolis funds because they use a yield measure for their post-retirement adjustments. Administrators have an incentive to manage for consistent yields rather

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[5]While there are many variations on yield and total rate of return measures, basically investment yield is interest, dividends, rental income, and realized gains or losses, divided by asset value. A total rate of return is interest, dividends, rental income, and both realized and unrealized gains and losses, divided by asset value. The specific features of the post-retirement adjustments are covered in the by-laws of the pension funds and in various laws. For the Minneapolis fund adjustment see Minn. Laws 1978, Chap. 238, Sec. 13, subd. 4, and Minn. Laws 1984, Chap. 574, Sec. 34. For the Duluth and St. Paul fund provisions see Minn. Laws 1985, Chap. 259, Sec. 2 and 3.

than for high average total rates of return. The need to deal with these conflicts is reflected in the investment philosophies and portfolios of the Minneapolis and St. Paul funds, permitting us to make the following generalizations:

- The primary investment objective is adequate and consistent yields. A secondary objective is high total rates of return and portfolio growth.

- The portfolios reflect these objectives. High yield investments are preferred. Growth stocks which pay little or no dividend are generally avoided. Equity real estate investments, when part of the portfolio, have been tailored to produce high yield and steady cash flow.

C. ASSET MIX

The asset mix of the three teachers' funds appears in Table 2.1. The total value of assets in each year is given, along with the percentage of assets invested in cash and cash equivalents, bonds, stocks, equity real estate, and venture capital. The asset percentages were calculated using cost for real estate and venture capital (market values were not available), and market values for other assets.

The asset mix of the Minneapolis Teachers' Fund is unique. The fund has a low bond position and a large commitment to equity real estate. These real estate investments are sale/leaseback arrangements with high cash flow. The fund holds these as a substitute for a traditional bond portfolio. In contrast, no venture capital or equity real estate is listed for the Duluth fund. The St. Paul fund holds one small equity real estate investment which it includes within its bond portfolio.

D. RATES OF RETURN

Table 2.2 provides calendar year rates of return, as received from the funds. The data quality varies, limiting comparisons. The St. Paul Teachers' Fund provided high quality data. This fund was one of the few which had no problems providing the requested information. The Minneapolis Teachers' Fund provided accurate time-weighted returns for stocks and bonds. However, meaningful market-based returns could not be calculated for their extensive real estate portfolio because no market data were available. As a result, their total portfolio returns do not incorporate real estate, excluding a major component of their portfolio.

The Duluth Teachers' Fund submitted dollar-weighted rather than time-weighted returns. Depending on the pattern of returns during the

TABLE 2.1

FIRST CLASS CITY TEACHERS' FUNDS: ASSET MIX

Fund	Year	Total Assets[a]	Percent Cash	Percent Bonds	Percent Stock	Percent Equity Real Estate[b]	Percent Venture Capital[c]
Minneapolis	1980	$160,595,536	5%	20%	48%	27%	0%
Teachers'	1981	175,201,528	17	11	40	32	0
Fund	1982	204,394,167	19	9	40	32	0
	1983	228,873,062	21	7	43	29	0
	1984	246,709,124	20	7	43	30	1
	1985	277,889,101	13	8	48	30	1
St. Paul	1980	$ 83,331,000	21%	41%	38%	0%	0%
Teachers'	1981	88,232,000	18	41	41	0	0
Fund	1982	115,602,000	13	46	41	0	0
	1983	132,209,000	8	43	50	0	0
	1984	152,317,000	6	43	51	0	0
	1985	177,935,000	6	40	54	0	0
Duluth	1980	$ 33,241,533	26%	29%	44%	0%	0%
Teachers'	1981	34,355,711	17	34	50	0	0
Fund	1982	43,180,332	17	38	45	0	0
	1983	48,733,301	6	34	60	0	0
	1984	53,868,405	3	33	64	0	0
	1985	61,746,347	5	32	64	0	0

Source: Data received from the pension funds.

[a] Assets as of the end of the calendar year, except for the June 30, 1985 values.

[b] In calculating the Minneapolis Teachers' Fund real estate percentages, the real estate is valued at cost minus accumulated depreciation.

[c] Venture capital is valued at cost.

TABLE 2.2

FIRST CLASS CITY TEACHERS' FUNDS: TOTAL RATES OF RETURN[a]

Fund	Year	Stocks	Bonds	Alternative Investments[b]	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments[b]	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Minneapolis	1980	19.8%	3.9%	N/A	14.1%	14.1%	32.4%	33.7%	12.7%	3.3%
Teachers'	1981	-1.8	23.7	N/A	5.3	5.3	-4.9	-3.7	15.6	7.0
Fund[c]	1982	24.5	25.6	N/A	21.1	21.1	21.4	18.7	11.7	29.8
	1983	19.2	12.4	N/A	15.0	15.0	22.6	23.4	9.3	7.8
	1984	6.1	14.2	2.8%	8.3	5.9	6.4	3.1	10.4	15.1
	1985	21.7	10.8	1.1	15.1	14.9	17.5	18.6	4.0	10.8
St. Paul	1980	36.2	3.5	N/A	10.4	N/A	32.4	33.7	12.7	3.3
Teachers'	1981	-5.9	3.9	N/A	2.1	N/A	-4.9	-3.7	15.6	7.0
Fund[c]	1982	19.3	31.8	N/A	23.8	N/A	21.4	18.7	11.7	29.8
	1983	18.9	9.3	N/A	13.3	N/A	22.6	23.4	9.3	7.8
	1984	8.7	15.1	N/A	11.7	N/A	6.4	3.1	10.4	15.1
	1985	20.7	9.8	N/A	15.2	N/A	17.5	18.6	4.0	10.8
Duluth	1980	42.5	2.3	N/A	19.5	N/A	32.4	33.7	12.7	3.3
Teachers'	1981	-3.7	3.6	N/A	1.7	N/A	-4.9	-3.7	15.6	7.0
Fund[d]	1982	22.0	26.6	N/A	24.8	N/A	21.4	18.7	11.7	29.8
	1983	17.7	6.7	N/A	12.9	N/A	22.6	23.4	9.3	7.8
	1984	8.5	14.1	N/A	11.1	N/A	6.4	3.1	10.4	15.1
	1985	18.6	10.7	N/A	14.4	N/A	17.5	18.6	4.0	10.8

Source: Data received from the pension funds.

[a]Calendar year returns, except for 1985 which includes only through June 30.

[b]Includes venture capital, but not real estate. Data is not available to calculate market-based total returns on the Minneapolis Teachers' real estate portfolio.

[c]Time-weighted returns.

[d]Dollar-weighted returns.

sub-periods and the cash flow, dollar-weighted returns can give a distorted impression of the relative performance of investment managers. We inquired about the fund's cash flow to determine how comparable these dollar-weighted returns were to time-weighted returns. The data suggest strong investment performance, and we believe time-weighted returns for the total fund would be similar to the returns provided. We have less faith in the separate stock and bond returns. Cash flows in or out of stocks and bonds could be significant as managers try to take advantage of opportunities.

For comparison, Table 2.2 also includes annual time-weighted returns for several indexes. The S&P 500 and the Wilshire 5000 are stock indexes. The Wilshire 5000 best represents the entire stock market. It is based on all domestic stocks for which daily prices are available. The table also includes a T-bill index and the Merrill Lynch bond index. Since these are time-weighted indexes, comparisons to the Duluth dollar-weighted returns may be misleading.

Table 2.3 provides annualized rates of return. These returns provide a useful performance summary. To illustrate, if the Minneapolis Teachers' Fund had consistently earned 15.9 percent on stocks in each year, the result would be identical to their variable stream of stock returns shown in Table 2.2 for 1980 through mid-1985. Similarly, a consistent 16.3 percent return on bonds is equivalent to the variable bond returns shown in Table 2.2.

Table 2.3 covers two time periods. One set of returns is for 1/1/80 to 1/1/85, while the second includes the first six months of 1985. Due to good bond returns and a surge in the stock market, adding the additional six months raises the average returns for all three funds.

Because of similar performance and some data problems, ranking the funds on a total portfolio rate of return basis is not meaningful. Since the annualized fund returns in Table 2.3 are calculated from the data in Table 2.2, the results are subject to the same underlying data problems. The St. Paul fund is a capable performer. The Minneapolis returns suggest good performance, but the returns do not include its extensive real estate portfolio. The Duluth dollar-weighted returns suggest strong performance. However, these returns are not comparable to the indexes, or to the Minneapolis, St. Paul results.

The stock and bond performance of the Minneapolis and St. Paul funds can be compared. Both performed well. The five and five-and-one-half year stock returns of the St. Paul fund exceeed those of the Minneapolis Teachers' Fund and the indexes. The slightly lower average stock returns of the Minneapolis fund are due to relatively weak 1980 performance. Table 2.2 shows that while they earned nearly 20 percent during that year, both the stock indexes exceeded 30 percent, and the St. Paul stock returns exceeded 36 percent. If the 1980 returns are excluded, Minneapolis is the stronger performer. They outperformed the St. Paul fund in stocks in 1981, 1982, 1983, and the first half of 1985.

The Minneapolis Teachers' Fund bond returns are high, an expected result given its investment strategy. The fund holds few bonds, relying instead

TABLE 2.3

FIRST CLASS CITY TEACHERS' FUNDS: ANNUALIZED TOTAL RATES OF RETURN

Fund	Period	Stocks	Bonds	Alternative Investments	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Minneapolis Teachers' Fund[a]	1/1/80 to 1/1/85	13.1%	15.7%	N/A	12.7%	12.1%[b]	14.8%	14.2%	11.9%	12.2%
	1/1/80 to 6/30/85	15.9	16.3	N/A	14.3	13.8[b]	16.7	16.4	11.6	13.1
St. Paul Teachers' Fund[a]	1/1/80 to 1/1/85	14.6	12.3	N/A	12.0	N/A	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	17.1	13.0	N/A	13.8	N/A	16.7	16.4	11.6	13.1
Duluth Teachers' Fund[c]	1/1/80 to 1/1/85	16.4	10.3	N/A	13.7	N/A	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	18.4	11.3	N/A	15.2	N/A	16.7	16.4	11.6	13.1

Source: Computed from data in Table 2.2.

[a]Based on annual time-weighted returns.
[b]Does not include real estate. Data is not available to calculate market-based total returns on the real estate portfolio.
[c]Based on annual dollar-weighted returns.

on its real estate portfolio for high cash flow investments. Junk bonds are held within its small bond portfolio. These are issues with low ratings; bond holders receive higher interest rates to compensate for the greater risk. Thus the results are expected. The return should exceed that of the St. Paul fund, which holds a more traditional portfolio, and the Merrill Lynch bond index, which is influenced by returns on many higher rated issues.

E. INVESTMENT APPROACHES, OBJECTIVES, AND OVERSIGHT

In this section we first briefly describe the portfolios and strategies used in investing the assets. Second, we determine whether managers have established meaningful performance objectives for the funds. Finally, we examine whether administrators have the data needed to adequately evaluate their fund's performance so changes in investment managers and approaches can be made when necessary.

1. MINNEAPOLIS TEACHERS' FUND

The Minneapolis Teachers' Fund is entering a transition period. Late in our audit the executive secretary retired. This individual exerted strong influence over investment policy and was responsible for managing the stock and real estate portfolios. New management is currently evaluating many aspects of the fund's administration. We begin with a description of the existing investment philosophy and practices, and we note our concerns. Administrators plan to address our concerns during their review.

a. *Investment Portfolio*

The fund is unique among those studied for its heavy reliance on internal management of assets, and the high concentration of equity real estate in its portfolio. Approximately 90 percent of fund assets are managed in-house, including all real estate, all stocks, and most bonds. Short term cash, junk bonds, and most venture capital investments are externally managed.

Three considerations were used in asset selection:

- Assets should adequately protect principal and investment returns from the eroding effects of inflation.

- Assets should provide high cash flow.

- Investments should represent solid, long term values.

The previous executive secretary contended that equity real estate was the best way to achieve the desired returns and cash flow. Sale/leaseback arrangements would substitute for bonds, and be the cornerstone of the portfolio, supplemented by stocks. Based on planning decisions which appear in memos, stock was to be maintained at 30 to 40 percent of portfolio, with equity real estate growing to comprise 50 percent of total assets. Bonds would be slowly liquidated until a target range of zero to five percent of portfolio was reached. Management contended that adequate returns can not be obtained through traditional bond investments. While bonds can provide consistent cash flow, the value of the underlying principal and interest is eroded by inflation.

Stocks were selected based on their consistent cash flow and long term value. Cyclical stocks were avoided in favor of companies with product lines which could be expected to do moderately well in most markets. Stocks were sold only if staff concluded there was a permanent deterioration in the income and growth potential of the company. Little effort was made to shift between sectors, or between stock and cash over the market cycle.

The entire equity real estate portfolio consists of sale/leaseback arrangements. These are heavily concentrated in fast food and restaurant properties including Burger King, Perkins, Pizza Hut, Rax, Bonanza, Arby's, and Wendy's; and in convenience stores and supermarkets. Other types of commercial real estate properties comprise less than 5 percent of the equity real estate portfolio.

The sale/leaseback arrangements are an innovative attempt to provide high returns and cash flow. Typically these arrangements do not involve other investors. The fund purchases the land and building, then leases them to the tenant. A basic monthly rent is paid plus a percentage of sales above a threshold figure. The occupant is responsible for taxes, utilities, and maintainence.

These investments combine the cash flow of a bond with the advantages of equity ownership. Two provisions provide good inflation protection. The fund benefits if the property appreciates, or if the sales threshold is exceeded. The threshold may be exceeded either by high volume or by increased prices.

Pension fund administrators claim an additional advantage--these are "maintainence free" investments. The fund incurs little ongoing expense in managing the property. Administrators contend that the tenant has an incentive to maintain the properties and manage the business effectively to earn profits. With restaurants that are part of regional or national chains, the training and resources of the franchising company may help to reduce management and financial problems.

While these investments have attractive features, we are concerned about the size of the real estate portfolio, the lack of diversification, and overlap between stocks and real estate. We observe:

- Equity real estate comprises over 30 percent of the total portfolio, an unusually high percentage. The average public fund holds about five percent equity real estate[6].

- All the real estate investments of the fund are sale/leaseback arrangements, and based on cost, approximately 95 percent of these assets are concentrated in a single sector--food related properties.

- There is overlap between the stock and real estate portfolios, further increasing the percentage of total portfolio in food related assets.

Approximately 12 percent of the fund's stock portfolio consists of holdings of McDonald's, Beatrice, General Mills, Pillsbury, Super Valu Stores, and several smaller food related companies. In a few cases the fund is both leasing property and holding the stock of the restaurant or parent company. Examples are Wendy's, Chi-Chi's, People's Restuarants, Cub Foods (which is owned by Super Valu), and Burger King (owned by Pillsbury). If the company's earnings potential declines, the fund may be faced with liquidating the stock and the real estate. Generally the exposure is not large, although in one case it is not insignificant. The fund holds approximately $2.7 million in Super Valu stock and has $4.6 million in sale/leaseback arrangements with Cub Foods.

We recommend:

- The board and staff of the Minneapolis Teachers' Fund should review its program of real estate investing. Concern should be given to the need for liquidity, adequate portfolio diversity, and the appropriate proportion of these investments.

- The Board and staff should review the real estate and stock portfolios to insure that separation and diversification are adequate.

b. *Performance Objectives*

Management stated that they have a long term rate of return objective of the rate of inflation plus five percent. However, since the fund has no market values for its extensive real estate holdings, administrators lack adequate information to measure progress toward their goal. Management also has an objective of achieving an adequate yield to permit a post-retirement adjustment, and meeting its required actuarial return of eight percent.

We recommend:

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[6]Greenwich Research Associates, *Public Pension Funds: 1985 Report to Participants*, p. 8. In their sample of 362 public funds the average fund held 2.4 percent of its assets in equity real estate in 1984. This is projected to rise to 6.1 percent in 1987.

- Management should obtain the information needed to measure performance against objectives.

- Management should set additional performance objectives for its total portfolio and develop performance objectives for each asset class and asset manager.

We found that improvements can be made in the performance objectives of all three teacher funds. Rather than repeat detailed recommendations for each fund, we include a discussion of performance objectives in the conclusion to this chapter.

c. *Performance Monitoring*

The Minneapolis Teachers' Retirement Fund did not maintain the data needed to fully assess its stock, real estate, or total portfolio performance. Last year a performance report was presented to management covering 1984, but excluding the real estate portfolio. The fund had considerable trouble complying with our information request for rates of return based on market values for 1980 through mid-1985. Portfolios and market values for the earlier years had to be reconstructed. Returns could not be calculated for the real estate portfolio because market values are not known.

Management should re-examine procedures relating to its real estate portfolio. These are "maintainance free" investments only if one ignores the need to monitor the portfolio and obtain market data. Typically, the fund has relied on missed rental payments as the first indication of trouble. No systematic attempt has been made to update market values. While these procedures have kept expenses low, there is considerable cost. Market-based total rates of return cannot be determined for this real estate or the total portfolio. Meaningful performance objectives can not be set, and progress toward those objectives can not be monitored.

We conclude:

- Management should address the issues of real estate valuation and measuring the performance of these assets.

In part this lack of comprehensive data to assess short-term performance was due to the orientation of management. Since stocks and other assets were selected for their combination of high yield and long term growth, management was less concerned with intermediate shifts in market value, or in yearly comparisons with other investors or investment strategies. We question this approach. Investments and procedures should be subject to periodic review. To convince school district officials, the Legislature, and fund participants that investments are prudent, administrators should be able to measure performance and demonstrate by comparison to other investors that funds are wisely managed.

We also observe that not having market values for the real estate portfolio can lead to unwarranted pressure for higher contributions. For the actuarial valuation, which determines the projected financial liabilities of these funds and the level of contributions needed, assets are to be carried at cost plus one third of the difference between cost and market. Lacking market values, the Minneapolis Teachers' Fund has instead used cost minus accumulated depreciation, which may not adequately represent real estate values. The understatement can be serious if these properties are appreciating, leading to ever widening differences between cost and market.

Opinions differ regarding the actual value of these properties. The previous executive director contended that the fund's real estate portfolio was appreciating considerably. He submitted ten appraisals to us, done while we were reviewing the fund, which supported his view. During the closing conference the new executive director questioned the methods used in those appraisals and stated that appreciation is modest at best.

Over time we expect significant changes in the investment practices of this fund. The new executive director and the board are presently reviewing fund policies. First, we expect that the stock proportion will increase relative to real estate. In contrast to the previous director, new management contends that a well managed stock portfolio can outperform equity real estate. Second, we expect greater commitment to measurable objectives and performance evaluation. The new director appears committed to performance evaluation, and reports will be routinely obtained. Third, the problems of the real estate portfolio will be addressed. The new director intends to seek a moratorium on real estate investing until the valuation problem and other key issues are resolved. Finally, the use of outside investment management will increase. While the new director wants to retain some in-house management, greater use of outside managers is expected.

2. ST. PAUL TEACHERS' FUND

The St. Paul Teachers' Fund follows the prudent-person standard and SBI's investment guidelines. The fund also tries to avoid liquor or tobacco stocks, although this is not always possible given the highly diversified nature of many companies.

The executive director manages cash in-house. Capital Supervisors, a Chicago firm, advises on stock and bond selection and asset mix. Recommendations are made to the executive director, who signs off on all purchases and sales. Brokerage services are separated from investment advice.

a. *Investment Portfolio*

Two principles are followed in portfolio selection:

- Within limits, assets are shifted between stocks and cash to take advantage of economic trends, and to avoid loss of asset value.

- High cash flow, high yield investments are preferred to low yield, high growth investments.

Fund management has considered investment alternatives and carefully justified the approaches taken. Investments are liquid so the asset mix can be altered to respond to changing economic conditions.

Cash provides liquidity for benefit payments, and funds are shifted into cash to cushion against downturns in the stock market. At times cash equivalents have been as much as 30 percent of portfolio. Stocks range from 30 to 60 percent of portfolio. Given the need to finance benefit payments, and the yield-based post-retirement adjustment mechanism, high dividend stocks are preferred to low yielding growth stocks.

Bonds, approximately 40 percent of the portfolio, are held for yield and cash flow. The bond portfolio contains a fair amount of mortgage bonds and GNMA pass-throughs[7]. Mortgage-related securities often pay monthly, which makes them an excellent security for pension funds, given their monthly cash flow needs. Also, studies have shown that these securities occasionally yield a premium over conventional corporate bonds. Average bond maturities are five to 10 years, with no bonds in the June 30, 1985 portfolio exceeding a 15 year maturity. Longer term bonds are avoided to protect asset values from the effect of interest rate swings. Because of the fixed payout on bonds, the value of existing bonds falls when interest rates increase, and rises when interest rates fall. This effect is most severe with long term bonds of 20 year or longer maturities.

According to the executive director the board is not supportive of real estate investing. The fund is involved in only one equity real estate investment, amounting to a fraction of one percent of assets. This investment is a limited partnership in Burger King restaurants, tailored to produce the high cash flow desired by this fund. The arrangement is similar to those used by The Minneapolis Teachers' Fund. There are, however, a few differences. Since the St. Paul Teachers' Fund follows SBI investment guidelines, they invested through a limited partnership. Second, it appears that payments to the fund are based entirely on sales, rather than a flat rent and threshold sales figure.

b. *Performance Objectives*

The fund lacks adequate total rate of return objectives. The fund strives to meet the eight percent actuarial return requirement and earn a yield sufficient for a post-retirement adjustment. The asset mix is intended to produce these yields and to provide adequate cash flow for benefit payments.

