

The cost of Michigan's two largest retirement systems for public school (PSERS) and state employees (SERS) is expected to triple in the next 15 years and exceed \$1 billion by the year 2000 if eligible membership remains at projected levels and benefits continue unchanged. Assuming that the state's budget grows at the current average annual rate (3%), retirement would become one of the largest single budget items, equaling 17% of general fund expenditures. Social security is a further continuing cost for retirement. In fiscal 1980-81 the social security payment for state employees was \$83.6 million; this will grow significantly in future years.

The PSERS and SERS are defined benefit retirement programs. Public employees who have ten or more years of qualified service have guaranteed (vested) benefits. Normally, annual retirement benefits are determined by multiplying the retirees' average salary for the five years immediately preceding retirement by the number of years of services, times 1.5%.

The two systems have a combined membership of 362,000 employees, of whom one-third have served more than ten years and therefore are vested. In fiscal 1981 these systems provided \$301.2 million in benefits to 68,869 retirees and beneficiaries. The average payment was \$4,374. Since 1978 the total payout in benefits has increased an average of 10.1%. The number of beneficiaries increased an average 5.7% annually.

<u>Fiscal Year</u>	<u>Number of Beneficiaries</u>	<u>Average Payment</u>	<u>Total Payment</u>	<u>% Change Over Previous Period</u>
1978	58,643	\$ 3,853	\$ 226.0 m	--
1979	62,200	3,939	245.0	8.4
1980	65,256	4,021	262.4	7.1
1981	68,869	4,374	301.2	14.8
1985*	82,501	5,070	418.3	38.9
1990*	99,541	5,940	591.3	41.3
1995*	116,581	6,810	793.9	34.3
2000*	133,621	7,680	1,026.2	29.3

\*Projected on basis of prevailing trends.

Latest released data, as of September 30, 1980, show that the two systems have vested liabilities based on actuarial projections of \$6.550 billion compared with assets having a book value of \$5.199 billion. The difference of \$1.351 billion is an unfunded vested liability. That is, the state has an average liability of \$53,688 for each of the 122,000 vested employees. Of this amount, \$42,615 is funded and \$11,073 is unfunded.

A primary reason for this unfunded liability has been the practice of providing enhanced benefits without adequate financing of resultant costs. Another has been the state's custom, until the last three years, of making contributions below actuarially recommended levels. The state's conservative pension fund investment policy has constrained earnings. Although the state by statute amortizes unfunded liabilities over a 50 year period, the common practice in the private sector is 30 years.

interest rate of 4-5%. Because of prevailing high interest rates, the current value of the state's portfolio is \$1.38 billion or 21.7% below book value. In fiscal 1980 the gap was \$747.9 million or 14.7% of book value. Interest earnings have been more than 5 percentage points below the rate available on U.S. Treasury notes. Every 1% of interest earnings is equal to \$50 million per year for the retirement system.

<u>Fiscal Year</u>	<u>Mkt. Val. of Assets</u>	<u>Book Val. of Assets</u>	<u>% Difference Mkt. Val.-Book Val.</u>	<u>Interest as % of Book Val.</u>	<u>Interest on 1-Yr. T-Bills</u>
1976-77	\$3,191.9 m	\$3,350.6 m	4.7%	6.83%	6.09%
1977-78	3,521.1 m	3,736.8 m	5.8%	7.23%	8.34%
1978-79	4,030.7 m	4,381.3 m	8.0%	8.17%	10.67%
1979-80	4,350.4 m	5,098.3 m	14.7%	9.33%	12.05%
1980-81	4,915.3 m	6,296.4 m	21.9%	9.62%	14.78%

This report does not reflect the full compendium of our concerns in this area. Because Michigan's constitution expressly protects the retirement benefits of public employees, all shortfalls must be made up by appropriations in future years. Great care should be taken in order to avoid mortgaging the future to pay for currently earned retirement benefits. The serious problems we see in this state's retirement systems are not unique to Michigan, as evidenced by the crisis several years ago in New York City. Similar concerns have been expressed in other states and in private industry. We are of the opinion that an independent, thorough, and impartial review of our retirement systems is essential and that it should be carried out expeditiously. Among the questions to be examined should be:

(1) Are there alternative retirement programs which would provide better retirement benefits at lower cost and risk (for example, a defined contribution program)?