Fund administrators are reacting to the incentives created by the post-retirement adjustment mechanism. The primary incentive is for consistent yields based on cost, rather than high but somewhat more variable total rates of return based on market values. Administrators state that total

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[7]Government National Mortgage Association (GNMA) pass-through securities pay monthly interest plus amortization of principal on pools of mortgages.

rate of return objectives have low priority because benefit payments and post-retirement adjustments can not be paid with unrealized gains.

We urge administrators to set additional objectives and to give more weight to total rate of return objectives. Our concern is not with recent investment performance, which was strong over the periods studied, but with the current investment objectives and the implications for future performance. Given their fiduciary responsibilities, and since high average total rates of return are needed to minimize long term taxpayer contributions to the fund, administrators should have total rate of return objectives intended to increase the real purchasing power of fund assets. The yield objectives are not sufficient. They ignore unrealized gains and at times those objectives can be met even though the total returns are less than the inflation rate, or less than market averages. Thus we recommend:

- Administrators should establish rate of return objectives which equal or exceed market averages and the inflation rate.

A more detailed set of recommendations appears in the conclusion.

c. *Performance Monitoring*

When interviewed, management of the pension fund displayed a firm understanding of procedures for evaluating investment performance. The fund had no problems in satisfying our information request. For many years they have received performance reports from Indata Services.

3. DULUTH TEACHERS' FUND

The Duluth Teachers' Fund follows the prudent-person standard and SBI investment guidelines. They also try to avoid liquor, tobacco, Canadian, and other foreign stocks. Administrators strive for high but consistent total rates of return. This emphasis is reflected in the portfolio, in investment objectives, and in investment strategies. The fund uses a post-retirement adjustment based on total rates of return.

The executive director at one time was a staff member of the St. Paul Teachers' Fund, and the funds have some similarities in management style. However, the Duluth fund has a more aggressive stock position and engages in larger swings between stock and cash. Cash is managed in-house, and Capital Supervisors, the same company used by the St. Paul Teachers' Fund, provides recommendations on stock and bond selection. Investment advice is separated from brokerage services.

a. *Investment Portfolio*

Fund administrators have a good understanding of the role of various assets in the portfolio. The fairly balanced asset mix, combined with shifts between cash and other assets, are used to avoid downside variability.

The Duluth Teachers' Fund keeps a lower proportion of assets in bonds than the St. Paul fund, with bonds generally under 35 percent. The portfolio contains a fair number of mortgage bonds and pass-through securities. The average maturity of the bond portfolio ranges from three to 10 years. In general, longer maturities are avoided, although some long term bonds were bought to take advantage of the high interest rates available in recent years. The fund also trades among bond grades during the market cycle. In periods of low interest rates and a strong economy, lower grade bonds are purchased to take advantage of higher yield. When the economy is weak and interest rates are high, the fund shifts to higher grade bonds to lessen default risk.

At times stocks exceed 60 percent of portfolio. The fund is aggressive in shifting into stocks during market surges and into cash in market downturns to avoid loss of asset values. Cash positions occasionally exceed 50 percent.

In recent years the fund has not owned equity real estate, although they have in the past, being one of the first funds in the state to use this type of investment. The executive director feels that in the right markets equity real estate can be an excellent investment. In the near future a modest real estate investment is planned.

We question selection of one of the assets in the portfolio. The pension fund owns stock in the Duluth Growth Fund, a corporation which intends to purchase existing businesses and move them to Duluth. Risk and return were not the primary considerations in selecting this asset. Although the $50,000 exposure is minimal, administrators should not include assets in the portfolio which have not been justified on a risk and return basis.

We recommend:

- All portfolio investments should be the best available given the expected impact on the portfolio's risk and return.

b. *Performance Objectives*

The fund has the following objectives:

- Exceed a six percent total rate of return, needed to permit a post-retirement distribution.

- The average total rate of return should exceed inflation over two market cycles.

- Exceed the eight percent actuarial requirement.

Although this fund has useful total rate of return objectives, some improvements can be made. First, the objective of exceeding the rate of inflation is vague and not sufficient by itself. Average total rates of return could exceed the rate of inflation yet the fund could considerably underperform the market. Second, there are no formal objectives for each asset class. This may be due to the emphasis of management--they place considerable importance on shifts between asset classes to maintain and increase fund value. This does not lessen the importance of setting asset class objectives. Investment success depends on profitable shifts between asset classes and on the performance within each asset class. Poor performance in either area can undermine the total portfolio objectives. Thus the fund should have formal objectives for each asset class. Detailed recommendations appear in the conclusions below.

c. *Performance Monitoring*

Fund management is capable and actively involved in monitoring investment performance and economic situations. This is particularly important given the asset shifts used by this fund.

We noted earlier that this fund submitted dollar-weighted returns. These returns are an accurate reflection of fund earnings, but they can be misleading indicators of the relative performance of the investment managers. We understand that in the last year data improvements have been made. The fund now receives reports from Indata Services showing time-weighted returns and other performance information.

F. CONCLUSIONS

The Duluth fund requires total rates of return in excess of 6 percent to permit an annual post-retirement adjustment. Similarly, the Minneapolis and St. Paul funds strive for consistent yields in excess of six percent. These yield objectives can create a trade-off against long term growth, although this effect was not significant over the period studied. While there are some data problems, the total rates of return for the three funds suggest adequate to strong performance. This is in part due to the capability of the funds' administrators, and to market conditions which favored high yielding, high cash flow investments. The period included some excellent years for bonds, cash equivalents, and income stocks. Real interest rates were exceptionally high.

Regarding investment objectives, we found that the St. Paul and Minneapolis fund administrators were more concerned with yield than with total return objectives. This reflects their use of yield measures to determine post-retirement adjustments. However, since high average total rates of return are needed to minimize taxpayer contributions, each fund should have total rate of return objectives and administrators should give these objectives adequate emphasis. The Duluth fund administrators are oriented toward total rate of return measures. The problems with the Duluth fund objectives are minor--primarily a question of detail. We are more concerned with the St. Paul and Minneapolis funds. The St. Paul fund places low priority on total rate of return objectives. The Minneapolis fund total rate of return objective has little meaning since administrators do not measure the unrealized gains from its extensive real estate portfolio.

Better performance objectives should be developed, and the objectives should be written and measurable. Developing written objectives forces administrators to carefully consider their investment strategies and the needs of fund members. Once completed, the document can serve to inform new board members, guide investment decisions, and provide criteria for evaluating performance. Also, a written document helps insure that investment managers clearly understand what is expected. These investors are acting as employees of the fund. In any employee/employer relationship clear expectations are essential to achieve the desired results.

The following is an outline for setting performance objectives that we recommend to all the pension funds. First:

- Administrators should select a taret total portfolio rate of return in excess of the rate of inflation.

Administrators have a responsibility to preserve and increase the real value of fund assets. Thus over the long term, a total rate of return which equals or exceeds inflation is needed. Administrators should select a specific target return above the inflation rate after reviewing financial needs and risk preferences.

Second:

- The total portfolio return should equal or exceed a composite market index with a similar asset mix.

This objective is necessary because at times the returns could exceed the inflation rate, yet considerably underperform the market. Such performance is not acceptable.

Third:

- Stategic moves should be reviewed, and performance objectives which equal or exceed market returns should be set for each asset class, consistent with the total portfolio objective.

Achieving the total portfolio objectives depends on successful strategic moves among asset classes, and on good performance from stocks, bonds, real estate, and other assets. These objectives should be challenging but achievable. Asset class objectives should equal or exceed the market. With stocks, market returns can be obtained with a passive index fund. If performance does not generally exceed market averages, there is no advantage in retaining active management.

Fourth, since average performance or better is a reasonable objective for the investment managers:

- Asset managers should rank in the top half when compared to comparable investors.

Finally:

- Administrators should set risk objectives.

All pension funds should measure variability of return. Prudent management requires that fund members be exposed to no more risk than necessary to achieve the desired return. Assuming unwarranted risk should be viewed just as seriously as failing to achieve desired returns.

Administrators for the Minneapolis Teachers' Fund are currently reconsidering its extensive sale/leaseback real estate program. We encourage this review. Low liquidity and lack of diversification may prove troublesome. The lack of market data causes serious reporting problems. Extensive investment in this form of real estate may not be consistent with the usual tools of performance measurement and reporting. The portfolio has not been valued at market or fully monitored for capital gains and losses. Accurate performance or market values can not be reported to members, taxpayers, or the Legislature.

This fund uses a yield measure to determine post-retirement adjustments. Because yield measures do not depend on unrealized gains or losses, administrators were not pressured to monitor real estate market value changes. If the post-retirement adjustment were based on a total rate of return, we suspect that administrators would have addressed the valuation problem sooner, or would hold far less of these sale/leaseback arrangements.

Although the administrators of the three teachers' funds are knowledgable about evaluating investment performance, they can not be fully effective without proper data. The St. Paul Teachers' fund is the only one which received and used high quality performance information for the entire period. The two other funds are addressing their data needs. While Duluth administrators reviewed considerable performance data, they were not using time-weighted returns. This has now been corrected. To date, Minneapolis fund administrators have not relied on total return data, in part because of valuation problems. The new director is committed to addressing these problems and intends to use performance evaluation services.

Finally:

- The Legislature should clarify existing laws and should consider use of a single form of post-retirement adjustment for these three teachers' funds.

Between the three funds, we observe use of automatic adjustments, yield measures, and a total rate of return measure. Each has somewhat different implications for taxpayer burdens and post-retirement benefits. It is not clear whether such diversity was intended. While the St. Paul fund uses a yield measure and the Duluth fund relies on total rate of return, language in the law governing the adjustment is identical.[8] The language specifies that investment income is to be divided by asset value. Duluth administrators interpret this as a market-based total rate of return measure. They assume investment income includes unrealized gains or

[8]Minn. Laws 1985, Chap. 259, Sec. 2 and 3.

losses and they define asset value at market. The St. Paul fund excludes unrealized gains or losses from investment income and defines asset value at cost, producing a cost-based yield measure.

In the last legislative session Minneapolis Teachers' Fund administrators proposed a post-retirement adjustment based on total rate of return. We have not reviewed this measure or that of the Duluth fund in detail, and we cannot comment on the specific implications of either formula. However, the concept of a total rate of return measure has merit. It insures that the adjustments can be financed through investment gains, and use of a total rate of return measure can reduce conflict between growth and post-retirement adjustment objectives.

INVESTMENT MANAGEMENT: POLICE AND FIRE FUNDS

CHAPTER 3

A. INTRODUCTION

The first class city police and fire funds are closed to new members. Thus these funds will have fewer active members as the present membership ages and retires. Since 1980 all new salaried police and fire personnel are members of the PERA Police and Fire Fund. With minor exceptions, all police and fire funds are subject to the same investment guidelines as the State Board of Investment (SBI).[1]

The funds also share the following characteristics:

- The funds rely on outside investment management.
- Executive secretaries or directors are selected from the membership.

Unlike the teachers' funds, the police and fire funds have chosen not to employ executive directors from outside the membership. Key administrators are not investment professionals and may work part time on pension functions while performing their other police or fire duties. With some exceptions, we found these administrators were not as knowledgable about investment options, performance, or performance measurement as the teachers' fund administrators.

B. FUND STRUCTURE

Each police and fire pension association uses a single fund to accumulate assets of active members, finance pension benefits, and pay for post-

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[1]Minn. Stat. §69.77 and Minn. Laws 1986, Chap 359, Sec. 12. Additional provisions permit the police and fire funds to invest up to 75 percent of their assets in mutual funds if those investments conform with SBI requirements. The funds can also invest in certain specialized accounts managed by SBI.

retirement adjustments. Benefits at retirement are based on years of service and the salary level of a first class firefighter or patrolman. Post-retirement benefit adjustments occur automatically whenever the active duty salary is adjusted. Since post-retirement adjustments are not dependent on investment earnings, these pension funds are not burdened with the need for consistent returns.

Within this framework, and in light of its own unique circumstances, each fund must develop its investment strategy. Two factors suggest the funds should be aggressively managed, while other factors suggest a more conservative approach. First, an aggressive investment approach with high but possibly variable returns will not have an impact on post-retirement adjustments. Second, the benefit and post-retirement adjustments coupled with the low retirement age for police and fire employees make these retirement plans expensive to finance. High returns would permit more to be financed through investment earnings rather than tax revenues.

Other factors would support a more conservative approach. If a fund soon will merge into the PERA Police and Fire Fund, as several of these funds are considering, administrators should be concerned with maximizing the asset value at the date of merger. This would suggest investing to guard the fund against downward fluctuation in asset values, rather than for growth. Second, the liquidity to provide retirement payments must be maintained. This will become increasingly difficult as the cash flow into the fund decreases due to declining active membership. This reasoning suggests that liquidity should take preference over growth considerations. However, at this time cash flow is not a serious concern of any of the funds.

The cities bear most of the risk for financing police and fire pension funds. The state contribution is relatively fixed, consisting of amortization aid and a distribution based on insurance premiums. The remainder of the financing comes from a city contribution and a portion withheld from salary.

C. ASSET MIX

Statutory guidelines require that equity real estate plus venture capital not exceed 20 percent of portfolio. Table 3.1, the asset mix table, shows that St. Paul Fire and Duluth Police hold no real estate or venture capital. Minneapolis Fire, Minneapolis Police, and St. Paul Police have modest exposures. Duluth Fire has a heavy real estate exposure and may exceed the statutory 20 percent limit. We had difficulty getting a usable statement of returns and asset values for this fund, and the figure of 21 percent of assets in equity real estate is an estimate. We can safely conclude, however, that real estate holdings should not be increased.

Although some factors support aggressive investment styles, most police and fire fund administrators described themselves as highly conservative investors. Typically this translates into a heavy bond holdings. The

TABLE 3.1

FIRST CLASS CITY POLICE AND FIRE PENSION FUNDS: ASSET MIX

Fund	Year	Total Assets[a]	Percent Cash	Percent Bonds	Percent Stock	Percent Equity Real Estate	Percent Venture Capital	Income Share Account
Minneapolis Fire	1980	$ 17,394,000	27%	31%	42%	0%	0%	0%
	1981	21,121,000	15	39	46	0	0	0
	1982	30,644,000	20	37	43	0	0	0
	1983	37,990,000	14	31	53	0	2	0
	1984	44,780,000	17	32	50	0	2	0
	1985	50,895,000	12	33	50	2	3	0
Minneapolis Police	1980	$ 37,964,398	31%	34%	36%	0%	0%	0%
	1981	46,284,846	31	37	32	0	0	0
	1982	66,387,507	29	36	33	2	0	0
	1983	81,506,338	28	32	37	1	2	0
	1984	99,109,736	25	43	22	8	1	0
	1985	110,005,853	17	47	25	8	3	0
St. Paul Fire	1980	$ 20,561,283	0%	33%	13%	0%	0%	54%
	1981	23,966,676	5	33	12	0	0	50
	1982[b]	28,263,546	6	31	12	0	0	51
	1983	36,601,549	9	29	19	0	0	43
	1984	41,501,140	9	32	18	0	0	41
	1985	43,958,855	4	33	19	0	0	44
St. Paul Police	1980	$ 24,006,992	6%	15%	17%	0%	0%	62%
	1981	28,239,888	8	12	17	2	0	61
	1982	38,115,144	9	9	21	3	0	59
	1983	44,577,568	8	7	24	3	1	57
	1984	51,013,880	7	8	25	5	1	55
	1985	55,092,526	4	7	25	4	1	58
Duluth Fire[c]	1980	$ 2,555,503	33%	60%	7%	0%	0%	0%
	1981	2,942,103	9	84	7	0	0	0
	1982	4,479,728	17	66	7	11	0	0
	1983	6,225,528	13	63	12	13	0	0
	1984	7,288,809	2	70	11	17	0	0
	1985	7,326,485	6	48	25	21	0	0
Duluth Police[d]	1980	$ 5,093,306	8%	92%	0%	0%	0%	0%
	1981	6,529,633	30	70	0	0	0	0
	1982	8,616,646	9	75	16	0	0	0
	1983	10,046,080	4	78	18	0	0	0
	1984	12,770,005	10	74	16	0	0	0
	1985	13,485,841	1	79	20	0	0	0

Source: Unless otherwise noted, data received from pension funds.

[a] Year-end asset values, except for the June 30, 1985 values.
[b] Does not include assets managed by Stein, Roe and Farnham.
[c] 1980 through 1984 values based on data from State Auditor reports. The June 30, 1985 values were obtained from fund administrators.
[d] 1980 data are at cost. The 1981 through mid-1985 data are at market.

Duluth Police Fund has the heaviest bond concentration. The fund has an internal policy limiting stock to 20 percent of total portfolio value. No equities were held during 1980 and 1981.

Only Minneapolis Fire and the St. Paul Police funds have equity percentages approaching 50 percent. The two St. Paul funds have a large percentage of assets in an Income Share Account, managed by SBI, which has a target asset mix of 60 percent bonds and 40 percent stocks. The account is viewed as a single asset combining the yield of bonds with the growth potential of equities. However, if one adds the equity percentage within the Income Share Account to the stock pecentage in the asset mix table, the St. Paul Police Fund approaches a 50 percent stock percentage.

D. RATES OF RETURN

Rate of return information appears in Table 3.2, with average or annualized returns in Table 3.3. Data quality varies. The Minneapolis Fire returns do not include cash, venture capital, or equity real estate. Since cash positions are fairly high, the accuracy of the total portfolio returns is reduced. St. Paul Fire returns exclude some internally managed cash, but these amounts are lower, creating less distortion of total portfolio results. The Minneapolis and St. Paul Police data include cash and are of high quality. The Duluth Police data are high quality after 1980. The 1980 return, obtained from State Auditor notes, is dollar-weighted and based on cost. During 1981 the fund began using Banker's Trust to manage its assets. From Banker's Trust we obtained market-based time-weighted returns covering the last 11 months of 1981 through mid-1985. The Duluth Fire data is incomplete and dollar-weighted. Our data request was transmitted to Dain Bosworth, which provides investment management and brokerage services for the fund. The return information we eventually received does not correspond to our stock, bond, and total portfolio classifications. Lacking these results, the Duluth Fire data in Table 3.2 are market-based dollar-weighted measures taken from State Auditor notes. During past audits, Duluth Police and Duluth Fire Fund administrators requested that State Auditor staff calculate returns for their funds. However, these data were never intended as the basis for a rigorous performance review. No separate stock and bond returns were calculated. Also, we have no total portfolio returns for 1980 or 1985.

Ideally the investment performance of each fund should be compared to its own objectives. However, we found that few funds had meaningful objectives, while several had none. Lacking this form of comparison, we comment below on the relative returns of these funds. The relative investment performance will vary somewhat with different time periods. Also, differences in data quality hinder comparisons.

We can conclude that for the five and five-and-one-half year periods used here, the Minneapolis Police Fund is a strong performer. It submitted high quality data, and its bond, stock, and total portfolio returns exceed all other funds. The bond returns equal the Merrill Lynch bond index, while stock performance exceeds the stock indexes.

TABLE 3.2

FIRST CLASS CITY POLICE AND FIRE PENSION FUNDS: TOTAL RATES OF RETURN[a]

Fund	Year	Stocks	Bonds	Income Share Account	Alternative Investments	Total Portfolio[b]	Total Portfolio[c]	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Minneapolis Fire[d]	1980	15.9%	-4.0%	N/A	N/A	.7%	N/A	32.4%	33.7%	12.7%	3.3%
	1981	-7.6	5.8	N/A	N/A	3.2	N/A	-4.9	-3.7	15.6	7.0
	1982	28.4	36.0	N/A	N/A	29.8	N/A	21.4	18.7	11.7	29.8
	1983	14.5	8.9	N/A	--[e]	12.0	--	22.6	23.4	9.3	7.8
	1984	0.0	14.7	N/A	--	6.8	--	6.4	3.1	10.4	15.1
	1985	18.1	11.1	N/A	--	15.0	--	17.5	18.6	4.0	10.8
Minneapolis Police[f]	1980	25.3	2.6	N/A	11.0	14.4	13.1	32.4	33.7	12.7	3.3
	1981	-3.1	9.6	N/A	12.2	3.8	5.9	-4.9	-3.7	15.6	7.0
	1982	35.6	26.1	N/A	9.9	30.7	24.6	21.4	18.7	11.7	29.8
	1983	16.7	7.8	N/A	10.0	12.6	11.8	22.6	23.4	9.3	7.8
	1984	10.6	15.5	N/A	9.3	13.7	11.9	6.4	3.1	10.4	15.1
	1985	17.9	11.3	N/A	4.1	13.4	10.9	17.5	18.6	4.0	10.8
St. Paul Fire[g]	1980	20.7	9.3	12.0%	N/A	12.1	N/A	32.4	33.7	12.7	3.3
	1981	5.3	10.4	5.7	N/A	6.6	N/A	-4.9	-3.7	15.6	7.0
	1982	16.9	10.4	26.7	N/A	26.4	N/A	21.4	18.7	11.7	29.8
	1983	16.4	9.8	10.7	N/A	11.6	N/A	22.6	23.4	9.3	7.8
	1984	-2.3	10.8	9.4	N/A	7.5	N/A	6.4	3.1	10.4	15.1
	1985	17.5	9.4	12.4	N/A	11.9	N/A	17.5	18.6	4.0	10.8
St. Paul Police	1980	-3.7	8.6	12.0	N/A	9.2	9.2	32.4	33.7	12.7	3.3
	1981	4.2	9.2	5.7	N/A	5.5	5.4	-4.9	-3.7	15.6	7.0
	1982	24.3	9.5	26.7	4.0	23.7	23.1	21.4	18.7	11.7	29.8
	1983	12.8	9.5	10.7	10.0	10.9	10.8	22.6	23.4	9.3	7.8
	1984	1.3	10.8	9.4	10.7	7.7	7.7	6.4	3.1	10.4	15.1
	1985	16.3	3.7	12.4	3.6	11.6	10.5	17.5	18.6	4.0	10.8

TABLE 3.2, continued

Fund	Year	Stocks	Bonds	Income Share Account	Alternative Investments	Total Portfolio[b]	Total Portfolio[c]	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Duluth Fire[h]	1980	--	--	--	--	--	--	32.4%	33.7%	12.7%	3.3%
	1981	--	--	--	--	--	-5.3%	-4.9	-3.7	15.6	7.0
	1982	--	--	--	--	--	14.4	21.4	18.7	11.7	29.8
	1983	--	--	--	--	--	11.8	22.6	23.4	9.3	7.8
	1984	--	--	--	--	--	- .3	6.4	3.1	10.4	15.1
	1985	--	--	--	--	--	--	17.5	18.6	4.0	10.8
Duluth Police[i]	1980	N/A	--	N/A	N/A	10.7%	N/A	32.4	33.7	12.7	3.3
	1981	N/A	14.2%	N/A	N/A	14.2	N/A	-4.9	-3.7	15.6	7.0
	1982	N/A	21.5	N/A	N/A	24.2	N/A	21.4	18.7	11.7	29.8
	1983	20.8%	8.6	N/A	N/A	10.6	N/A	22.6	23.4	9.3	7.8
	1984	1.7	11.1	N/A	N/A	10.3	N/A	6.4	3.1	10.4	15.1
	1985	16.5	8.8	N/A	N/A	10.3	N/A	17.5	18.6	4.0	10.8

Source: Data received from pension funds, unless otherwise indicated.

[a] Calendar year data. The 1985 returns are for six months, through June 30.

[b] Excludes alternative investments.

[c] Includes alternative investments.

[d] None of the returns include real estate, venture capital, or cash.

[e] Not available.

[f] The alternative investment returns include cash, venture capital, and real estate. The returns for "total portfolio excluding alternative assets," do not include cash, venture capital, or real estate.

[g] Internally managed cash is not included in these returns.

[h] The available returns are dollar-weighted, obtained from State Auditor notes.

[i] The 1980 return is cost-based and dollar-weighted, obtained from State Auditor notes. The 1981 through mid-1985 returns are time-weighted, obtained from Banker's Trust. The 1981 return is based on the last 11 months of the year.

TABLE 3.3

FIRST CLASS CITY POLICE AND FIRE PENSION FUNDS: ANNUALIZED TOTAL RATES OF RETURN

Fund	Period	Stocks	Bonds	Alternative Investments	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Minneapolis Fire[a]	1/1/80 to 1/1/85	9.5%	11.5%	N/A	10.0%	N/A	14.8%	14.2%	11.9%	12.2%
	1/1/80 to 6/30/85	11.9	12.6	N/A	11.9	N/A	16.7	16.4	11.6	13.1
Minneapolis Police[b]	1/1/80 to 1/1/85	16.3	12.1	10.5%	14.7	13.3%	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	18.2	13.1	10.4	15.9	14.2	16.7	16.4	11.6	13.1
St. Paul Fire[c]	1/1/80 to 1/1/85	11.1	10.1	N/A	12.6	N/A	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	13.3	11.0	N/A	13.7	N/A	16.7	16.4	11.6	13.1
St. Paul Police	1/1/80 to 1/1/85	7.3	9.9	N/A	11.2	11.1	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	9.6	9.7	N/A	12.4	12.2	16.7	16.4	11.6	13.1

TABLE 3.3, continued

Fund	Period	Stocks	Bonds	Alternative Investments	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
Duluth Fire[d]	1/1/80 to 1/1/85	--	--	--	--	--	14.8%	14.2%	11.9%	12.2%
	1/1/80 to 6/30/85	--	--	--	--	--	16.7	16.4	11.6	13.1
Duluth Police[e]	1/1/80 to 1/1/85	N/A	--	N/A	13.9%	N/A	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	N/A	--	N/A	14.6	N/A	16.7	16.4	11.6	13.1

Source: Computed from data in Table 3.2.

[a]Returns do not include real estate, venture capital, or cash.

[b]Alternative investment returns include cash, venture capital, and real estate. The returns for "total portfolio excluding alternative investments," do not include cash, venture capital, or real estate.

[c]Internal cash is not included in these returns.

[d]Annualized returns are not available for these time periods.

[e]The fund held no stocks in 1980, 1981, and part of 1982. Separate bond returns were not available for 1980. The total portfolio annualized returns are computed from a cost-based, dollar-weighted 1980 return and time-weighted data for 1981 and later years.

Based on annualized returns in Table 3.3, the Minneapolis Fire Fund appears to be a weak performer, although this conclusion is not warranted. Table 3.2 reveals that poor 1980 returns cause of the low average performance. The investment managers were performing poorly, and fund administrators failed to obtain performance data to alert them to the problem. This oversight has been corrected. Although we previously noted problems with this fund's data, one can safely conclude that performance from 1981 through mid-1985 shows considerable improvement.

The St. Paul Fire Fund and St. Paul Police administrators are cautious investors with similar time-weighted returns over the period. The calculated average total portfolio returns are slightly higher for the fire fund, although part of the difference may be due to omitting some cash returns from the fire fund results.

For both St. Paul funds the total portfolio returns exceed those listed for their stock and bond components. This unusual result is due to the inclusion of the Income Share Account in the total portfolio returns.

Care is needed in interpreting the separate stock and bond returns for these two funds, or in making comparisons to the indexes. Administrators have selected growth stock portfolios to complement the Income Share Account, and only the growth portfolios are included in the stock return numbers. Comparing these stock returns to the indexes indicates that growth stocks have not performed as well as the broad cross-section of income and growth stocks represented by the indexes. This implies that over these periods income stocks have outperformed growth stocks.

The bond returns for these two funds are of little relevance. Much of the bonds are within the Income Share Account, which is captured in the total portfolio returns but not in the bond returns. The St. Paul Police bond returns are based on one small account. The fire fund numbers are based on two specialized fixed income accounts invested through SBI. All assets in these SBI accounts are held to maturity, shielding investors from any potential losses due to fluctuating market values. Yield to maturity is more relevant than time-weighted returns in evaluating these investments.

The Duluth Police Fund has high average returns in recent years. The annualized total portfolio returns presented in Table 3.3 appear strong, although the accuracy is reduced because of the 1980 data.[2] The 1980 return is dollar-weighted and based on cost rather than market. However, return data after 1980 are of high quality. Table 3.4 shows a comparison of annualized total portfolio returns for 1981 through 1984. Over that period the Duluth Police Fund appears to be the best performer. The main reason is excellent 1981 performance. Given a poor investment outlook for stocks and bonds, Banker's Trust kept most of the newly transferred assets in cash equivalents during most of 1981. During that year, cash outperformed bonds, while stock indexes show negative returns.

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[2]Annualized bond returns for the Duluth Police Fund do not appear in Table 3.3 because the 1980 return is not available. Stock returns for these periods are irrelevant because no stock was held in 1980 or 1981.

TABLE 3.4

FIRST CLASS CITY POLICE AND FIRE FUNDS:
FOUR YEAR ANNUALIZED TOTAL RATES OF RETURN[a]

Fund	Period	Total Portfolio
Minneapolis Fire	1/1/81 through 12/31/84	12.5%
Minneapolis Police	1/1/81 through 12/31/84	13.3
St. Paul Fire	1/1/81 through 12/31/84	12.8
St. Paul Police	1/1/81 through 12/31/84	11.5
Duluth Fire	1/1/81 through 12/31/84	4.8
Duluth Police[b]	2/1/81 through 12/31/84	14.7

Source: Computed from data in Table 3.2.

[a]Where applicable, these returns include alternative investments. Returns are time-weighted, except for the Duluth Fire Fund.

[b]Data is not available for the first month of 1981.

We are concerned about the Duluth Fire Fund. The available results suggest weak, erratic performance. Lacking 1980 and 1985 data, Table 3.4 provides a comparison for 1981 through 1984. The average return of the Duluth Fire Fund is 4.8 percent, less than half that of any other police or fire fund.

We recognize the problems in making comparisons among the funds using these data. The Duluth Fire returns are dollar-weighted, while the other data are time-weighted. However, it is unlikely that such a large difference in average returns is due to this factor. Part of the apparent differences could be due to the Duluth Fire Fund real estate investments. These may depress short run returns since these are low yield investments, and the eventual capital gains may take years to be captured by the performance data. Finally, cash returns are included in the Duluth Fire returns, but are partially excluded from some of the others.

While some of the differences in average returns can be explained, we must conclude that the available evidence suggests weak investment performance, deserving the prompt attention of fund administrators. We recommend:

- Duluth Fire Fund administrators should obtain accurate, detailed performance data.

- Administrators should use this data to identify and correct performance problems.

E. INVESTMENT APPROACHES, OBJECTIVES, AND OVERSIGHT

1. MINNEAPOLIS POLICE FUND

The board and the executive secretary are directly responsible for all investment decisions. All buy and sell transactions require the signitures of three board members. Stock and bond recommendations are made to administrators by Investment Advisors, an investment management firm. Investment advice is separated from brokerage services. The board also plays a role in selecting equity real estate and venture capital investments. These arrangements provide good accountability and require the board and staff to be knowledgable investors.

Legal staff of the Minneapolis Police Fund reviews investments to ensure consistency with SBI guidelines. The investment advisor is also charged with operating within the statutory guidelines.

a. *Investment Portfolio*

Administrators of the Minneapolis Police Fund are cautious investors. They protect asset values and returns through broad diversification across asset classes with a fairly consistent mix. The fund maintains a relatively high cash position.

The bond position is fairly constant, although it was increased within the last two years with a corresponding reduction in stocks. Initially this allowed the fund to take advantage of high interest rates. More recently the fund benefited from increases in the market value of these bonds as interest rates fell. However, the reduction in the stock percentage reduced the benefit from the recent stock market surge.

Like most of the funds, the bond portfolio has short to intermediate maturity, seeking a compromise between the higher returns and greater asset value variability of long term bonds. The portfolio contains a small component of mortgage debt securities.

The moderate stock component is limited by internal guidelines to 25 to 50 percent of the total portfolio. The fund also has equity real estate and venture capital. Real estate is eight percent of 1985 total portfolio value.

b. *Performance Objectives*

Although not developed in writing, management has objectives and has developed a satifactory planning and review process. One long range performance objective is total rates of return equal to inflation plus three percent. The fund also has an objective of outperforming the market, since the stock and bond components are expected to outperform relevant indexes. Annual objectives are also set with the investment advisor, based on the market outlook in each year. According to fund managers an overall portfolio objective is set, then the portfolio mix is adjusted to achieve the overall objective.

We encourage the fund to produce a written document describing these objectives, discussing investment strategies, and detailing its review process for evaluating investment and manager performance.

c. *Performance Monitoring*

In response to our information request, the Minneapolis Police Fund provided high quality data. The fund receives monthly performance information from its investment advisor on stock and bond investments. Since 1981 they have also received quarterly performance reports from a performance evaluation firm. Management of the fund has a good understanding of performance data and good review procedures. Management also demonstrated a good understanding of the role of each asset class in portfolio returns and diversification.

2. MINNEAPOLIS FIRE FUND

The Minneapolis Fire Fund uses Investment Advisors and Alliance Capital Management Corporation to manage its stocks, bonds, and part of its cash. Brokerage and investment management services are separated. Fund administrators set some asset mix guidelines at quarterly meetings and may question particular investments, but for the most part these firms are given complete discretion. No sign-off by fund administrators on individual investments is required.

Some cash, enough to meet short term benefit payment needs, is managed in-house. Fund administrators have also selected some venture capital and real estate limited partnerships.

a. *Investment Portfolio*

Alliance Capital is described as an aggressive investor. Investment Advisors is slightly more conservative, striving for good returns with low volatility. The desired combined effect is consistent performance with occasional above average gains. Both external managers at times hold high stock positions. The effect on the total portfolio is reduced, however, by the relatively high internal cash position.

The fund had a modest commitment to real estate--two percent of portfolio, in 1985. This is a limited partnership owning office and shopping center properties. Venture capital investments are managed through a subsidiary of Investment Advisors.

b. *Performance Objectives*

While quarterly meetings are held with the investment managers, the fund has not established performance objectives. Thus the meetings are not directed toward measuring performance against objectives. We recommend:

- Administrators should establish performance objectives.

A suggested procedure for developing performance objectives is provided in the conclusion to Chapter 2.

c. *Performance Monitoring*

The average total portfolio returns, shown in Table 3.3, are low. As noted earlier, this is largely due to poor performance in 1980. Administrators were not receiving the performance information needed for prompt, informed actions. One of the investment managers used during 1980 did not submit rate of return information, and the fund did not use a performance evaluation firm. At year-end administrators realized that once net contributions were subtracted, asset growth was zero or negative. Subsequently, the firm was fired.

Administrators have taken corrective steps making it unlikely that a similar situation will arise. Performance data are received from its current investment managers and from its custodial bank. Further improvements can be made. Additional information on the relative performance of investment managers and on risk and variability would be useful. Also, performance objectives should be set.

Administrators are addressing their needs for additional information. They have recently hired a performance evaluation service. Even with more complete performance information, without clear objectives fund administrators will be primarily reacting to situations rather than striving toward goals. Administrators have no standards--no criteria to evaluate the performance of their money managers. Objectives should be set. The performance data can then serve as the information needed to monitor progress toward their goals.

3. ST. PAUL POLICE FUND

Prior to 1979 all assets of the St. Paul Police Fund were invested through the SBI. Since then, about 30 percent of its assets have been managed through private firms.

a. *Investment Portfolio*

Administrators engage in moderate asset mix shifts. A fairly steady proportion of incoming cash is invested in each investment vehicle.

The St. Paul Police Fund has significant investments in SBI's Income Share Account and Growth Share Account. Other managers invest a small bond account, a stock account, and some real estate and venture capital. All investment managers have full discretion. Cash is managed internally through the St. Paul City Treasurer, a member of the pension board.

In 1985, 56 percent of the fund's assets were in the Income Share Account, providing balanced investment vehicle. The stock component provides capital appreciation and an inflation hedge, while bonds provide stability of return and serve as a deflation hedge.

Two growth stock funds are used, SBI's Growth Share Account and an Investment Advisors fund. Combining the stock accounts with the equities within the Income Share Account, the stock percentage approaches 50 percent.

The fund has modest percentages of venture capital and equity real estate. The venture capital investment is a limited partnership, through IAI Venture Partners. The real estate investment is is through the PRISA Real Estate Fund, a Prudential subsidiary.

b. *Performance Objectives*

Administrators strive to exceed the required actuarial return and the inflation rate. While these are reasonable objectives, these goals cannot, by themselves, provide direction for asset mix and other investment decisions. Historically, bonds have provided a one percent real return, and stocks a six percent real return. If this general pattern holds in the future, any asset mix with a low cash position should provide long term returns which exceed the inflation rate. Thus we recommend that administrators select, as a long term objective, a specific total rate of return in excess of inflation. This should be further supplemented with objectives for the separate asset classes and for each manager. Suggested objectives are provided in the conclusion to Chapter 2.

c. *Performance Monitoring*

The board adjusts the asset mix in light of performance and perceived investment opportunities. However, its review and investment planning process can be improved through more specific objectives and use of more complete performance data. The board received detailed performance data on only a portion of its portfolio, and board members are not well versed in interpreting this information. In response to our request for rates of return, the board contracted with a performance evaluation firm, and it will continue receiving these reports. We encourage board members to become skilled in using this data.

4. ST. PAUL FIRE FUND

The fund manages some cash internally to cover upcoming benefit obligations. In 1985, the remaining assets were divided 80 percent in SBI accounts and 20 percent invested through Stein, Roe, and Farnham. The SBI accounts are structured like mutual funds, with SBI making all investment decisions. Stein, Roe, and Farnham also has full discretion.

a. *Investment Portfolio*

The fund's asset mix changes slowly. Shifts in the stock and bond proportions are due primarily to decisions regarding the investment of incoming cash. Pension administrators make these decisions after consulting with their investment advisors, reviewing performance, and considering expected future market conditions.

The portfolio is well balanced between stocks and bonds, with the weighting slightly in favor of debt. The SBI investments are positioned for stability, with some potential for additional returns through Stein, Roe, and Farnham. The fund holds no equity real estate or venture capital.

The SBI investments favor bonds, although there is an adequate growth and income stock component. Assets are invested in SBI's Growth Share Account, Income Share Account, Fixed Return Account, and the Bond Account. The Fixed Income Account, with two to three year maturities, and the Bond Account, with six to eight year maturities, are specialized funds developed by SBI to lock in returns. These assets are held to maturity, shielding investors from any potential loss due to falling market value.

The Stein, Roe, Farnham account takes an aggressive stock position at times, but they manage a small portion of total portfolio. No long term bonds are held, reducing fluctuations in asset values due to interest rate changes.

b. *Performance Objectives*

Investment managers are expected to perform in the upper half when compared to comparable managers. This and other objectives are found in memos or are implicit in the way administrators are using their performance data.

We encourage administrators to consider some fine tuning. The fund could benefit from an explicit and more detailed set of objectives. An outline for developing objectives appears in the conclusions to Chapter 2.

Administrors seek to minimize the volatility of returns. This goal is evident in the structuring of their SBI investments--investing in the Fixed Income Account and Bond Account to lock in returns. Although administrators are concerned about volatility, clear decisions have not been made regarding how much to accept. These decisions can be approached by first selecting long term return goals. Once these objectives are set, administrators can determine whether its asset mix is consistent with its total rate of return objectives, given historic real returns on stocks and bonds. If higher real returns are desirable and a fairly constant asset mix continues to be used, the stock percentage may have to be increased. The selected mix will largely determine the acceptable degree of variability.

c. *Performance Monitoring*

Administrators have data and knowledge to monitor performance, and they have a good review process. Since the 1970's the fund has received performance reports. These reports are used to evaluate managers and investment options, and to decide where to allocate incoming cash. This fund was one of the few that had no difficulty complying with our rate of return request.

Administrators are knowledgable of the role various asset classes play in their portfolio, and they understand the advantages and disadvantages of real estate. They hold none, arguing that current low rates of inflation do not favor this investment.

5. DULUTH POLICE FUND

During 1980 the assets of the Duluth Police Fund were invested through the city treasurer. In 1981 the fund shifted investment management to Banker's Trust in New York. They have full discretion. At first all assets were in cash equivalents and debt instruments. In 1982 stocks were added, but fund administrators have placed a 20 percent equity limit.

a. *Investment Portfolio*

The total portfolio is heavily weighted toward bonds, exceeding 70 percent of assets in each year. The bond component has a high proportion of mortgage and mortgage pass-through securities.

Since stocks were added Banker's Trust has been consistently close to the 20 percent limit. The asset mix table shows that for June 30, 1985, the stock portfolio was set at the maximum percentage during the recent stock surge. The fund holds no equity real estate.

We observed one case where return and risk were not the primary considerations in selecting a portfolio asset. The pension fund has a minor investment in the Duluth Growth Fund. Exposure is minimal, well under one percent of total portfolio. The investment was not recommended or selected by Banker's Trust. It was purchased by fund administrators and added to the portfolio. We recommend:

- All selected investments should be the best available given the expected impact on portfolio risk and return.

In reviewing asset management, we observed one significant strength and one weakness. The strength is the way Banker's Trust uses earnings from the entire portfolio to meet the payout needs of the fund.[3] This enables managers to hold no more cash equivalents than necessary for strategic investment moves, permitting a larger portion of assets to be held in higher yielding investments. Other police and fire funds should consider this strategy. Several try to meet upcoming payments solely through cash equivalents. Their cash positions are higher than they should be given other investment opportunities.

The weakness is the 20 percent ceiling on equities. This ceiling may lower long term returns and leave the fund vulnerable to inflation. Historically stocks have outperformed bonds, and stocks can provide capital gains and inflation protection.

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[3]All pension funds should try to meet their liquidity needs while minimizing the impact on portfolio returns. The three teachers' funds provide good examples. The Minneapolis Teachers' Fund had an objective of meeting all its benefit payments through the rental payments on its real estate. Another case is the SBI Post-Retirement Fund. Benefit payments are financed through bond returns and income stock.

The low percentage of stock currently allowed stems from a belief that stocks are inherently risky. While stocks can have volatile returns, the same is true of bonds. In recent years bond values have fluctuated widely due to interest rate changes. Also, the effect of any asset or asset class is properly viewed in terms of its impact on total portfolio risk and return. Adding stocks can increase the return, and stock and bond returns tend to move in opposite directions, helping to stabilize the portfolio. In any case, if this fund remains independent of PERA for several years it can trade some variability for higher long term performance. Post-retirement benefit adjustments are not dependent on consistent investment returns.

The 20 percent ceiling also limits the ability of managers to respond to changing market opportunities. Because of this provision, the benefit from the recent stock market surge was reduced. We recommend:

- The Duluth Police Pension Fund should consider increasing the permissible portion of stock within its portfolio.

The fund might adopt a fifty percent limit, like that used by the Minneapolis Police Fund, or simply use the 75 percent limit permitted under the SBI statutes.

b. *Performance Objectives*

No performance objectives have been set for Banker's Trust. We recommend:

- Administrators should establish performance objectives.