(2) Should the state take into consideration the social security payments to be received by its future retirees in computing adequate retirement benefits?

(3) How accurate are the actuarial assumptions and what can be done to validate them?

(4) How can the state assure full funding on a current basis for additional benefits conferred upon present retirees which were never contemplated in previous actuarial projections?

(5) Can the state improve its investment earnings while maintaining appropriate levels of safety?

(6) Should periodic, independent reviews of the state retirement systems be conducted to maintain fiscal soundness?

(7) Should the composition of the retirement boards, now consisting of employees and retirees appointed by the governor and public employers, be reassessed and/or revised?

These systems are funded from two primary sources: (1) earned income derived from investment of retirement funds; and (2) annual appropriations from the state, the amount of which is determined by a consulting actuary and paid to the system as a fixed percentage of payroll. In fiscal 1981, the state appropriated \$433.0 million to the systems; earnings on invested assets provided an additional \$426.0 million.

After a series of negotiations, the retirement boards agreed to increase the projected annual interest rate on the invested funds from 6% to 8%. The revised interest assumption reduced the state's required contribution by one-fourth or \$100 million per year, a substantial part of the then projected 1981-82 deficit. This interest assumption change materially increased the projected future value of current assets, narrowed the existing shortfall between assets and liabilities, and reduced the percentage of payroll the state is required to submit to cover future liabilities for current members. Should the state's assumptions prove incorrect, it legally will be required in subsequent years to make up the resultant deficiency. A recent survey by Charles D. Spencer & Associates found that 116 major corporations projected a lower average rate of return on their pension investment fund assets, 7.581%.

The fiscal viability of the system is dependent upon the accuracy of the actuarial assumptions and projections with regard to several factors, including: (1) the number of employees who will vest, (2) their years of service, (3) their average salary at the time of retirement, (4) the retiree's life expectancy, and (5) the rate of return on investments. Many of these factors require the actuary to look decades into the future, a process fraught with fallibilities.

Recent large scale layoffs and a hiring freeze have reduced the number of employees. Most of those laid off are relatively young with less than ten years of service. The slowed economy has also reduced the turnover of public employees. The result is that a greater percentage of employees remaining in the systems will become vested. While only one-third of the current workforce is vested, they account for 83.1% of the total accrued liability. Although we expect further reductions in the size of the workforce with a minimal rise in the state's accrued liabilities, the increasing number of vested employees should produce a rapid rise in the state's total liability for future retirement benefits.

The two systems utilize a modified model of the Group Annuity Mortality Table for 1971. Experience studies to determine how actual mortality rates among retirees conform with these figures have not been performed. In the general population, life expectancy at age 60 increased one year in the last decade. If this trend continues, we can expect a further increase of at least two years before the year 2000. A major breakthrough in preventing either or both of the leading causes of death, heart disease and cancer, could raise life expectancy even further. If vested employees and retirees experience a comparable improvement, they will collect an additional \$1 billion in pension payments between now and the end of this century. The actuary's modification of the mortality table covers 75% of this cost, leaving a potential unfunded liability of \$250 million.

The Department of Treasury, which handles investments for the two systems, has maintained a policy of holding investments to maturity. Money turnover therefore has been limited to 3-5 percent a year, which provides little opportunity for capital growth or increasing the rate of return on investments. Because of legal constraints and administrative decisions, over 80% of the systems' portfolios consist of long-term, low-interest instruments such as bonds and mortgages. Many of these earn an annual