A suggested outline for developing performance objectives appears in the conclusion to Chapter 2.

c. *Performance Monitoring*

Procedures and data for monitoring performance need to be improved. Administrators have not received time-weighted returns, and they lack a full understanding of how to use this information.

We recommend:

- Administrators of the Duluth Police Fund should routinely obtain detailed performance data.

- Until administrators become familiar with these data and their uses, administrators should seek assistance in interpreting this information from SBI staff or from a performance advisor.

A few of the pension funds obtain performance information from their investment managers. More complete information is available from services specializing in performance measurement. The Minneapolis Police Fund uses both sources, providing full information and a cross check for accuracy.

6. DULUTH FIRE FUND

Since the late 1970's all assets of the Duluth Fire Fund, including cash, have been invested through the Dain Bosworth Duluth office. The firm provides both investment advice and brokerage services to this fund. While fund officials are frequently contacted about potential transactions, no sign-off is required for individual transactions.

a. *Investment Portfolio*

The current portfolio is dominated by convertable bonds. Dain Bosworth officials contend these securities combine the income stability of bonds with the growth potential of stocks. The separate stock portfolio is modest, only five percent of assets, and is equally split between common and preferred stock. Mutual funds comprise 21 percent of the portfolio.

The fund has a sizable limited partnership, equity real estate component. The majority of these assets are in housing, commercial properties, and shopping centers. The remaining investments are garage and storage centers. These partnerships purchase land on the outskirts of metropolitan areas. Storage facilities are built and rented, providing cash flow to investors. Given continued growth, these properties eventually can be sold and developed for other purposes, providing appreciation to the pension fund.

We were unable to fully verify whether portfolio assets conform to SBI guidelines. A review of the June 30, 1985 asset list suggests that this fund may slightly exceed the allowable proportion of equity real estate. However, this conclusion is based on a monthly asset and transaction listing from Dain Bosworth. Fund administrators contend these statements are not accurate.

- The real estate investments should be reviewed to insure they are appropriate for the fund and conform with statutory requirements.

- Fund administrators must require accurate data from their investment managers. Transactions must be monitored to maintain control over assets, to insure consistency with investment objectives, and to insure assets conform to statutory guidelines.

Pension administrators must receive accurate asset statements in order to monitor the actions of investment managers. Although pension officials permit the firm to buy and sell assets without sign-off, administrators could not properly monitor that activity. Given the data problems, administrators claimed that the statements were rarely reviewed. This situation is not acceptable. While frustrated with the data, administrators had not taken steps to correct the situation. We urged administrators to require necessary changes. We understand that improvements have been made.

We also find that the portfolio contains a modest investment in the Duluth Growth Fund, which was underwritten by Dain Bosworth. While Dain Bosworth has full discretion to select investments for the Duluth Fire Fund, we were told that this investment was selected by the pension board.

- All portfolio assets should be the best available given the expected impact in portfolio risk and return.

b. *Performance Objectives*

Pension fund administrators have not specified performance objectives for the fund. We recommend:

- Administrators should establish performance objectives.

A suggested procedure for developing objectives appears in the conclusions to Chapter 2. Administrators should consider additional assistance in setting investment objectives.

c. *Performance Monitoring*

Duluth Fire administrators are responsible for insuring that funds are responsibly invested, and for maintaining control over pension assets. Administrators were deficient in performing these basic responsibilities. They have been slow in recognizing and addressing problems. Significant improvements are needed in the areas of assigning responsibility for investment performance, monitoring performance, and taking corrective action when needed.

The available evidence suggests weak investment performance. A primary cause is:

- The responsibility of managing this portfolio has not been formally assigned.

Dain Bosworth primarily provides brokerage services; the investment management is an informal arrangement. No written contract exists, and no separate management fee is paid. We know from interviews that the unit in charge of this account is not geared toward managing a multi-million dollar investment account. This may explain why we have not been able to obtain time-weighted rates of return from Dain Bosworth. The individuals involved are not familiar with these measures, and do not use this information to help them manage the portfolio.

All other pension funds we studied have hired investment managers and separated investment management from brokerage services. We observe:

- Combining brokerage and management services creates an incentive to manage the portfolio for high commissions, rather than for high performance.

Separation is necessary to avoid a conflict of interest and to insure the portfolio is managed for high investment returns.

We recommend:

- Duluth Fire administrators should separate investment mangement from brokerage services.

- The investment manager selected should be held accountable for performance.

To avoid conflicts, we would not recommend using an investment management unit within Dain Bosworth if that company continues to provide brokerage services.

Pension fund officials have not been sensitive to these conflicts and have been slow in addressing the investment performance issue. Dain Bosworth officials state that they are not comfortable with the present arrangement, and they have urged pension officials to hire a separate investment advisor. Several services were recommended and these suggestions were raised at a pension board meeting. In spite of the problems with the present arrangement and data from the State Auditor staff suggesting weak investment performance, officials took no action. We were told that officials were reluctant to incur an additional fee to manage the portfolio.

The board lacks the ability to make informed investment related decisions. Investment management fees are negligible in comparison to the potential benefit in improved performance. We observed a weak understanding of investment management functions and performance evaluation. Administrators were not adequately monitoring the portfolio, they had not set objectives, and they lack adequate performance data. Although concerned about performance, administrators did not obtain additional information to more accurately assess the situation, in part because they did not recognize what information was important.

We conclude:

- At the time of our audit, fund administrators were not effectively performing their fiduciary role.

Administrators must recongize that they are responsible for the productive investment of assets. In order to effectively perform this role:

- Fund administrators must take the time and effort to become knowledgeable about investment, performance measurement, and setting investment objectives.

Late in our evaluation, the composition of the board had changed. The new executive secretary informed us that the board is reconsidering the asset management issues. Also, officials have contacted performance evaluation firms. We encourage administrators to take necessary steps to improve investment performance and fund management practices.

F. CONCLUSIONS

Regarding investment performance over the periods studied, the Minneapolis Police Fund and the Duluth Police Fund performed well, followed by St.

Paul Fire and St. Paul Police. Minneapolis Fire had lower five year annualized returns than most, due to very poor performance in 1980. Administrators addressed this problem and performance improved considerably after 1980. Minneapolis Fire administrators are making further improvements in data and management practices. The available evidence suggests weak investment performance by the Duluth Fire Fund, with average returns half those of the other funds. Administrators were slow to study and address the problem. Recently, some fund administrators have been replaced.

As a group, investment returns were slightly below those of the teachers' funds. We attribute this to the more variable management quality of the police and fire funds, to the conservative investment approaches used, and to a lack of emphasis on performance.

The directors of the police and fire funds have all been appointed from the membership. They may serve part-time, and generally lack the training and experience of the teacher fund administrators. Procedures for selecting leadership were established years ago, when the assets under management were small. Duluth Fire, the smallest fund in the group, now has over $7 million in assets. Given these changing circumstances, several administrators are now questioning the wisdom of managing their funds using part-time staff. As assets continue to grow, an increasing number of police and fire funds will need to confront this issue. Some may seek to merge into PERA. Others may examine the feasibility of hiring full time pension administrators. Some may continue using present procedures. In all cases:

- Administrators have the responsibility to fully understand their fiduciary role, and they must gain the skills to effectively perform those duties.

- Fund administrators must be knowledgeable about investing, performance measurement, and setting investment objectives.

In general we find:

- Improvements are needed in performance objectives. Some of the funds have no objectives.

The Minneapolis Police Fund has good objectives, but like all the funds it should develop a written statement of investment philosophy and goals. Some fine tuning is needed by the St. Paul Fire Fund. The St. Paul Police Fund needs to develop more extensive objectives. The Minneapolis Fire Fund and the two Duluth funds have not developed performance objectives.

We also find:

- Several of the police and fire funds examined in this report were not spending adequate time and resources on performance measurement.

The previous findings are not surprising since administrators have not been held accountable for investment performance, and neither benefits or post-retirement adjustments are dependent on returns. The lack of emphasis on performance is reflected in the difficulty some of these funds had in providing rate of return information. Only Minneapolis Police and St. Paul Fire routinely received complete performance data. The St. Paul Police Fund had never previously measured total portfolio performance, although they had good quality data for portions of the portfolio. The Minneapolis Fire Fund also lacked complete performance data. The St. Paul Police and Minneapolis Fire funds have recently addressed their data needs by hiring a performance evaluation firm. The two Duluth funds lack adequate performance information.

- Administrators should routinely obtain performance data including all internal and externally managed assets. Administrators should become proficient in using the information to evaluate investment managers.

This includes understanding the relevance of return and risk information, understanding the time frames relevant for evaluating a manager, and knowing how each manager should perform over a market cycle. While some of the necessary information can be calculated in-house, a performance consulting firm is capable of providing more extensive data and comparisons.

Minneapolis Police and St. Paul Fire administrators expressed comfort in directing the investment of their assets and monitoring performance. Both have good performance review procedures. Others were less certain about their investment strategies and procedures. Compared to the teachers' funds, investment approaches were less sophisticated. Some administrators had trouble describing the investment strategies used by their external managers. Also, some police and fire funds conceded that the hiring and policy formulation processes were not properly separated. Investment managers were interviewed without a clear idea of what investment style, objectives, or asset mix was most appropriate for the fund. There is danger that the fund might accept the best sales presentation, instead of following the most appropriate policy.

A few administrators did not fully understand portfolio diversification. They tend to think of each asset separately, instead of considering its impact on total portfolio risk and return. Heavy bond positions are favored, because bonds are viewed as a traditional, safe investment. This results in predictable yields based on cost, but it can cause considerable fluctuation of returns based on market value. Greater use of stock and other assets may provide higher performance over time, with acceptable variability.

Given circumstances facing the police and fire funds:

- We urge administrators to carefully review their investment strategies. Administrators should reconsider risk levels and asset mixes of their funds.

Those funds which plan to soon merge with PERA should be concerned with maximizing asset value at the date of merger. This may entail a conservative position to guard against loss of market value, and avoidance of growth stock, venture capital, and real estate, which will have little short run payoff and may prove difficult to value. Funds should discuss strategies with their investment advisors and SBI administrators.

For police and fire funds which intend to remain separate for the foreseeable future, the present investment approaches may be too conservative. Although the PERA Police and Fire Fund is open, it provides an interesting contrast to these first class city police and fire funds. The PERA fund is invested more aggressively. The target stock percentage is 60 percent of assets; another 15 percent will be real estate, venture capital, and resource funds. Also, much of the stock is invested through an index fund--an option worth considering. A compromise may be appropriate, somewhere between the PERA Police and Fire approach and the present conservative mixes of some of the police and fire funds.

Finally:

- Police and Fire fund administrators should review their cash management practices.

- To the extent possible, administrators should hold no more cash than necessary for strategic investment purposes.

- Administrators should investigate opportunities for financing current benefit obligations from total portfolio returns, rather than from cash.

Several of these funds meet upcoming benefit obligations primarily through in-house investments in cash equivalents. Some administrators also respond to expected increases in benefits by further building up their cash positions. These practices decrease the percentage of assets in higher yielding investments when the high returns are most needed.

Shifting assets from cash to higher return assets should improve earnings. Given the recent drop in interest rates, we urge administrators to investigate this option.

We also observe that most of the police and fire funds do not include internal cash equivalents in their performance reviews. If only the external portfolio is reviewed, administrators are not aware of the impact of high internal cash on total portfolio returns. Based on our discussions with administrators, several are now planning to have cash included in future performance reports. We encourage all funds to follow this practice.

INVESTMENT MANAGEMENT: MERF

CHAPTER 4

A. INTRODUCTION

MERF was established in 1919 to provide retirement, disability, and survivor benefits to members. Current membership exceeds 8,000 and includes non-teaching employees of the Minneapolis School District, employees of Minneapolis, the city water department, Minneapolis-St. Paul Metropolitan Airports Commission, Metropolitan Waste Control Commission, and the Municipal Building Commission. MERF is a closed fund. All employees hired after June 30, 1979 are members of the Public Employees Retirement Association (PERA).

B. FUND STRUCTURE

MERF's organization is similar to retirement systems managed by the State Board of Investment (SBI). Two funds are used, one to accumulate assets and another to pay retirement benefits. MERF's Deposit Accumulation Account invests employee, employer, and state contributions. When an individual retires, an amount sufficient to pay the expected stream of retirement benefits is transferred into the Post-Retirement Account. This transfer is adequate providing that a five percent yield is earned in the Post-Retirement Account. If the yield is above five percent, the excess creates a supplemental annuity providing a permanent benefit increase.

The state directly bears a significant financial risk for the MERF Deposit Accumulation Account. While the city contributes an amount determined by formula, the contributions of the state and, starting in 1986, two of the commissions are tied to investment performance.[1] The unfunded liability of the Minneapolis-St. Paul Metropolitan Airports Commission and the

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[1]The state's contributions are adjusted to cover changes in MERF's unfunded liability. Minn. Stat. §422A.101 and Minn. Laws 1985, Special Session, Chap 13, Sec. 331.

Metropolitan Waste Control Commission will now be borne directly by those agencies. Of course, in the long run all MERF members and the city are indirectly at risk for investment returns. The Legislature could decide to increase the city's or employee's obligation if investment returns are judged to be too low.

The state's exposure concerns state officials. The fiscal year 1980 state contribution was $1.1 million, rising to $7.5 million by fiscal year 1986. Future state contributions toward MERF's unfunded liability are expected to increase gradually from $9.6 million in calendar year 1987 to $11.7 million by 2017.

MERF is a defined benefit plan. Therefore, the fund must obtain the assets needed to meet its eventual pension obligations. The estimate of this obligation will vary depending on assumptions about inflation, salaries, the expected life span of retirees, and other factors. Whatever the eventual level of this obligation, it must be met through contributions plus investment earnings. Thus the state has an interest in the investment performance of the Deposit Accumulation Account. High investment earnings reduce the necessary level of contributions from all sources.

C. ASSET MIX

Since the two MERF accounts parallel SBI's Basic and Post-Retirement Funds, Table 4.1 shows the asset composition of the MERF and SBI accounts. The MERF Post-Retirement Account is invested with a short-to-intermediate horizon and is managed for high but consistent yields. The asset mix of the MERF and SBI Post-Retirement Accounts are conservative and similar. Approximately 60 percent of MERF's post-retirement assets are held in bonds. Stocks are generally less than 30 percent of the portfolio.

MERF's Deposit Accumulation Account is more growth-oriented and accepts more risk. The asset mix table reveals larger shifts between asset classes. The bond position is considerably lower than its Post-Retirement Account.

While MERF officials contend that the Deposit Accumulation Account should be invested somewhat conservatively because the fund is closed, it is not possible to conclude whether the MERF Deposit Accumulation Account is more conservative than the SBI Basic Retirement Funds. MERF uses a more conservative asset mix combined with a more aggressive management style. The bond positions are similar. MERF's average cash position is much higher than SBI's while its average stock position is lower. However, MERF is more aggressive in shifting between cash and other assets in efforts to increase returns. Also, MERF has a greater venture capital commitment.

TABLE 4.1

MERF AND SBI RETIREMENT FUNDS: ASSET MIX

Fund	Year	Total Assets	Percent Cash	Percent Bonds	Percent Stock	Percent Equity Real Estate	Percent Venture Capital
MERF	1980	$ 119,806,000	51%	17%	31%	N/A	N/A
Deposit	1981	133,631,000	23	47	29	N/A	N/A
Accumulation	1982	169,682,000	18	51	31	N/A	>1%
Account	1983	181,971,000	23	38	36	1%	2
	1984	144,345,000	15	27	50	3	4
	1985[a]	148,803,000	19	20	50	4	7
SBI	1980	$1,962,000,000	12	39	49	N/A	N/A
Basic	1981	2,149,000,000	14	40	45	1	>1
Retirement	1982	2,804,000,000	11	42	43	3	1
Funds	1983	3,129,000,000	11	29	57	3	>1
	1984	3,265,000,000	9	26	58	5	2
	1985[a]	3,691,000,000	10	23	60	5	2
MERF	1980[b]	N/A	N/A	N/A	N/A	N/A	N/A
Post-	1981	$ 190,576,000	11	60	29	N/A	N/A
Retirement	1982	251,128,000	14	60	27	N/A	N/A
Account	1983	291,130,000	9	55	36	N/A	>1
	1984	367,840,000	9	61	29	1	>1
	1985[a]	417,165,000	13	58	28	>1	>1
SBI	1980	$1,162,000,000	12	39	49	N/A	N/A
Post-	1981	1,101,000,000	16	50	34	N/A	N/A
Retirement	1982	1,523,000,000	9	60	31	N/A	N/A
Account	1983	1,802,000,000	4	56	41	N/A	N/A
	1984	2,246,000,000	7	64	30	N/A	N/A
	1985[a]	2,709,000,000	7	66	27	N/A	N/A

Source: Data received from the pension funds.

[a]Through June 30, 1985.
[b]During 1980, MERF's post-retirement account was managed by SBI.

D. RATES OF RETURN

Our research on the Minneapolis Employees Retirement Fund (MERF) has been impeded by problems in obtaining accurate data on investment performance. Some other funds had similar problems, but in the case of MERF the problems were serious and protracted.

We discovered that the first data set supplied by MERF and its performance evaluation service contained errors. The second set, supplied by the performance evaluator in February 1986, was described as "solid." We wrote our draft report using that data, and we reviewed that draft with MERF administrators on April 9, 1986. During the conference MERF administrators suggested the February data set might not accurately reflect performance. In the weeks following the conference we received further data revisions from the performance evaluator, materially changing MERF's rate of return data.

We use the latest revised data in the analysis that follows to avoid further delays in publication of this report. However, we cannot assume the data are accurate and we will pursue unanswered questions about MERF's performance data in the coming year.

1. MERF COMBINED TOTAL PORTFOLIO RETURNS

Five and five-and-one-half year annualized total portfolio returns for both MERF funds combined are presented in Table 4.2. Also included are the annualized total portfolio returns for the two SBI accounts, the three first class city teachers' funds, and the first class city police and fire funds. If these data are accurate, they suggest strong investment performance for combined MERF assets:

- The combined MERF annualized returns are above 15 percent, equaling or exceeding those computed for the other funds reviewed in this report.

In the following sections we also describe the separate performance of MERF's accounts. Combined performance data have limited use as management information and they are irrelevant to any group at risk for MERF's investment performance. MERF retirees are at risk solely for MERF Post-Retirement Account performance. The state, the city, other employers, and all active employees contributing to MERF are solely at risk for the performance of the Deposit Accumulation Account. Also, when answering many investment performance questions, the data of separate funds should not be combined. MERF has two funds with different asset mixes and different objectives. The combined performance data do not reveal the investment performance of the separate accounts, and the data can not indicate whether the separate accounts are meeting their objectives.

The returns presented below for the separate MERF Deposit Accumulation Account and MERF Post-Retirement Account suggest differing performance.

TABLE 4.2

ANNUALIZED TOTAL PORTFOLIO TOTAL RATES OF RETURN

Fund	Period	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments
MERF Combined Post-Retirement Account and Deposit Accumulation Account[a]	1/1/80 to 1/1/85	--	15.2%
	1/1/80 to 6/30/85	--	15.9
SBI Basic Retirement Fund	1/1/80 to 1/1/85	11.6%	11.5
	1/1/80 to 6/30/85	13.3	13.0
SBI Post-Retirement Fund	1/1/80 to 1/1/85	13.0	N/A
	1/1/80 to 6/30/85	14.3	N/A
Minneapolis Fire[b]	1/1/80 to 1/1/85	10.0	N/A
	1/1/80 to 6/30/85	11.9	N/A
Minneapolis Police[c]	1/1/80 to 1/1/85	14.7	13.3
	1/1/80 to 6/30/85	15.9	14.2
St. Paul Fire[d]	1/1/80 to 1/1/85	12.6	N/A
	1/1/80 to 6/30/85	13.7	N/A
St. Paul Police	1/1/80 to 1/1/85	11.2	11.1
	1/1/80 to 6/30/85	12.4	12.2

Fund	Period	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments
Duluth Fire[e]	1/1/80 to 1/1/85	--	--
	1/1/80 to 6/30/85	--	--
Duluth Police[f]	1/1/80 to 1/1/85	13.9	N/A
	1/1/80 to 6/30/85	14.6	N/A
Minneapolis Teachers[g]	1/1/80 to 1/1/85	12.7	12.1
	1/1/80 to 6/30/85	14.3	13.8
St. Paul Teachers	1/1/80 to 1/1/85	12.0	N/A
	1/1/80 to 6/30/85	13.8	N/A
Duluth Teachers[h]	1/1/80 to 1/1/85	13.7	N/A
	1/1/80 to 6/30/85	15.2	N/A

Source: Computed from data supplied by the pension funds.

[a]Includes mortgage loans carried at cost in the Post-Retirement Account.

[b]Returns do not include real estate, venture capital, or cash.

[c]The returns for "total portfolio excluding alternative investments," do not include cash, venture capital, or real estate.

[d]Internal cash is not included in these returns.

[e]Annualized returns are not available for these times periods.

[f]The total portfolio annualized returns are computed from a cost-based, dollar-weighted 1980 return and time-weighted returns for 1981 and later years.

[g]Does not include real estate. Market data is not available to calculate total returns including the real estate portfolio.

[h]Based on annual dollar-weighted returns.

The Post-Retirement Account has performed very well over the five and five-and-one-half year periods. The Deposit Accumulation Account had lower returns. Based on the most recent data revisions, that account had returns comparable to the average of the police and fire funds examined in this report.

2. MERF DEPOSIT ACCUMULATION ACCOUNT

Since the performance of the Deposit Accumulation Account affects the state's financial contributions to MERF, we examine its performance separately. In the tables and discusssion that follows, we compare MERF's Deposit Accumulation Account to SBI's Basic Retirement Fund and to the police and fire funds. While MERF's account does have unique features not shared by the SBI fund, it shares several characteristics. MERF'S Deposit Accumulation Account and the SBI Basic Retirement Fund both accumulate assets of active employees and have high growth objectives. Post-retirement adjustments are not affected by the returns on these accounts. Each exists to finance transfers into the post-retirement accounts when members retire. Like the police and fire funds, MERF's Deposit Accumulation Account is closed.

One key difference is that the SBI and police and fire funds follow similar investment guidelines, while MERF is free to set independent investment guidelines for its Deposit Accumulation Account.

Assuming the most recent data accurately reflect MERF's investment performance:

- MERF's Deposit Accumulation Account is an average performer. Its total portfolio returns are comparable to that of SBI's Basic Retirement Fund, and to the average return of the first class city police and fire funds.

This conclusion is based on comparisons between the total portfolio annualized returns in Table 4.3, and by comparing MERF's Deposit Accumulation Account against the annualized police and fire returns in Table 3.3.

The average total portfolio performance of MERF's Deposit Accumulation Account is due to good cash and bond returns. The fund's stock performance has been very poor. After exceptional performance in 1980 there was a major reversal. For 1981 through mid-1985, stock performance was well below the indexes. The SBI Basic Retirement Fund stock performance consistently exceeded MERF's Deposit Accumulation Account after 1980.[2] A comparison with the police and fire returns in Table 3.2 reveals a similar

[2]Although SBI consistently outperformed MERF stock performance, SBI also had performance problems. In an effort to improve performance, during 1983 SBI administrators placed two-thirds of the SBI Basic Retirement Fund equities in an index fund designed to track the Wilshire 5000. The remaining stock shifted from internal management to active external

TABLE 4.3

MERF AND SBI RETIREMENT ACCOUNTS: TOTAL RATES OF RETURN

Fund	Year	Stocks	Bonds[a]	Alternative Investments	Total Portfolio Excluding Alternative Investments	Total Portfolio Including Alternative Investments	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
MERF	1980	40.9%	9.9%	N/A	19.0%	19.0%	32.4%	33.7%	12.7%	3.3%
Deposit	1981	- 7.3	14.1	N/A	5.7	5.7	-4.9	-3.7	15.6	7.0
Accumulation	1982	15.8	22.5	N/A	21.2	21.2	21.4	18.7	11.7	29.8
Account	1983	8.7	7.0	N/A	7.2	7.2	22.6	23.4	9.3	7.8
	1984	- 1.8	10.6	3.4%	--	6.0	6.4	3.1	10.4	15.1
	1985	14.6	8.3	5.7	--	11.2	17.5	18.6	4.0	10.8
SBI	1980	26.2	- .1	N/A	12.4	N/A	32.4	33.7	12.7	3.3
Basic	1981	0	2.0	N/A	3.5	N/A	-4.9	-3.7	15.6	7.0
Retirement	1982	21.6	38.1	11.9%	26.4	25.7%	21.4	18.7	11.7	29.8
Fund	1983	12.7	9.3	7.4	10.3	10.1	22.6	23.4	9.3	7.8
	1984	2.7	14.6	11.8	6.8	6.9	6.4	3.1	10.4	15.1
	1985	18.1	10.0	3.0	14.5	13.9	17.5	18.6	4.0	10.8
MERF	1980	N/A	N/A	N/A	N/A	N/A	32.4	33.7	12.7	3.3
Post-	1981	N/A	N/A	N/A	6.6	6.6	-4.9	-3.7	15.6	7.0
Retirement	1982	27.7	29.6	N/A	28.8	28.8	21.4	18.7	11.7	29.8
Account[b]	1983	23.7	11.9	N/A	15.0	15.0	22.6	23.4	9.3	7.8
	1984	.4	14.8	--	--	9.5	6.4	3.1	10.4	15.1
	1985	14.5	9.7	--	--	11.1	17.5	18.6	4.0	10.8
SBI	1980	25.9	-1.3	N/A	12.6	N/A	32.4	33.7	12.7	3.3
Post-	1981	- .3	2.2	N/A	3.4	N/A	-4.9	-3.7	15.6	7.0
Retirement	1982	20.0	34.6	N/A	27.0	N/A	21.4	18.7	11.7	29.8
Account	1983	16.9	8.0	N/A	11.0	N/A	22.6	23.4	9.3	7.8
	1984	5.2	17.8	N/A	12.1	N/A	6.4	3.1	10.4	15.1
	1985	17.3	12.4	N/A	13.4	N/A	17.5	18.6	4.0	10.8

Source: Data provided by MERF, Standard Valuations, and SBI.

[a]Bond returns for MERF include bonds and cash equivalents. Cash is not included in the SBI bond returns.
[b]During 1980, MERF's post-retirement assets were managed by SBI. Separate stock and bond returns were not available for 1981 due to transfer of assets from SBI and overlapping management. The total portfolio 1981 return includes only the last six months of the year.

result. Excluding the Duluth Fire Fund, since we have no stock data, with two exceptions MERF was outperformed by every fund in each year after 1980. The only exceptions were the 1984 stock return of the St. Paul Fire Fund and the 1981 stock return of the Minneapolis Fire Fund.

According to MERF's executive director the fund had a series of problems with equity managers. In the mid-1970's MERF hired an equity manager for the Deposit Accumulation Account that performed well for several years. The excellent 1980 performance is due to this firm. In 1981, when MERF began investing its own post-retirement assets, this manager was also given part of the post fund equities. However, in 1981 performance plummeted. The manager was fired from the Post-Retirement Account in 1982, but continued to manage Deposit Accumulation Account stocks. Performance remained poor, and the manager was finally relieved from managing the Deposit Accumulation Account in 1984. Another firm was hired in 1984 to manage the Deposit Accumulation Account equities, but it started off terribly and was replaced by the end of the year. Investment Advisors was hired and is performing well.

Besides weak equity performance, a 1984 asset transfer also lowered the performance of the Deposit Accumulation Account while benefiting the Post-Retirement Account. Because of a change in actuarial assumptions $40 million in securities, much of it longer term bonds, were transferred from the Deposit Accumulation Account to the Post-Retirement Account. In deciding what assets to transfer, administrators faced a number of options, each with different consequences for the active and post accounts. Administrators could have transferred cash, stock, bonds, or any combination of these assets. By using longer term bonds for the transfer, the Deposit Accumulation Account bond portfolio was reduced in a year in which bonds were outperforming stocks, leading to a lower total portfolio return. The Post-Retirement Account benefited from the high yield on these investments and from increased market value when interest rates fell.

3. MERF POST-RETIREMENT ACCOUNT

The MERF and SBI Post-Retirement Accounts invest the assets of their retired members. These two funds have comparable structures and objectives. If yields exceed five percent, post-retirement benefit increases are provided.

Prior to 1981 MERF's Post-Retirement Fund was managed by SBI. MERF did not provide us with returns for 1980, although we can assume they are identical to those of SBI. The 1981 total portfolio return covers only the last six months of the year, and no separate stock or bond returns were provided. According to administrators this is due to transfer of assets from SBI and overlapping management.

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equity managers. This repositioning of assets lowered the 1983 stock performance to half that of the Wilshire 5000. Stock performance in 1984 and the first half of 1985 was slightly below the index, suggesting that the active managers did not perform well.

Examining the return data in Table 4.3 we conclude:

- The MERF and SBI Post-Retirement Accounts have performed well, with both providing sizable post-retirement adjustments to retirees.

The MERF and SBI Post-Retirement Accounts were strong and comparable performers. MERF had higher returns in 1982 and 1983, while SBI exceeded MERF in 1984 and the first half of 1985. This pattern is reflected in both stock and total portfolio returns. Because of the cash and the mortgage component in the MERF bond portfolio, bond performance comparisons between MERF and SBI may be misleading.[3]

One can argue that total rate of return is not the most appropriate performance indicator for these post-retirement funds. Both funds are managed for high consistent yield, not for growth. While we did not request the yield data, judging from the post-retirement adjustments these funds have generated, both have performed well by that measure.

When the returns of MERF's Deposit Accumulation Account are compared to MERF's own Post-Retirement Account we find:

- MERF Post-Retirement Account has considerably higher total rates of return than MERF's Deposit Accumulation Account.

However, based on the most recent data revisions, the returns to MERF's Deposit Accumulation Account were equal to the average of the police and fire funds.

Beginning in 1982, the first year in which stock and bond data are available for MERF's Post-Retirement Account, the Post-Retirement Account stocks consistently outperform the Deposit Accumulation Account stocks, sometimes by large amounts. This result is expected given the problems discussed above with Deposit Accumulation Account equity managers.

Comparing bonds produces the same conclusion--the Deposit Accumulation Account is consistently outperformed. Also, this bond comparison may understate the performance difference between the two accounts. During 1984 and 1985 a significant share of mortgages, carried at cost, were added to the MERF Post-Retirement Account. Administrators contend that these mortgages have appreciated. If correct, carrying these at cost lowers the calculated bond return for the Post-Retirement Account.

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[3]MERF has at times held a high cash position, and it has included this cash in its bond returns. Unlike bonds, the value of existing cash equivalents does not vary when interest rates change. Thus combining cash and bonds may lower but stabilize the apparent returns. Comparability between MERF and other bond accounts is further reduced by a large investment in mortgage loans, carried at cost, within the MERF Post-Retirement bond portfolio.

The total portfolio returns show that except for the six months of 1985 the MERF Post-Retirement Account outperformed the Deposit Accumulation Account. Annualized returns in Table 4.4 for 1982 through mid-1985 show an annualized return of 13 percent for MERF'S Deposit Accumulation Account, and 18.3 percent for MERF's Post-Retirement Account. For the same 3.5 year period the annualized total portfolio returns for SBI Basic Retirement Fund is 16.1 percent, compared to 18.1 percent for the SBI Post-Retirement Fund.

E. INVESTMENT APPROACHES, OBJECTIVES, AND OVERSIGHT

According to administrators, MERF follows the prudent-person rule with the objective of investing in the best interests of fund participants. MERF is free to develop its own investment guidelines for the Deposit Accumulation Fund. For its Post-Retirement Account, MERF follows investment guidelines similar to those used by SBI.

1. INVESTMENT PORTFOLIOS

MERF combines in-house debt management with outside equity managers. MERF administrators manage a large internal cash and bond portfolio for the Post-Retirement Account, which is combined with a large externally managed Post-Retirement Account equity account. For the Deposit Accumulation Account, somewhat smaller internal cash and bond accounts are combined with another external equity account. Some assets of the active and retired members are combined in several smaller external accounts.

a. *MERF Post-Retirement Account*

The Post-Retirement Account portfolio consists primarily of fixed income securities. Nearly all the Post-Retirement Account equities are currently managed by Investment Advisors, with over $114 million in assets. Smaller amounts of Post-Retirement Account equities and debt are held in the combined accounts.

MERF administrators interpret Minn. Stat. §422A.05, subd. 2c as permitting them to use the Post-Retirement Account to make direct mortgage loans on Minnesota properties. MERF has added a large portfolio of these loans to its Post-Retirment Account. These mortgages, all for properties in the seven-county metro area, have increased from slightly over $1.5 million at the beginning of 1984 to $53.6 million by mid-1985. MERF asserts that it follows standard banking practices in making these loans. Officials claim that these mortgages provide higher returns than investing in mortgage bonds and passthroughs. The fund avoids the various insurance, packaging, and administrative expenses involved with packaged mortgages.

We caution MERF officials against any further increases in the Post-Retirement Account mortgage portfolio. With $53 million presently invested, these now represent approximately 20 percent of the bond

TABLE 4.4

MERF AND SBI ACCOUNTS: ANNUALIZED TOTAL RATES OF RETURN

Fund	Period	Stocks	Bonds[a]	Alternative Investments	Total Portfolio Excluding Alternative Investments	Total Porfolio Including Alternative Investments	S & P 500	Wilshire 5000	T-Bill Index	Merrill Lynch Bond Index
MERF Deposit Accumulation Account	1/1/80 to 1/1/85	10.1%	12.7%	N/A	--	11.6%	14.8%	14.2%	11.9%	12.2%
	1/1/80 to 6/30/85	11.8	13.1	N/A	--	12.7	16.7	16.4	11.6	13.1
	1/1/82 to[b] 6/30/85	10.5	13.8	N/A	--	13.0	19.4	18.1	10.1	18.0
SBI Basic Retirement Fund	1/1/80 to 1/1/85	12.2	12.0	N/A	11.6%	11.5	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	14.4	12.8	N/A	13.3	13.0	16.7	16.4	11.6	13.1
	1/1/82 to 6/30/85	15.6	20.2	N/A	16.5	16.1	19.4	18.1	10.1	18.0
MERF Post-Retirement Fund	1/1/82 to[b] 6/30/85	18.6	18.7	N/A	--	18.3	19.4	18.1	10.1	18.0
SBI Post-Retirement Fund	1/1/80 to 1/1/85	13.1	11.5	N/A	13.0	N/A	14.8	14.2	11.9	12.2
	1/1/80 to 6/30/85	15.1	12.8	N/A	14.3	N/A	16.7	16.4	11.6	13.1
	1/1/82 to 6/30/85	17.0	20.6	N/A	18.1	N/A	19.4	18.1	10.1	18.0

Source: Data provided by MERF, Standard Valuations, and SBI.

[a]Bond returns for MERF include bonds and cash equivalents. Cash is not included in the SBI bond returns.

[b]This time period is used to permit a comparison between MERF's Deposit Accumulation Account and Post-Retirement Account. Earlier years could not be included because MERF's post fund was managed by SBI during 1980. Assets were transferred to MERF during 1981. The 1981 MERF Post-Retirement Fund return in Table 4.3 covers the last 6 months of the year. We do not have corresponding 1981 data for MERF's Deposit Accumulation Account.

portfolio. Since these properties are all in the seven county metro area, these mortgages raise concerns of excessive geographic concentration. Second, these mortgages are unlikely to satisfy a secondary goal of supporting the economy or quality of life in the area. If these investments are made using standard banking practices, as MERF claims, then the likely effect is that MERF is simply displacing funding from other sources. Generally efforts to increase mortgage funds in restricted geographic areas result in little net gain. Third, these mortgages may be less marketable than standard mortgage bonds and passthroughs. Finally, these investments increase the problem of measuring performance. Because these are not typical mortgage pool investments, the market value is not known, and the investments are carried at cost. The portfolio is not accurately valued and performance indicators are of questionable worth.

b. *MERF Deposit Accumulation Account*

The Deposit Accumulation Account portfolio is more aggressive than the Post-Retirement Account, with heavier emphasis on stocks, venture capital, and equity real estate. Also, it is evident from the asset mix table that asset shifts are larger than with the Post-Retirement Account, as management shifts between asset classes in response to perceived opportunity.

The in-house account of the Deposit Accumulation fund is smaller than the MERF Post-Retirement internal account. Although it consists predominantly of fixed income securities, it also has sizable venture capital and equity real estate components. The combination of this smaller internal account with those of the external managers results in a total portfolio more heavily weighted toward stocks. The principal external equity manager is currently Investment Advisors, with a $57 million active account. Stock and venture capital comprise the majority of the portfolio in 1984 and 1985.

2. PERFORMANCE OBJECTIVES

MERF is the only fund we studied that had prepared an extensive document detailing its philosophy and objectives. We have recommended the document to several of the police and fire administrators. It contains sections which analyze fund characteristics, determining appropriate risk levels and investment strategies. Fund performance objectives and criteria for evaluating asset managers are also included.

Investment managers are to be assessed on their ability to reach their objectives, and their performance is compared to comparable managers. The results of asset mix and market timing decisions are reviewed. Frequent communication is maintained with external managers. Administrators monitor asset changes and insure that asset mix and investment strategies remain consistent with overall fund objectives.

The Post-Retirement Account and the Deposit Accumulation Account have separate objectives. The Post-Retirement Account yield would have to exceed the rate of inflation by five percent in order to provide an adjustment equal to the rate of inflation. Such yields cannot consistently be met, and would result in considerable variability. A trade-off is necessary. The fund strives for yields between the rate of inflation and inflation plus five percent. Income yielding investments are stressed, with growth a secondary objective. The priorities are reversed for the Deposit Accumulation Account. Capital appreciation is the primary goal, with income secondary. The fund strives for a total rate of return of five percent above inflation.

3. PERFORMANCE MONITORING

MERF receives performance reports from a performance evaluation firm and administrators have a good understanding of performance measurement. However, the many revised data sets we have received raise questions about the quality of MERF's performance data.

F. CONCLUSIONS

1. MERF

MERF administrators have reasonable performance objectives, and these officials have the ability to evaluate performance. However, our conclusions regarding the investment performance of MERF's Deposit Accumulation Account and Post-Retirement Account are tentative. We have received several revisions of MERF's performance data. We do not know all the reasons for the numerous changes and we are not certain that the most recent data set accurately reflects performance. More investigation will be necessary. The results described in this report are based on data received after our report was drafted and after a closing conference with MERF administrators. These data suggest strong combined performance of the MERF accounts, although the separate performance of the Post-Retirement Account and the Deposit Accumulation Account show considerable differences. The Post-Retirement Account has performed very well. The returns of the Deposit Accumulation Account, where the state bears considerable risk for the investment performance, are noticable lower. Despite these differences the returns indicate that the Deposit Accumulation Account performance, for the periods studied, was comparable to the average of similar funds. This result is surprising given the weak stock performance of this fund.

In 1984, MERF administrators fired the primary Deposit Accumulation Account equity manager. The 1985 data suggest improved performance. MERF's board is currently reconsidering the investment approach used to manage all equity assets. The executive director is proposing use of an index fund. This would be supplemented by a single equity manager for the Post-Retirement Account and another equity manager for the Deposit Accumulation Account.

Given our reservations about the performance data and the brief time periods used in the comparisons between the two MERF accounts, recommendations based solely on the investment results are not warranted. However, ignoring the performance data, it is obvious that the financing arrangement used for MERF's Deposit Accumulation Account reduces accountability and responsibility for investment performance. While MERF administrators manage the fund on behalf of MERF members, this is not the group most at risk for investment performance. Since the state finances much of MERF's unfunded liability and the state is required to pay for further increases in that liability, state contributions would compensate for any problems with Deposit Accumulation Account investment performance. Considerable investment risk is shifted from the city and the membership to the state.

We observe:

- Given that the retirees are at risk for Post-Retirement Fund performance, while the state assumes much of the the risk for the Deposit Accumulation Account, MERF administrators have strong incentives to maintain high performance in the Post-Retirement Account, but a weaker incentive to promptly correct problems with the Deposit Accumulation Account.

- In any decision where the interest of the Post-Retirement Account must be traded off against the Deposit Accumulation Account, administrators have an incentive to favor the Post-Retirement Account.

- The state is not represented on MERF's board, and none of the groups which are represented share, to the same degree, the state's natural concern about Deposit Accumulation Account performance.

The performance of the Deposit Accumulation Account is not the highest priority of any group on MERF's board. The board consists of five MERF members, the mayor, and a council member. Although not required by statutes or by-laws, during the years examined here most employee representatives were retired. Weak Post-Retirement Account performance would cause a low benefit adjustments and immediate pressure to improve performance. In contrast, retired members are not at risk for the performance of the Deposit Accumulation Account, and the state's obligation to pay unfunded liability relieves active employees from much of the risk for investment performance. The mayor and a council member are on the board, but since the city is not directly obligated to pay for increases in the unfunded liability, these officials have less of a stake in the investment performance of the Deposit Accumulation Account.

- If legislators want to insure that the financial interests of the state are reflected in MERF's decisions, they should create stronger incentives for high performance by the Deposit Accumulation Account.

While the state could play a direct and prominent role on MERF's board, this might be an awkward working arrangement. Another option is to place the City of Minneapolis more at risk for the performance of the Deposit

Accumulation Account. However, these changes may not be feasible since the current arrangement is the product of a political compromise made several years ago. In any case, as we point out in the next chapter, the state needs to pay more attention to the investment performance and practices of all the local funds. This, by itself, will cause all local funds to pay more attention to performance.

We conclude this section with an observation on MERF's investment approach. MERF's "Statement of Investment Philosophy and Objectives" describes a policy of selecting investments which contribute to "a sound local economy." No other fund has a similar policy. One investment which is partially justified by this objective involves use of MERF assets as collateral on a local issue of industrial revenue bonds. MERF receives a fee for placing its assets at risk, while it continues to receive earnings from the securities. Another example is MERF's large, geographically concentrated mortgage portfolio.

An objective of aiding the local economy runs counter to the traditional concept of evaluating investments solely on their potential impact on portfolio risk and return. Technically, MERF's policy can be consistent with fiduciary responsibilities if MERF seeks out economically comparable social investments. An economically comparable social investment is one with risk and return characteristics equal or superior to the best alternatives, while having the added benefit of aiding the local economy.

However, on a practical level we believe there are problems with this approach. First, administrators may not use the care necessary to select truly comparable investments because the fund does not bear the full risk for the results. Part of the risk is borne by the state, and lower returns would be offset by state contributions. Second, measuring the risk and return impact of potential investments is subject to error and differences of opinion. When administrators are under strong pressure by various interests to fund projects beneficial to them, questionable investments may occur because of the difficulty of forcefully demonstrating that the investments are <u>not</u> prudent. Finally, the number of economically comparable social investments will not be large. Seeking out these investments adds to administrative costs while taking the time and attention of administrators away from more important issues.

2. GENERAL CONCLUSIONS

This section contains general conclusions and observations based on our review of the three teachers' funds, the first class city police and fire funds, and MERF.

Our evaluation of the management practices of these funds reveals a clear benefit to careful planning and monitoring of investment performance. When funds operate without investment objectives, they are on a journey with no clear destination. When administrators lack both good objectives and good performance data, they have no clear destination and little ability to recognize where they are currently going. We found that with few exceptions:

- The funds with the highest returns have investment objectives, and the administrators are knowledgable investors who carefully monitor investment performance.

Examples are MERF's Post-Retirement Account, the SBI Post-Retirement Account, the three first class city teachers' funds, and the Minneapolis Police Fund.

The exception to this pattern is the Duluth Police Fund. Between 1981 and 1984 this fund had the highest investment returns of the police and fire funds. This fund has a single asset manager that is performing well. However, administrators are not receiving adequate investment performance data and they lack an adequate understanding of performance evaluation. Unless improvements occur in these areas, we doubt that above average performance can be sustained. Administrators will not react, or will react too slowly, to changes in market conditions or the performance of its investment manager.

Second, we conclude that:

- Incentives are important. When the fund membership bears much of the risk for weak investment performance, and when the membership can clearly benefit from good performance, administrators are held accountable and are highly motivated to achieve their objectives.

The MERF and SBI Post-Retirement Accounts and the first class city teachers' funds can grant post-retirement adjustments providing that investment performance is adequate. This creates strong pressure from the retired members to avoid performance problems and to act promptly when problems occur. All these funds had above average investment performance.

In contrast, with MERF's Deposit Accumulation Account and the police and fire funds, the groups responsible for investing assets are not the groups primarily at risk for performance. Generally, these funds had lower returns. MERF administrators invest Deposit Accumulation Account assets on behalf of its membership, but the state bears much of the investment risk. Similarly, police and fire administrators are responsible for investing their funds' pension assets, but the cities bear most of the risk.

- These arrangements weaken accountability and reduce incentives for strong performance.

We noted earlier in this chapter that MERF administrators do not have a strong incentive for high performance in the case of the Deposit Accumulation Account. When we interviewed city officials and police and fire administrators, we found a similar lack of pressure to perform. A few pension administrators noted that there is little payoff to the membership from high investment returns. The police and fire pension systems are defined benefit plans with post-retirement adjustments tied to changes in active duty salaries. High investment returns benefit the cities, since they would have to contribute less to fund these plans. Ironically, while city officials should be highly concerned about performance, often these officials have not played an active oversight role.

Any workable oversight process must permit the groups at risk to monitor pension fund operations and to apply effective pressure for high investment performance. In order for any system to work, all groups at risk must be motivated and informed.

To be informed, all groups require accurate performance data. However:

- At present, the lack of consistent, high quality performance data is a major deficiency.

In this report, conclusions about performance often had to be qualified because of incomplete or inconsistent data. Some funds had never previously calculated market-based investment returns for their funds. Effective oversight is impossible unless the members and all parties at risk know how these funds are performing.

Minnesota Statute §11A.04 states in part that SBI shall, "establish a formula or formulas to measure management performance and return on investment. All public pension funds in the state shall utilize the formula or formulas developed by the state board." SBI did propose a time-weighted total rate of return procedure, and it requested comments from a few pension administrators. However, the process did not continue beyond that point. We recommend:

- SBI should adopt a procedure or procedures for measuring management and investment performance.

- Public pension funds should be required to report performance annually to the Legislative Commission on Pensions and Retirement and to the Department of Finance, using procedures and the degree of detail established by SBI.

This will promote more uniformity in reporting and provide a useful body of data for fund administrators and all interested groups. Without clear reporting requirements, we doubt whether all pension administrators will obtain the data needed to adequately manage the pension assets and to properly inform all groups at risk for performance. Also, fund administrators may be tempted to report information selectively and in a way that makes an evaluation of pension management difficult.

Finally, improvements are needed in the information provided to pension fund members. Since a few of the police and fire funds covered in this report had not previously calculated market-based total rates of return on their entire portfolios, these data obviously could not be presented to the membership in the annual reports. MERF does present market performance data, but only for the combined portfolios. This combined data is not relevant to any group at risk for MERF's performance.

We recommend:

- The membership of public pension funds should be provided with total rates of return, using procedures accepted by SBI.

These reports to the membership should include separate stock, bond, and total portfolio returns. In cases like MERF, where two separate funds are used, each should be presented separately. The data should also include indexes or other measures needed to gauge the relative performance of the fund, the asset mix, and a complete list of assets.

STATE OVERSIGHT

CHAPTER 5

This chapter examines state audit authority, policy determination, administration and investment management of Minnesota's pension funds. The discussion focuses on the role and oversight activities of various entities at the state government level which are involved in public pension legislation, monitoring or fund management. These organizational actors include the State Auditor, Legislative Auditor, Legislative Commission on Pensions and Retirement (LCP&R), the departments of Finance and Revenue and the State Board of Investment.

Legislative control and oversight of Minnesota's pension funds is extensive. A review of pension laws enacted over the last decade reveals legislation dealing with benefit increases, changes to local pension fund by-laws, employee and employer contributions, service requirements, structure of benefit plans and types of investments which may be held as pension assets. Existing statutes regulating state pension funds contain detailed reporting requirements and restrictions on fund management.

Figure 5.1 shows the basic oversight structure for Minnesota's pension funds. Audit jurisdiction for public employee pension systems is divided between the State Auditor, the Legislative Auditor, and private firms. The LCP&R makes recommendations to the Legislature on the policy issues related to all aspects of pension funds. The state departments of Finance and Revenue have varied responsibilities under several statutes regulating pension fund financing and reporting. The State Board of Investment manages retirement assets for the majority of the state's pensioners.

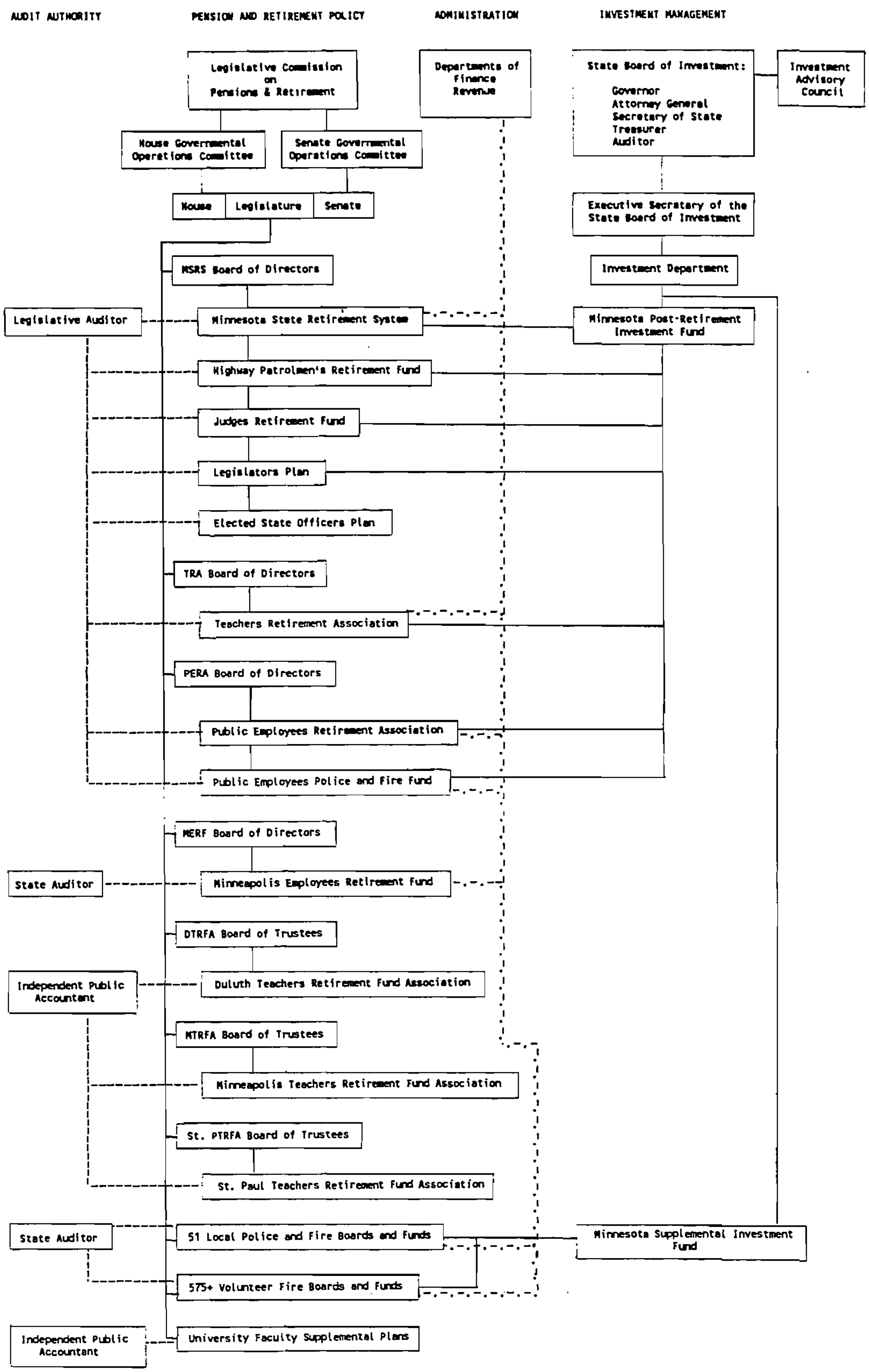
The current level of state oversight of Minnesota's public employee pension funds is, however, a relatively recent development. Lately, there is legislative concern about whether it is yet adequate. The oversight structure has evolved in a piecemeal fashion, and there are some gaps.

The next four sections detail the development and current structure of state oversight by examining the role and activities of the various actors. In a final section, we summarize and discuss several deficiencies in the oversight structure.

FIGURE 5.1

OVERSIGHT OF MINNESOTA PUBLIC PENSIONS

AUDIT AUTHORITY, POLICY DETERMINATION, ADMINISTRATION AND INVESTMENT MANAGEMENT



Source: Legislative Commission on Pensions and Retirement and PED research.

A. AUDIT AUTHORITY

1. STATE AUDITOR

Generally, the State Auditor is responsible for examining the financial affairs of local governments and their subdivisions. Under its general statutory authority, the State Auditor's Office annually audits the financial affairs and statements of the Minneapolis Employees Retirement Fund (MERF).[1] The financial affairs of school districts must be examined by a public accountant *or* the State Auditor, and most school districts choose private accounting firms as do the teachers' retirement associations in the three first class cities.[2]

A number of statutes authorize the State Auditor to perform annual examinations of local government pension funds. Specific authority exists for the State Auditor to examine the books and accounts of the secretary and the treasurer of firefighter's relief associations in cities of the first class.[3] Laws of 1986, Ch. 359 extends the audit jurisdiction of the State Auditor to all police and fire relief associations in the state. During the period reviewed in this study the State Auditor's office was responsible for the first class cities' police and fire fund audits.

2. LEGISLATIVE AUDITOR

Generally, the Legislative Auditor is responsible for examining financial activities at the state government level. Statutes mandate that the Legislative Auditor perform financial audits by verifying accounts, funds, securities and other assets of all state agencies at least once a year as resources allow.[4] Thus, the Legislative Auditor conducts annual financial audits of MSRS and its subfunds, PERA, TRA, and the State Board of Investment. However, the Legislative Auditor also has authority to follow state funds to the entities that receive them and to perform audits as directed by the Legislative Audit Commission.[5] Because the state makes contributions to every public pension and relief association, the Legislative Auditor arguably has jurisdiction to audit them but would do so only in an exceptional situation.

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[1]Minn. Stat. §6.49.

[2]Minn. Stat. §123.34, Subd. 8.

[3]Minn. Stat. §69.50.

[4]Minn. Stat. §3.971 and 3.972.

[5]Ibid.

B. PENSION AND RETIREMENT POLICY

1. LEGISLATIVE COMMISSION ON PENSIONS AND RETIREMENT

In 1955, the Legislature established an Interim Commission on Pensions and Retirement. It remained an interim commission until 1966. It was in continual operation except for 1961-1962 when the 1961 Legislature did not authorize an interim commission. The 1967 Legislature established the Legislative Commission on Pensions and Retirement (LCP&R) as a permanent commission.

The LCP&R is composed of five members of the Senate and five members of the House. The chair of the Commission rotates between the House members and the Senate members. The term of membership on the commission is two years.

The LCP&R is charged with studying and investigating Minnesota public employee retirement plans and making recommendations to establish and maintain sound public employee pension legislation and policy. The role of the Commission is advisory, but it has had considerable influence and functioned as the first legislative committee to consider and recommend action on proposed pension legislation.

By statute, the Commission is required to file a report at least biennially to each session of the Legislature. Compiled by the Commission's staff, the reports contain the following information:

- legislation passed during the previous biennium;
- a statement of principles of pension policy; and
- overviews, actuarial information and analyses of changes in financial condition of the major statewide funds, first class city funds and local police and fire funds.

Commission reports are compiled from information received from all public pension funds in the state. The Legislature instituted financial reporting requirements for all state funds in 1967, and it established requirements for actuarial valuations and experience studies in 1975.

Minn. Stat. §356 requires every public pension and retirement plan and fund that receives contributions from monies derived from taxation to make annual financial and actuarial reports to the Commission and the Legislature. The statutes set forth the frequency and required contents of financial reports, actuarial valuations and experience studies for each general type of public pension fund. In addition, other requirements establish certain economic assumptions which actuaries for the funds must use to project the effect of economic forces on the retirement plans. These assumptions include percentage rates for annual investment return, annual individual compensation increases and annual payroll growth.

Despite these long-standing statutory requirements, pension fund actuaries continued to have a great deal of discretion when deciding the importance and size of non-economic or demographic assumptions used to do actuarial valuations of retirement plans. Because actuaries could determine and set rates of member turnover, retirement and mortality, for example, widely different funding needs could result from actuarial valuations of the same fund.

Legislative awareness of this fact grew as a result of the 1983 Winklevoss and Associates, Inc. study, which estimated the cost of the "Rule of 85" retirement changes quite differently than did each of the pension funds. The Winklevoss study was originally done because the Department of Finance could not get consistent informatiom from the major statewide funds during the 1982 legislative session, when many funds requested increased employer contributions.

To address the problem, the Legislature in 1984 enacted a law directing the LCP&R to draft temporary rules and permanent standards to ensure consistency in the measures used to estimate the costs of funding the pensions. The temporary rules were to be effective in 1984 and were a precaution against pension funds trying to obtain additional employer contributions before the permanent standards became effective in June 1985.

The primary purposes of the standards are to ensure that sound actuarial procedures are used in developing actuarial assumptions, actuarial valuations and cost estimates for proposed legislation for each retirement plan, and to establish uniformity in actuarial procedures so that financial comparability of the state's retirement plans is maximized.

In addition to developing permanent standards for all state pension funds, the Legislature directed the LCP&R to contract with an "established actuarial consulting firm, to perform valuations, cash flow forecasts, and cost analyses of proposed legislation, and to every fourth year perform the statutorially required quadrennial experience studies for all Minnesota pension funds except the local police and fire funds.

Because of these changes and others, 1984 was an important year in the development of legislative oversight of Minnesota's largest and most important pension funds. The LCP&R's role and influence on pension legislation is potentially enhanced by enactment of uniform actuarial standards. Also, its own actuary providing clear and consistent technical analyses should enable the Commission to spend more time on issues of pension policy and less time on sorting out and determining credible cost estimates from unreliable actuarial information.

The common perception of the LCP&R is that it is now primarily involved in making recommendations about benefit changes in response to requests for improvements from the pension funds. The Commission has been criticized by its own members, legislative staff and others for giving insufficient attention to policy issues and of being inadequately knowledgeable on pension matters. For example, the LCP&R has not dealt extensively with the issue of investment practices. Pension fund investments were reviewed by LCP&R prior to 1980, but since then matters of investment policy, social investing, investing in South Africa and permissible investments by local pension funds have been discussed in subcommittees of the Senate Governmental Operations Committee.

In 1986, the Commission must advise the Legislature on the effect of implementing the Rule of 85. Also demanding legislative attention will be projections of increased state contributions to the major pension funds, as well as many of the issues addressed in this report.

C. ADMINISTRATION

1. DEPARTMENT OF FINANCE

The Department of Finance has several statutory responsibilities over public pensions. Under its general authority[6] and with regard to the statewide funds (MSRS, TRA and PERA), Finance can:

- require use of a uniform accounting system;
- have free access to financial documents;
- require preparation of financial reports to "evaluate and compare the cost of functions or programs;"
- make rules and instructions for budget preparation;
- review and make recommendations to the Governor on funding requests; and
- review and approve spending plans for consistency with statutes/legislative intent.

The Commissioner of Finance is one of eight trustees of the Teachers Retirement Association.[7] With regard to the Minneapolis Employees' Retirement Fund (MERF), the Department of Finance reviews MERF applications for state amortization aids to determine if the calculation has been made in a manner consistent with law, then makes payment of the proper amount.[8]

The Department of Finance pays the amortization state aids paid to police and firefighter relief associations. The department can require compliance with several procedures, financial report filings and other guidelines, and can withhold or deny aid when it finds noncompliance.[9]

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[6] Minn. Stat. §16. et. seq.

[7] Minn. Stat. §354.06.

[8] Minn. Stat. §422A.101.

[9] Minn. Stat. §§69.031, 69,051, and 69.77.

Despite these statutory responsibilities, prior to 1980 the department was little involved in pension matters. Pension finances were considered a sacred area, protected from close scrutiny and budget cuts. The atmosphere changed in 1980 with the onset of a budget crisis and pension fund requests for contributions that exceeded anticipated obligations. Since the department was responsible for preparing a biennial budgt and ten-year disbursement projections, it became concerned with the costs of state obligations to pension funds.

The department began to look closely at pensions, and it eventually concluded that the various pension funds' actuarial reports could not be trusted for reliable estimates of the accrued unfunded liabilities to which the state was obligated to make contributions.

The Finance Department sought an objective analysis of the major statewide pension funds, and in 1982, as noted earlier, it contracted with Winklevoss and Associates, Inc. to study the financial condition of MSRS, MERF, TRA, and PERA and to recommend a funding policy. The study was completed in June 1983, and on the basis of its recommendations, the Finance Department presented a major reform bill to the 1984 Legislature. With the exception of a cost of living adjustment provision, the bill became law and ensured a consistent funding policy for the four pension funds.

In conclusion, the Department of Finance has assumed a more proactive role on pension issues in recent years. This new role has directly resulted in increasing the financial accountability of the state pension funds and has indirectly resulted in expanding the state's oversight activities. There has been recent discussion of creating in the Department of Finance a unit to permanently address issues related to oversight of the state's many public pension funds.

2. DEPARTMENT OF REVENUE

The Department of Revenue currently administers the state aid pension contribution system that allocates revenues from taxes on insurance premiums to police and fire relief associations.[10] These state aids are not to be confused with the amortization state aids which police and fire funds also receive annually.[11]

An administrative order in 1983 transferred the insurance state aid function from the Department of Commerce to Revenue. The Revenue Department is responsible for calculating the amount of state aid each pension fund is to receive and certifying to the Commissioner of Finance the amounts of warrants to be issued. Revenue makes its determination on the basis of annual reports filed with the Department by the police and fire relief associations.

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[10] Minn. Stat. §69.021 et. seq.

[11] Minn. Stat. §423A.01 and Minn. Laws 1984, Ch. 564, § 48.

D. STATE BOARD OF INVESTMENT

The Minnesota Constitution establishes the State Board of Investment (SBI) which is composed of the Governor, Attorney General, Secretary of State, State Treasurer and State Auditor. The State Board selects an executive director who is charged with planning, directing, coordinating and executing all administrative and investment functions in conformity with all policies and directives.

SBI is authorized by statute to manage the Minnesota Post Retirement Investment Fund which contains the assets of retired Minnesota public employees covered by seven statewide retirement plans.[12] SBI also manages the Minnesota Supplemental Investment Fund which contains the assets of certain local police, salaried firefighters and volunteer firefighters.[13]

Beyond its responsibilities to manage and invest pension funds, SBI also formulates investment policies and procedures. The executive director of SBI formally reports to the Legislature annually, and regularly testifies at meetings to the Legislative Commission on Pensions and Retirement.

Statute specifically requires SBI to establish a formula or formulas to measure management performance and return on investment that is to be used by all public pension funds in the state.[14] The State Board has not yet promulgated such formulas.

SBI is not authorized to monitor the investment practices of pension funds that manage their own assets, and with the exception of establishing an investment performance formula, it has no regulatory responsibilities relating to them.

E. ANALYSIS

This review of state oversight of Minnesta's public pension funds identifies several deficiencies that have existed in recent years.

- Until very recently, responsibility for regular auditing of the financial condition of most local police and fire relief associations outside first class cities was not assigned to the State Auditor or the Legislative Auditor. There is still no state audit jurisdiction over the first class cities' teachers' funds.

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[12]Minn. Stat. §11A.18.

[13]Minn. Stat. §11A.17.

[14]Minn. Stat. §11A.04 (2) and (11).

- Analysis and approval of pension aid applications needs to be strengthened.

- Adequate oversight of the investment practices of local pension funds is lacking. Statutes do not clearly require reporting by these funds on investment practices and performance, and SBI has not promulgated formulas to be used by public pension funds to measure management performance and return on investment.

1. AUDIT JURISDICTION AND REVIEW

During the period reviewed in this report, approximately 1980 to 1985, the first class cities' teachers funds and certain local police and fire funds were not under the audit jurisdiction of the State Auditor, but hired an independent accounting firm to carry out the annual financial audit required by state law.

Since the State Auditor has audit jurisdiction over local governments it is logical that the State Auditor have primary authority to audit local pension funds. Thus, we believe the Legislature acted wisely in 1986 to extend the State Auditor's jurisdiction to all local police and fire funds.[15] The State Auditor can and should utilize private accounting firms to do local pension fund audits when this is an efficient use of resources. The Legislative Auditor's authority to follow state funds should be held in reserve with respect to local pension funds and used only in an exceptional situation and in coordination with the State Auditor.

More important than who does the audit is who reads the report and takes responsibility for it. First and foremost, pension fund boards should pay close attention to audit reports and to the entire audit process. This is inherent in a board's fiduciary responsibility. To repeat, who is represented on a local pension fund board influences the degree to which a board pays attention to its fiduciary responsibility. Greater vigilence

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[15]The 1986 Legislature made several other changes in pension fund oversight (Laws of Minn. Ch. 359):

- The presumption that a fund is qualified to receive state aid if it received aid the previous year was removed.

- Membership of the board of trustees of police and fire funds must include two representatives of the municipality in which they are located. These members have voting rights and clearly enunciated fiduciary responsibilities.

- Various financial transactions between board and relief association members and the relief association are prohibited.

- A municipal finance official is required to countersign on disbursements of $5,000 or more.

by local government representatives is clearly called for. As we have discussed earlier:

- Affected local governments should be actively represented on local pension fund governing boards.

- Responsible local government officials should receive and carefully review annual audit reports.

The recent Winona police pension fund case is a striking example of local government as well as pension fund board inattention. Though the problems were ultimately detected, they could have been caught sooner and damage might have been less if board members and city officials had paid more attention to previous audit reports. Auditors raised a serious conflict of interest concern in the audit report for 1983, delivered in June 1984. The report pointed out that the fund had purchased a loan in which the loan recipient was an officer of the Police Relief Association. Apparently the board ignored this fact until state agencies took note of the audit and questioned the Winona police pension fund's application for state aid.

The Winona case has in fact been a painful lesson for Winona's local officials, but in the end it may have the beneficial effect of causing greater attention by local officials to the administration of local pension funds. We understand, for example, that although state law provides for municipal representation on the Winona police pension fund board, the three officials that could have served as ex-officio members chose not to do so. We assume that in the future they will.

In Duluth, municipal officials have not exercised their role as board members of the police pension fund for many years and until 1986 there was no municipal representative required or serving on the fire fighters pension board. In Minneapolis, city officials are on the boards of the fire and police funds but are not regular and active participants. In St. Paul, the city treasurer has been an exception to this general pattern. This official is active on the police pension fund board and also is involved informally with the fire fighters pension fund, even though he has not been a member of the board.

Sorting out and clarifying appropriate audit jurisdiction is important, and having rigorous and independent audits performed on a regular basis of all local pension funds is vital. But above all, the audit process and audit reports must be taken seriously by the local pension fund board members. To do less is to neglect the boards' fiduciary responsibility. We would hope that by increasing city government representation on local pension funds and achieving active participation by city representatives, heightened attention to audit reports and other oversight mechanisms will be achieved.

2. REGULATORY ROLE OF THE DEPARTMENTS OF REVENUE AND FINANCE

The Winona situation also points to weaknesses at the state level as well. Though it was questions by a state agency that eventually precipitated an investigation, it can be argued that state action should have come more quickly. State concerns came to a head in October 1985 over a review of the Winona fund's application for state aid. Again, an audit had raised the conflict of interest issue in June 1984. Also, the fund's 1984 aid payment had been delayed for several months because the fund had not submitted a required actuarial valuation. The Department of Revenue authorized the 1985 aid payment but the Department of Finance did not. The experience points to a weakness in the law governing the administration of the state aid program which was addressed in the 1986 session. The law contained a limitation on the state's power to withhold pension aids in the case of questions about a local fund's qualifications to receive the aid.

Apparently this provision was material to the Department of Revenue's decision to pay Winona's aid even in the face of questions about its application for aid. The Department of Finance in the Winona case, however, held up payment. The 1986 Legislature removed this limitation on the Revenue Department's power to suspend aid payments. This will encourage Revenue to carefully review local funds' aid applications for accuracy and completeness at the point in time when such a review makes the most sense.

3. OVERSIGHT OF INVESTMENT PRACTICES

The three previous chapters presented an extensive analysis of investment practices. These chapters build a convincing case for increased oversight of investment practices. This chapter observes that this oversight is not now being carried out, although the need for measurement and monitoring of investment performance is generally recognized.

The question of which organizational entity at the state level should be primarily responsible for monitoring investment practices is somewhat problematic. However, we conclude that:

- The Legislative Commission on Pensions and Retirement (LCP&R) ought to take the lead in overseeing investment practices and performance. A good case can be made for conducting a similar function in the Finance Department, whatever the LCP&R decides to do.

The Finance Department is the logical locus for an executive branch unit devoted to pension fund oversight in areas other than financial audits. It may be that staff expertise and stability could be established more easily here than in the more political environment of a legislative commission, but it seems to us either arrangement would work. Whatever role the LCP&R takes in the future, the executive branch has a real need to monitor investment practices of all pension funds that receive state financial support. The important issue is what needs to be done, not exactly where, organizationally, this function should be located.

The job of monitoring investment practices and performance is outside the usual scope of a financial audit, although the State Auditor, recognizing an unmet need in Duluth, did some work in this area on the Duluth police and fire funds. But the State Auditor's Office should not be looked to to perform this job on a regular basis.

Finally, under current law the State Board of Investment is charged with responsibility for establishing a formula or formulas to be used by public employee pension funds in computing investment performance information. It has not yet done this. In lieu of an official formula, the funds should still use some widely accepted method, but it would help if SBI resolved the issue.

Increased oversight at the state level would cause the funds to do what most local funds privately acknowledge they ought to do: present to their members, elected officials, and the public periodic information on investment performance using a standardized methodology. Funds need this information for effective internal management, and the outside world needs it because good investment saves money and poor management wastes money and causes higher state and local taxes.

APPENDIX

DESCRIPTIVE INFORMATION

The following pages present descriptive information on each of the funds covered in this report. For each fund, there are sections headed:

1. Historical Background,
2. Membership,
3. Board of Trustees,
4. Reporting,
5. Benefits,
6. Financing.

In general, the statistical information presented is current as of the end of calendar 1984. Changes made by the 1986 Legislature are not considered.

A. MINNEAPOLIS POLICE RELIEF ASSOCIATION

1. HISTORICAL BACKGROUND

The Minneapolis Police Department Relief Association was incorporated in 1890. The purpose of the Association was to create, secure and establish a fund for the support and relief of sick, injured or disabled policemen and their widows and orphans. In 1905, the Association was reorganized as the Minneapolis Police Relief Association.

2. MEMBERSHIP

On December 31, 1984, the Minneapolis Police Relief Association membership included 641 active members, 430 pensioners, 10 permanently disabled members, and 252 survivor beneficiaries. On June 15, 1980, membership in the association was closed, and all employees hired since that date are members of PERA.

3. BOARD OF TRUSTEES

The Minneapolis Police Relief Association has a nine member Board of Trustees. The board meets monthly and consists of the following:

1. Three ex-officio members including the mayor, chief of police, and comptroller/treasurer of the city;

2. Five persons elected by active members for five year terms, one term expiring each year; and

3. One retired member elected separately from among pensioners to serve on the board for a three year term.

In the 1987, 1991, 1995 and 1999 board elections, the board positions open for election and held by active members will end, and the board positions will be filled by a retired member from an election conducted among only the retired members. In other years, when elections are held to fill a board position of an active member, only active members will vote. As long as there remains at least one member on active duty with the Minneapolis police department, there shall be a member of the board of directors from the active ranks. The purpose of this arrangement is to gradually transfer representation from active to retired members since as of June 1980, no new members can join the association and the number of actives is decreasing.

Immediately after the annual election, directors elect a president, vice president and secretary for terms of one year. Any director who during his term of office ceases to be a member of the city police department loses his board position. Vacancies occurring in the elective membership of the board of directors are filled by a special election called for that purpose.

4. REPORTING

The Minneapolis Police Relief Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. The association reports to its members through an "Annual Pension Report and Newsletter" sent to active and retired members in December. The most recent newsletter contained information on governmental action affecting the fund, disability pensions and pension rates, and a review of the fund's portfolio and financial condition. The association holds its annual meeting in December and it holds monthly board meetings. Both are open and agendas are posted in a police bulletin. The board may issue periodic newsletters, and board members sometimes make announcements at daily roll calls.

5. BENEFITS

All benefits are based upon a "unit" which is defined as one-eightieth of the monthly salary of a first grade top patrolman. Currently, one unit equals $32.42 per month. Eligibility for a service pension is 20 years of service and 50 years of age. Twenty years of service earns 34 units and a pension of $1,102.28. Twenty-four service years earns 38 units, and 2 years earns 42 units.

The association also provides for disability retirement and survivor benefits. All pensions increase at the same percentage as increases in top patrol officers' salary.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $10.9 million or 66 percent while 34 percent came from members ($1.6 million or ten percent), state amortization aid ($2.0 million or 12 percent), and insurance taxes (41.9 million or 12 percent).

Member contributions equal eight percent of a top patrol officer's salary. The state's financial responsibility to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 38 percent funded with an unfunded accrued liability of $153.6 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The Minneapolis Police Relief Association does not have a General Fund. The articles of incorporation provide for financing such a fund by assessing active and retired members a percentage of payroll, but such an assessment is not made.

B. ST. PAUL POLICE RELIEF ASSOCIATION

1. HISTORICAL BACKGROUND

The St. Paul Police Relief Association was incorporated originally in 1903. The general purpose of the association is to provide means for the relief of its distressed, injured, or disabled members, and to pay its members, or their widows or dependent children, as defined by law, from any funds it may have received from any source, a service, disability, or dependency pension, in the amounts and manner provided by law and the by-laws of the association.

2. MEMBERSHIP

As of December 31, 1984, the St. Paul Police Relief Association membership included 470 active members, 238 pensioners, nine permanently disabled members, and 186 survivor benficiaries.

3. BOARD OF TRUSTEES

The St. Paul Police Relief Association currently has a nine member board of directors. The board meets monthly and consists of the following:

1. Three ex-officio members including the mayor, chief of police, and comptroller/treasurer of the city;

2. Five persons elected by active members for five year terms, one term expiring each year;

3. Effective January 1, 1986, one retired member elected separately from among pensioners (excluding dependent beneficiaries) to serve on the board for a three year term.

Immediately after the annual election, directors elect a president, vice president and secretary for terms of one year. Any director who during his term of office ceases to be a member of the city police department loses his board position. Vacancies occurring in the elective membership of the board of directors are filled by a special election called for that purpose.

4. REPORTING

The St. Paul Police Relief Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. The association holds annual meetings for its members in January, and these meetings are well-attended by retirees. Regular monthly meetings are held at the Public Safety Building in downtown St. Paul. Notices of all meetings are published in a "Police Bulletin." Meeting minutes are posted and contain a review of the previous month's financial transactions ~~and a statement of the status of the pension fund.~~

5. BENEFITS

All benefits are based upon a "unit" which is defined as one one-hundredth of the current maximum monthly pay of a patrolman in the police service of the city. Eligibility for a service pension is 20 years of service and 50 years of age. Twenty years of service earns a pension of 40 units per month. For each year of service in excess of 20, an additional unit is added to a maximum of 50 units per month.

The association provides for disability retirement and survivor benfits. All pensions increase at the same percentage as increases in a top patrol officer's salary.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $3.9 million or 54 percent while 46 percent came from members ($1.1 million or 15 percent), state amortization aid ($.9 million or 13 percent) and insurance taxes ($1.3 million or 18 percent).

Member contributions equal six percent of the current maximum monthly pay of a patrolman. The state's financial responsibility to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 41.8 percent funded with an unfunded accrued liability of $70.9 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The St. Paul Police Relief Association does not have a General Fund. The association's articles of incorporation and by-laws do not provide for financing such a fund.

C. DULUTH POLICE PENSION ASSOCIATION

1. HISTORICAL BACKGROUND

The Duluth Police Pension Association was incorporated originally in 1905. The general purpose of the association is to create, secure, establish and maintain a fund for paying pensions to disabled and retired members of the corporation, their widows and their children under the age of eighteen years, to invest the funds of the corporation in accordance with law and to do all other things necessary to fulfill these purposes.

2. MEMBERSHIP

As of December 31, 1984, the association membership included 118 active members, 73 pensioners and 44 survivor beneficiaries.

3. BOARD OF GOVERNORS

The Duluth Police Pension Association currently has an eight member Board of Governors. The board meets as necessary and consists of the following:

1. Three ex-officio members including the chief of police, city treasurer and city administrative assistant;

2. Five persons elected by active members for five year terms, one term expiring each year.

The association is in the process of amending their by-laws to permit retiree election of a retired member to the board for a three year term. Current board members report that the ex-officio members do not attend board meetings.

At the annual election, association members also elect at large a president and vice president. These two officers do not sit on the Board of Governors, and their only function is to conduct the annual meeting. Immediately after the annual election, the senior member of the Board of Governors becomes chairman and conducts board meetings. At the annual meeting the Governing Board appoints a secretary from the active membership. The Duluth city treasurer serves as the association's treasurer.

4. REPORTING

The Duluth Police Pension Association reports to the Legislature by submitting audited annual financial reports and annual actuarial valuations to the LCP&R. The association holds annual meetings and two or three special meetings during the year. The Board of Governors meets at other times as necessary. Minutes of all meetings are circulated to active and retired members.

5. BENEFITS

All benefits are based upon a "unit" which is defined as one one-eightieth of the current monthly salary of a first-class patrolman in the police service of the city. Eligibility for a service pension is 20 years of service and 50 years of age. Twenty years of service earns a pension of 31 units per month. For each year of the first three years of service in excess of 20 years, an additional unit is earned, and for each year in excess of 23 years, one and one-half additional units, but not to exceed 40 units.

The association provides for disability retirement and survivor benefits. All pensions increase at the same percentage as increases in a top patrol officer's salary.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $1.7 million or 59 percent while 41 percent came from members ($.248 million or nine percent), state amortization aid ($.249 million or nine percent) and insurance taxes ($.669 million or 23 percent).

Member contributions equal eight percent of the current maximum monthly pay of a patrolman. The state's financial responsibility to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 40 percent funded with an unfunded accrued liability of $18.9 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The Duluth Police Pension Association does not have a General Fund. The association's articles of incorporation and by-laws do not provide for financing such a fund.

D. MINNEAPOLIS FIRE DEPARTMENT RELIEF ASSOCIATION

1. HISTORICAL BACKGROUND

The Minneapolis Fire Department Relief Association was incorporated in 1886. The general purpose of the association is to afford relief to sick, injured and disabled members of the association, their widows and orphans; to provide and pay disability and service pensions to members of the association; to furnish death benefits for funeral expenses of any deceased member; to purchase, erect, maintain, preserve and beautify monuments, burial lots and grounds for the remains of its deceased members; and to do all things necessary or incidenital to its general purpose, subject to by-laws limitations.

2. MEMBERSHIP

As of December 31, 1984, the Minneapolis Fire Department Relief Association membership included 431 active members, 334 pensioners, 29 disabled members, and 192 survivor beneficiaries.

3. BOARD OF TRUSTEES

The Minneapolis Fire Department Relief Association currently has a nine member Board of Trustees. The board meets monthly and consists of the following:

1. Two ex-officio members: the Minneapolis City Attorney and the Chief of the Fire Department, if he is a member of the association;

2. Six active members of the association: each year at the annual meeting, active members only elect two persons from among them for terms of three years;

3. A medical advisor, chosen when needed according to the field of medicine needed to review a case.

In 1985, the board will add a member to be elected from and by the retired members. The officers of the association include a president, vice president, secretary, assistant secretary, treasurer, and assistant treasurer. All officers and board members must be active members of the association. They hold office for a term of one year and are elected after adjournment of the annual meeting.

4. REPORTING

The Minneapolis Fire Department Relief Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. Informal, verbal communication to members occurs at union meetings, association monthly meetings, and fire stations. A monthly newsletter is sent to retired members, and a copy of the association's annual report goes to each pensioner and every fire station.

5. BENEFITS

All benefits are based upon a "unit" which is defined as one one-eightieth of the salary of a first grade fire fighter. Eligibility for a service pension is 20 years of service and 50 years of age. Twenty years of service earns 32 units equivalent to a service pension of $1,038 per month. Twenty-five years of service earns a maximum of 41 units or a pension of $1,330 per month.

The association provides for disability retirement and survivor benefits. Members with 20 years of service and retiring before age 50 do not receive a payment until attainment of age 50 and are classified as vested deferred members.

Post retirement adjustments occur each time base pay changes, and the amount of change equals the same percentage of change in base pay.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources and members into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $7.7

million or 67 percent while 33 percent came from member s($.976 million or eight percent), state amortization aid ($2.1 million or 18 percent), insurance taxes ($.750 million or 7 percent).

Member contibutions equal eight percent of the maximum salary of a first grade fire fighter. The state's financial responsibility to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 33 percent funded with an unfunded accrued liability of $91.6 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The Minneapolis Fire Department Relief Association finances a General Fund with member dues equal to .5 percent of the maximum rate of salary of a first grade fire fighter. The fund is used to pay expenses and retirement and death benefits not specifically provided for by statute. In 1984, the association paid $18,600 for meetings and conventions, $8,000 for legislative expenses, $31,844 in retirement benefits and $13,000 in death benefits. At the end of 1984, the balance in the general fund was $414,358.

E. ST. PAUL FIRE DEPARTMENT RELIEF ASSOCIATION

1. HISTORICAL BACKGROUND

The St. Paul Fire Department Relief Association was organized in 1882 and incorporated in 1885. The purpose of the association is to provide for the relief of its distressed, injured, sick or disabled members, and in the case of death of a member, to pay to the widow or children prescribed sums, and to pay to retired members who have done active duty in the fire department for a specified time, such sums as provided by the by-laws.

2. MEMBERSHIP

As of December 31, 1984, the St. Paul Fire Department Relief Association membership included 369 active members, 261 pensioners, one disabled member, and 160 survivor beneficiaries.

3. BOARD OF TRUSTEES

The St. Paul Fire Department Relief Association currently has a 28 member Board of Trustees. The board meets monthly and consists of the following:

1. Five persons elected annually from each of three shifts of platoons, to represent the shift on which they are regularly assigned for active duty.

2. One person elected annually from among the personnel of all other divisions of the Fire Department, to represent the divisions of Training, Research, Shop, Fire Prevention, and Fire Alarm;

3. Five persons elected annually from among recipients of service or disability pensions or who are on the deferred pension roll of the association;

4. All officers of the association, elected annually, which include the president, one or more vice presidents, the secretary and the treasurer; and

5. Three members of the five member Board of Examiners (the association president and the secretary are ex-officio members of the Board of Examiners), one elected each year for a term of three years, who are members of the association on active duty.

4. REPORTING

The St. Paul Fire Department Relief Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. The association reports to its members at monthly board meetings held at fire stations and by issuing its annual report to retired and active members. In addition, wide board representation enables informal dissemination of information among active members.

5. BENEFITS

All benefits are based upon a "unit" which is defined as one one-eightieth of base pay (the salary of a first grade fire fighter) on February 1 of any year. Eligibility for a service pension is 20 years of service and 50 years of age. Service pensions are computed by multiplying the number of units earned for years of service times the base pay. Twenty years of service earns 30.9 units. For each year in excess of 20, an additional 1.8/80 is added to a maximum of 39.9/80 of base pay for 25 years or more years of service.

The association provides for disability retirement and survivor benefits. Members with 20 years of service and retiring before age 50 do not receive a payment until attainment of age 50 and are classified as vested deferred members.

Post retirement adjustments occur each time base pay changes, and the amount of change equals the same percentage of change in base pay.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $4.783 million or 66 percent while 34 percent came from members ($.785 million or 11 percent), state amortization aid ($.864 million or 12 percent), insurance taxes ($.741 million or 10 percent) and interest earnings (one percent).

Member contributions equal eight percent of base pay and are non-refundable. The state's financial responsiblity to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 34.2 percent funded with an unfunded accrued liability of $79.8 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The St. Paul Fire Department Relief Association has a General Fund financed by members' dues. Member dues equal .5 percent of base pay and in 1984 totaled almost $50,000. The purpose of the fund is to pay death benefits and to meet working capital needs. The major expenditure from the General Fund in 1984 was $12,000 for death and funeral benefits for six individuals; other espenditures included $4,000 in administrative expenses and $38,000 for investments. At the end of 1984, the total cash and investment balance in the General Fund was about $239,000.

F. DULUTH FIREMEN'S RELIEF ASSOCIATION

1. HISTORICAL BACKGROUND

The Duluth Firemen's Relief Association was incorporated in 1887. The general purpose of the association is to provide for the relief of sick, injured and disabled members of the Duluth Fire Department; to provide for service and disability pensions for members and for pensions for the widows and orphans of members; and to provide and pay from its general fund funeral expenses for members, their widows and orphans, all in such amounts and under such conditions as set forth in the articles of incorporation and by-laws of the association.

2. MEMBERSHIP

As of December 31, 1984, the association membership included 133 active members, 96 pensioners, 4 disabled members, and 65 survivor beneficiaries.

3. BOARD OF TRUSTEES

The Duluth Firemen's Relief Association currently has a 12 member Board of Trustees. The board meets monthly and consists of the following:

1. Twelve persons elected at large by active members, four elected each year for three year terms at the annual meeting.

2. One person elected by the retirees for a term of one year.

The association has a phased method of replacing active representatives with retired representatives. When the active roster drops below 110 members, one board member representing the active membership will be replaced by a retired member. As active membership decreases by 10 over time, one additional board seat will become available for election by and from the retired membership. There will always be 13 directors.

Prior to 1982, the Fire Chief and Assistant Fire Chief were designated members of the Board of Trustees. Currently, there are no ex-officio members or city representatives on the board. Board size and membership representation were changed in 1982. Previously, the board had 19 members representing 19 units located at three fire companies. Board size and representation were reduced because the board was considered too large, attendance and involvement in board responsibilities was poor and some units had more PERA members than association members. Another change in 1982 revoked a provision whereby active members lost their membership in the association when they retired. Currently, active members continue as association members after retiring from active service.

The board has five executive officers: president, vice president, treasurer, secretary-adminsitrator, and assistant secretary-administrator. The secretary and assistant secretary administrators do not have to be elected members of the Board of Trustees but they do have to be members of the association. They are selected and appointed by a majority of the Board of Trustees. All officers are elected by the trustees after the annual meeting for terms of one year.

The Board of Trustees is internally organized into two committees. The Board of Examiners consists of three members of the association and a physician and is responsible for investigating and reporting on application for association membership, for disability pensions, on disability pensioners and for service pensions. An informal investment committee composed of the president, treasurer, secretary and assistant secretary monitors investments.

4. REPORTING

The Duluth Firemen's Relief Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. The association reports to the membership by issuing its annual report to retired and active members and through monthly board meeting minutes distributed to all members. In addition, each board trustee is assigned to a number of association members as a contact for information on association matters.

5. BENEFITS

All benefits are based upon a "unit" which is defined as one one-eightieth of the salary of a first grade fire fighter. Eligibility for a service pension is 20 years of service and 50 years of age. Service pensions are computed by multiplying the number of units earned for years of service times the base pay. Twenty years of service earns a basic pension of 31.85 units per month. For each year in excess of 20, an additional unit is added to a maximum pension payable of 40.85 units per month. Post retirement adjustments occur each time and at the same percentage of change in pay of a first grade firefighter's salary.

The association provides disability and survivor pensions for eligible members and widows and children. In addition, the association pays sick and temporary disability benefits and death and funeral benefits to its members.

6. "SPECIAL FUND" FINANCING

The association deposits contributions from public sources and members into the Special Fund and uses them to pay pensions and to amortize all accrued liabilities by the year 2010. In 1984, the city contributed $1.986 million or 71 percent while 29 percent came from members ($.236 million or eight percent), state amortization aid ($.513 million or 18 percent), and insurance taxes ($66,935 or 2 percent).

Member contributions equal eight percent of base pay and are non-refundable. The state's financial responsibility to the association is limited to semi-annual amortization state aid and supplementary amortization state aid payments. Amortization state aid is equal to the level annual dollar amount required to amortize, by December 31, 2010, the unfunded accrued liability of the association. At the end of 1984, the association was 22.1 percent funded with an unfunded accrued liability of $29.5 million. Supplementary amortization state aid began in 1984 in order to provide extra municipal property tax relief.

7. "GENERAL FUND" FINANCING

The Duluth Firemen's Relief Association has a General Fund financed by members' dues. Member dues equal .5 percent of base pay and in 1984 totaled about $17,000. The purpose of the fund is to pay death benefits and to meet working capital needs. The major expenditure from the General Fund in 1984 was $56,660 for disability and death and funeral benefits; one other major expenditure was for $4,300 of administrative expenses. At the end of 1984, the total case and investment balance in the General Fund was about $191,400.

G. MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

1. HISTORICAL BACKGROUND

The Minneapolis Teachers Retirement Fund Association was incorporated in 1909. The association is organized as a non-profit corporation, the general purpose of which is to secure a fund from assessments upon its members, from donations and from public taxes levied and collected for the fund and from any other available source; to control and manage the fund for the purpose of paying annuities or other benefits to members of the association, all in accordance with the articles and by-laws.

2. MEMBERSHIP

Association members include all present and former teachers in the Minneapolis public schools who are entitled to a present or future benefit. As of December 31, 1984, the association recorded 3,682 active members, 2,216 pensioners and 155 child or survivor beneficiaries.

3. BOARD OF TRUSTEES

The Minneapolis Teachers Retirement Fund Association has a seven member Board of Trustees. The board consists of the following:

1. Six persons, two elected each year for three year terms by and from the association members;

2. An appointee of the President of the Board of Education of the special independent school district of Minneapolis who has full voting rights at all association meetings and who holds office for such time as determined by the president of the Board of Education.

The elected board members currently include four active teachers and two retirees. The board of trustees elects officers from its own members to fill positions of president, vice-president, secretary and treasurer. The board of trustees appoints an executive secretary who cannot be a member of the board. The duties of the executive secretary are to keep account of the association's business transactions, keep an account with each association member, collect income, pay expenses and assist the board secretary as necessary.

The board is responsible for investing the monies received by the association. To assist investment decision-making, the board formed a seven-member Advisory Investment Committee. The seven advisors, each a business leader in the twin cities, volunteer their time and expertise. The advisory committee meets quarterly with the board to review purchases and sales of securities and other assets and to offer advice on proposed transactions. To assist on legislative issues, the membership at an annual meeting in 1948 established a "Committee of Thirteen" composed of six appointees of the president of the Minneapolis teachers' union, six appointees of the president of the Retirement Association and the president of the association as the thirteenth member. As an on-going committee, its purpose is to study, research and form recommendations to improve pension benefits and to work legislatively to enact the recommendations. Currently, the committee is chaired by the vice-president of the Board of Trustees.

4. REPORTING

The Minneapolis Teachers' Retirement Fund Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. Every fourth year, the association submits an actuarial experience report. The association has an annual meeting at which at least 100 active members must be present to transact business. The board trustees meets monthly. Active and retired members are mailed copies of a summary of the annual report, and during the school year members of the board of trustees write and publish monthly newsletters.

5. BENEFITS

The association has both basic and coordinated benefit plans. All teachers appointed and reappointed after July 1, 1978 are members of the coordinated plan. Coordinated plan members contribute to Social Security whereas basic members do not. Members of both plans may retire under the Rule of 85 if years of service plus age (minimum age 55) equal or exceed 85.

The benefits for *basic* members are more generous than the Rule of 85. The minimum requirements for a pension in the basic plan are age 60 with at least seven years of service or any age with 30 years of service. A member retiring within these perameters has a choice of six options of pension payments. A member choosing a LIFE option receives a full pension computed by multiplying 1.25 percent times years of service times the average of the five consecutive highest income years. All other options involve an actuarily reduced annuity depending on the age of survivors designed and/or the amount payments and period of time they are guaranteed.

Benefits to a *coordinated* member are also more generous than the Rule of 85. The minimum requirement for a pension in the *coordinated* plan is age 55 with 10 or more years of service, or any age with 30 or more years of service. The annuity amount is determined by multiplying a percentage per year of service times the average salary for the highest five successive years of service. For each year of service during the first ten, the percentage is one percent, and for each year of service thereafter the percentage is 1.5 percent. However, under the coordinated plan, retirement annuities to persons under age 62 who do not have 30 or more years of service are reduced by an actuarial percentage. The reduction is .5 percent for each month the member is age 65-60 and .25

percent for each month the member is under age 60. As under the basic plan, members may choose a number of annuity options. Both plans provide protections against disability and death while in active service and contain provisions for refunds of employee contributions, military service and sabbatical leave.

Retired members in both plans were eligible for a bonus payment if in 1984 they had been receiving benefits for at least four years. The bonus is payable in each year that the fund earns a return on investments in excess of five percent. The amount of a pensioner's bonus check is based on years of service multiplied by a calculated dollar per year amount. The dollar per year amount is calculated by dividing .5 percent of association assets at fiscal year-end by the total years of service of those eligible to receive a bonus. The intent of the bonus is to help those persons retired the longest and having the smallest pensions.

6. FUND FINANCING

The state's financial responsibility to the association is an employer obligation of 13.35 percent of the salary of each basic member, and 4.5 percent of the salary of each coordinated member plus employer social security taxes for all coordinated members. However, effective July 1, 1986, Minneapolis Special Independent School District #1 will become responsible for making employer contributions. Teacher dues are 8.5 percent of total earnings for basic plan members, and 4.5 percent of total earnings for coordinated plan members plus social security taxes. At the end of 1984, the association was 47.2 percent funded with an unfunded accrued liability of $269.1 million.

H. ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

1. HISTORICAL BACKGROUND

The St. Paul Teachers' Retirment Fund Association was incorportated in 1909. The association is organized as a non-profit corporation, the purpose of which is the collection and disbursement of a fund for the benefit of retired teachers of the City of St. Paul, currently under the jursidiction of Independent School District Number 625.

2. MEMBERSHIP

As of December 31, 1984, the association membership included 2,946 active members, 955 pensioners and 106 child or survivor beneficiaries.

3. BOARD OF TRUSTEES

The association has a 10 member Board of Trustees. The board meets monthly and consists of the following:

1. The Chairman of the Board of Independent School District Number 625 as an ex-officio member;

2. Nine persons elected at large, three each year, by and from the membership, to serve three year terms.

Under the by-laws, active and retired teachers can be elected to the board. Currently, two board members are retired, and seven are active teachers. Four officers are elected by the trustees at the annual meeting for a term of one year. The president and vice-president must be trustees. The secretary and treasurer need not be trustees, but they must be association members.

At the annual meeting, trustees also elect an executive committee consisting of five members, two of whom are the president and the treasurer and three of whom are trustees. The executive committee directs the investment of the funds of the association.

4. REPORTING

The St. Paul Teachers' Retirement Fund Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. Every fourth year, the association submits an actuarial experience report. The association has an annual meeting in January and the Board of Trustees meets monthly. Active and retired members are mailed copies of the annual report, and active members each year receive a card showing accumulated service credits and contributions. In addition, newsletters may be published several times per year and distributed to schools or mailed to each member. With their monthly pension checks, retirees may receive notices of tax and/or legislative changes affecting their benefits.

5. BENEFITS

The association has both basic and coordinated benefit plans. All teachers appointed and reappointed after July 1, 1978, are members of the coordinated plan. Coordinated plan members contribute to Social Security whereas basic members do not.

The minimum requirements for a pension in the *basic* plan are 25 years of service and 55 years of age. Normal retirement is age 60, but a teacher may retire at age 55 with a reduced pension. The amount of reduction, or discount, is .5 percent for each month under age 60. The rule of 85, in effect until December 31, 1986, provides that if age plus service equals 85 with a minimum age of 55, a teacher may retire without a benefit reduction.

The *basic* plan benefit is based on a formula dependent on years of service and final average salary. The contributions paid in by a teacher are not a factor. The formula is 2 percent times final average salary times the number of years accredited service up to 40 years. Final average salary is the best five of the last 10 years. The basic plan also provides for deferred pensions, disability, survivor and family benefits, and refunds of dues.

Both plans provide a bonus payment for all pensioners who have been receiving benefits for at least three years. The bonus is payable in each year that the fund earns a return on investments in excess of 5.5 percent. The amount of a pensioner's bonus check is based on years of service multiplied by a calculated dollar per year amount. The dollar per year amount is calculated by dividing .5 percent of association assets at fiscal year-end by the total years of service of those eligible to receive a bonus.

6. FUND FINANCING

The state's financial responsibility to the association is an employer's obligation of 12.63 percent of the salary of each basic member, and 4.5 percent of the salary of each coordinated member plus employer social security taxes for all coordinated members. However, effective July 1, 1986, St. Paul School District #625 will become responsible for making employer contributions. Teachers' dues are 8 percent of total earnings for basic plan members, and 4.5 percent of total earnings for coordinated plan members plus social security taxes. At the end of 1984, the association was 55.2 percent funded with an unfunded accrued liability of $117.5 million.

I. DULUTH TEACHERS' RETIREMENT FUND ASSOCIATION

1. HISTORICAL BACKGROUND

The Duluth Teachers' Retirement Fund Association was incorporated in 1909. The association is organized as a non-profit corporation, the general purpose of which is to secure a fund from contributions by members, donations, public taxes and other available sources; to control and manage the fund for purposes of paying annuities to members who retire from teaching service, of paying disability benefits when appropriate, and of refunding contributions plus interest or paying annuities or other benefits to members who withdraw or are dismissed from or die in service, or to the legal representatives or designated beneficiaries.

2. MEMBERSHIP

As of June 30, 1984, the association membership included 1,136 active members, 531 pensioners, 8 disabilitants, 23 child or survivor beneficiaries and 75 deferred annuitants.

3. BOARD OF TRUSTEES

The association has a nine member Board of Trustees. The board meets monthly and consists of the following:

1. One member appointed by the Board of Education of the City of Duluth for a term of three years;

2. Five active members, elected at large at the annual meeting, for three year terms;

3. Two retired members, one elected at large each year at the annual meeting, for a two year term; and

4. The Superintendent of Schools, who is an ex-officio member.

Under the by-laws, active and retired teachers vote members to the Board of Trustees. The officers of president and vice-president are elected by the trustees from among their own members after the annual meeting for a term of one year. The secretary and treasurer are chosen by the trustees from among the members of the association. The secretary is a salaried full time employee of the association.

The board has an investment committee composed of four members which meets before the full board's monthly meetings to review proposed and executed investment transactions. The board has other ad-hoc committees.

4. REPORTING

The St. Paul Teachers' Retirment Fund Association reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. Every fourth year, the association submits an actuarial experience report. The association has an annual meeting in January and the Board of Trustees meets monthly. Active and retired members are mailed copies of an annual membership report which announces the next annual meeting and contains a plan description. Active members each year receive a card showing accumulated service credits and contributions. In addition, notices are placed in school bulletins.

5. BENEFITS

All Duluth teachers are coordinated with social security. The normal retirement age is sixty years, and the normal retirement allowance for a member retiring after July 1, 1981, on or after normal retirement age is equal to 1.25 percent of the ~~members's average final salary, multiplied by~~ the number of his years of credited service. Early retirement may be taken in the form of a deferred allowance commencing on the date on which the member reaches age 60 or in the form of an actuarially reduced allowance commencing one month after application for early retirement. The rule of 85, in effect until December 31, 1986, provides that if age plus service equals 85 with a minimum age of 55, a teacher may retire without a benefit reduction.

6. FUND FINANCING

The state's financial responsibility to the association is an employer's obligation of 5.79 percent of the salary of each member. However, effective July 1, 1986, the Duluth Board of Education will become responsible for making employer contributions. Teachers' dues are 4.5 percent of salary. As of June 30, 1984, the Association was 65.4 percent funded with an unfunded accrued liability of $25.3 million.

J. MINNEAPOLIS EMPLOYEES RETIREMENT FUND

1. HISTORICAL BACKGROUND

The Minneapolis Employees Retirement Fund was established in 1919 by the State Legislature to provide members with financial security after retirement and survivor and disability protection during employment.

2. MEMBERSHIP

As of June 30, 1984, MERF membership included 4,107 active members, 4,017 pensioners, 278 disabilities, and 311 survivor beneficiaries. Members are employees of the City of Minneapolis, Minneapolis Special School District No. 1, City of Minneapolis Water Department, Minneapolis-St. Paul Metropolitan Airports Commission, Metropolitan Waste Control Commission, and the Municipal Building Commission. MERF is a closed fund as of June 30, 1978, and employees hired thereafter are members of the Public Employees Retirement Association.

3. BOARD OF DIRECTORS

MERF currently has a seven member Board of Directors who represent active and retired employees and employers as follows:

1. Five employee representatives, at least two of whom must be retired members, elected by and from the membership to serve for three year staggered terms.

2. Two elected officials: the mayor of the City of Minneapolis, or his or her designee and a representative of the Minneapolis City Council.

Currently, all the employee representatives on the MERF board are retired. The board is responsible for setting investment and administrative policy for the fund at regular monthly meetings. The board elected from among its own members a president, vice president and secretary/treasurer. The board hires an executive director/chief investment officer who is responsible for carrying out the policies of the board and managing the staff which administers the retirement fund.

4. REPORTING

MERF reports to the Legislature by submitting its audited annual financial reports and annual actuarial valuations to the LCP&R. Every four years the fund is required to submit an experience study to the commission. MERF publishes a Comprehensive Annual Financial Report and distributes to all members a condensed annual report. The annual report mailed to members includes notice of the annual meeting, legislative highlights, benefit information, financial statements and investment activities. The fund recently revised and distributed a member handbook describing the administration and operation of the fund. The fund also issues Legislative Update newsletters as necessary.

5. BENEFITS

Employees are eligible for a retirement pension at any age with 30 or more years of service; or at age 60 with 10 or more years of service; or at age 65 with less than 10 years of service; or at age 55 with 20 or more years of service if a MERF member before June 28, 1973, under the Two Dollar Bill. all employees must retire on or before age 70. Retirement benefits may be paid according to one of eight annuity options selected by the employee. The formula for calculating the amount of monthly benefit is based on the average of the highest five years' salary within the last 10 years times 2 percent of that average salary for each of the first 10 years of service and 2.5 percent times that salary for each year over 10 years of service. Monthly benefits are further adjusted depending on the options chosen by the employee for amount and duration of payments.

MERF provides separation refunds and deferred, disability, survivor and death benefits. Post retirement adjustments are based upon the investment results of the Post Retirement Account. Each January retired members receive an annual lifetime increase in their monthly retirement benefit if investment returns exceed 5 percent on the assets in the post retirement account.

6. FUND FINANCING

MERF has two funds: the active account collects employee, employer and state contributions and invests them; the retired account receives, at the time of a member's retirement, an amount of money from the active account sufficient to fully pay for the member's pension, and invests the money until the benefits must be paid. In fiscal year 1984, the city contributed $18.3 million or 52 percent while 48 percent came from members ($10.1 million or 28 percent), and the state ($7 million or 20 percent).

Member contributions equal 9.75 percent of their salary which includes .5 percent for survivor benefits. Employer contributions equal the employee contributions plus 2.5 percent of covered employee payroll plus $3.9 million required to be applied against the unfunded liability. The state contribution varies and is based on an annual determination, using a 5 percent interest assumption rate, of the amount required to fully fund

MERF by December 31, 2017. That amount is reduced by the employer 2.5 percent of payroll and the $3.9 million contributions. The balance is the amount of the state contribution. As of June 30, 1984, MERF was 70.12 percent funded with an unfunded accrued liability of $193.7 million.

STUDIES OF THE PROGRAM EVALUATION DIVISION

Final reports and staff papers from the following studies can be obtained from the Program Evaluation Division, 122 Veterans Service Building, Saint Paul, Minnesota 55155, 612/296-4708.

1977

1. Regulation and Control of Human Service Facilities
2. Minnesota Housing Finance Agency
3. Federal Aids Coordination

1978

4. Unemployment Compensation
5. State Board of Investment: Investment Performance
6. Department of Revenue: Assessment/Sales Ratio Studies
7. Department of Personnel

1979

8. State-sponsored Chemical Dependency Programs
9. Minnesota's Agricultural Commodities Promotion Councils
10. Liquor Control
11. Department of Public Service
12. Department of Economic Security, Preliminary Report
13. Nursing Home Rates
14. Department of Personnel: Follow-up Study

1980

15. Board of Electricity
16. Twin Cities Metropolitan Transit Commission
17. Information Services Bureau
18. Department of Economic Security
19. Statewide Bicycle Registration Program
20. State Arts Board: Individual Artists Grants Program

1981

21. Department of Human Rights
22. Hospital Regulation
23. Department of Public Welfare's Regulation of Residential Facilities for the Mentally Ill
24. State Designer Selection Board
25. Corporate Income Tax Processing
26. Computer Support for Tax Processing
27. State-sponsored Chemical Dependency Programs: Follow-up Study
28. Construction Cost Overrun at the Minnesota Correctional Facility - Oak Park Heights
29. Individual Income Tax Processing and Auditing
30. State Office Space Management and Leasing

1982

31. Procurement Set-Asides
32. State Timber Sales
33. *Department of Education Information System
34. State Purchasing
35. Fire Safety in Residential Facilities for Disabled Persons
36. State Mineral Leasing

1983

37. Direct Property Tax Relief Programs
38. *Post-Secondary Vocational Education at Minnesota's Area Vocational-Technical Institutes
39. *Community Residential Programs for Mentally Retarded Persons
40. State Land Acquisition and Disposal
41. The State Land Exchange Program
42. Department of Human Rights: Follow-up Study

1984

43. *Minnesota Braille and Sight-Saving School and Minnesota School for the Deaf
44. The Administration of Minnesota's Medical Assistance Program
45. *Special Education
46. *Sheltered Employment Programs
47. State Human Service Block Grants

1985

48. Energy Assistance and Weatherization
49. Highway Maintenance
50. Metropolitan Council
51. Economic Development
52. Post Secondary Vocational Education: Follow-Up Study
53. County State Aid Highway System
54. Procurement Set-Asides: Follow-Up Study

1986

55. Insurance Regulation
56. Tax Increment Financing
57. Fish Management
58. Deinstitutionalization of Mentally Ill People
59. Deinstitutionalization of Mentally Retarded People
60. Management of Public Employee Pension Funds

Employment and Training Programs (in progress)
Welfare Programs (in progress)
County Human Services (in progress)
Water Quality Monitoring (in progress)

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*These reports are also available through the U.S. Department of Education ERIC Clearinghouse.