

ALASKA LEGISLATURE COMMITTEE BILL FILES - 1987 - 1988 8879

CSHB 547 cont. 405

The purpose of this memorandum is to summarize and explain the bases for the Department of Revenue's investment policies, the standards utilized in implementing the policies, and the authorities under which the investment policies and investments are made.

I. APPLICABILITY

This memorandum covers the following listed separately invested funds:

- State of Alaska General Investment Fund
- AHFC Pledged Fund
- International Airports Construction Fund
- International Airports Revenue Fund
(including the Repair and Replacement Reserve Account)
- State Mortgage Insurance Fund
- Public Employees Retirement Fund
- Teachers Retirement Fund
- Judicial Retirement Fund
- Alaska National Guard and Alaska Naval Militia Retirement Fund
- Public School Fund
- University of Alaska Fund

Within the General Investment Fund are the General Fund, special revenue funds, debt service funds, capital projects funds, enterprise funds, intra-governmental service funds, and other funds which are commingled for investment purposes. The International Airports Funds are the only separately invested enterprise funds. All trust funds are separately invested.

For separately invested funds, the income accrues to the fund which earned it. The income of all funds in the General Investment Fund accrues to the General Fund. The only exceptions are the Student Loan Fund, Alaska Clean Water Fund, Fish and Game Fund, Power Development Revolving Loan Fund, and trust funds or accounts--the most significant of which is the Permanent Fund Dividend Trust Account--all of which receive their pro-rata share of monthly General Investment Fund income, pursuant to Attorney General's opinions dated September 10, 1984 and July 19, 1985. Appendix A contains a Memorandum of Understanding between the Departments of Revenue and Administration that provides for the crediting of General Investment Fund income to funds or accounts other than the General Fund.

II. COMMISSIONER OF REVENUE'S AUTHORITY

The Commissioner of Revenue has the general authority to invest all State funds, under AS 44.25.010 and AS 44.25.-020(2), and has either the primary or secondary authority to invest all monies deposited or held in the applicable funds under the sources cited below. These authorities are partly limited by relevant laws.

A. Sources of Authority

The source of the Commissioner's authority for each of the applicable funds is:

1. State of Alaska General Investment Fund, under AS 37.10.070;
2. AHFC Pledged Fund, under Section 508 of the General Housing Mortgage Bond Resolution of the Alaska Housing Finance Corporation;
3. International Airports Construction Fund, under Section 3.02 of Resolution No. 68-4 of the State Bond Committee of the State of Alaska and AS 37.15.420;
4. International Airports Revenue Fund, under Section 5.02 of Resolution No. 68-4 of the State Bond Committee of the State of Alaska (the requirement to separately invest the Repair and Replacement Account is specified in this Resolution) and AS 37.15.430;
5. State Mortgage Insurance Fund, under AS 18.56.095;
6. Public Employees Retirement Fund, under AS 39.35.110;
7. Teachers Retirement Fund, under AS 14.25.180;
8. Judicial Retirement Fund, under AS 22.25.048(c);
9. Alaska National Guard and Alaska Naval Militia Retirement Fund, under AS 26.05.228(c);
10. Public School Fund, under AS 37.14.170 and subsequent delegation by the Public School Fund Advisory Board (see Appendix B);
11. University of Alaska Fund, under AS 14.40.400 and subsequent delegation by the Governor (see Appendix C).

B. Limitations of Authority

The Commissioner's authority is limited in the various funds to specific types of investment instruments, and in certain funds the maximum percentage which can be held in some classes of investments is also specified.

1. Permissible Investment Instruments

The instrument limitations are prescribed by Alaska Statutes for the various funds as follows:

- a. General Investment Fund, AS 37.10.070 (see Appendix D);
- b. AHFC Pledged Fund (see Appendix E);
- c. International Airports Funds, State Bond Committee Resolution No. 684 (see Appendix F);
- d. State Mortgage Insurance Fund, AS 18.56.-095(b) and AS 37.10.070(a), the General Fund (see Appendix G);
- e. Public Employees Retirement Fund, AS 39.35.110;
Teachers Retirement Fund, AS 14.25.180;
Judicial Retirement Fund, AS 22.25.048(c);
Alaska National Guard and Alaska Naval Militia Retirement Fund, AS 26.05.228(c);
Public School Fund, AS 37.14.170 (see Appendix H);
- f. University of Alaska Fund, AS 14.40.400 (see Appendix C).

Although not expressly stated in the statutes, the Attorney General has ruled in an opinion dated November 28, 1978 that the Commissioner has authority to enter into reverse repurchase agreements.

2. Percentage Allocations Within a Fund

Certain funds have maximum percentage allocations or dollar limitations for some investments as prescribed by Alaska Statutes or the Alaska Administrative Code. The funds are the Public Employees Retirement and the Teachers Retire-

ment. The Judicial Retirement Fund, Alaska National Guard and Alaska Naval Militia Retirement Fund, and Public School Fund are also subject to the maximums because Alaska Statutes place them under the same investment limitations as the retirement funds.

a. Statutes

- (1) corporate stock and debt securities may not exceed 50 percent of the fund (AS 14.25.180(c) and AS 39.35.110(c));
- (2) no more than 5 percent of the voting stock of a corporation may be owned (AS 14.25.180(c) and AS 39.35.110(c));
- (3) foreign securities may not exceed 10 percent of the fund (AS 14.25.180-(b)(23) and AS 39.35.110(a)(23)); and
- (4) foreign time deposits may not exceed 20 percent of the fund (AS 14.25.180-(b)(24) and AS 39.35.110(a)(24)).

b. Administrative Code

For real estate mortgage loan investments

- (1) a single loan may not exceed \$1,000,000 (15 AAC 114.050(e) and 15 AAC 139.050(e)); and
- (2) loans may not exceed 20 percent of the portfolio measured at cost at the time of purchase of any loan (15 AAC 114.-050(f) and 15 AAC 139.050(f)).

III. COMMISSIONER OF REVENUE'S RESPONSIBILITY

The Commissioner is solely responsible for the realized investment results on the entirety of each of the funds, except to the extent that statutory law by prescribing or proscribing particular investments or allocations may effectively prevent the Commissioner from fully discharging that responsibility. The responsibility is amplified and limited by both laws and practical considerations.

A. Rule of Prudence

A rule of law concerning a trustee's degree of care in managing investments for a trustor or trust beneficiary has developed over a long period of years in

U.S. jurisprudence and it has commonly been referred to as the "prudent man rule." The rule held fiduciaries to a standard of care comparable to that which a person of ordinary prudence would use in managing his own investments. With regard to the Commissioner's responsibility for the investment of trust funds, the Alaska Statutes (previously cited) have held the Commissioner to the higher and more demanding standard of care required of an institutional investor managing large investments under a trust relationship. The standard presumes the institution is a sophisticated professional investor whose knowledge and ability to evaluate alternative investments is substantially greater than that expected of an ordinarily prudent layman. Conformance with the standard may be evidenced by comparison with funds managed under similar, if not identical, standards. The trust funds covered by the statutes are the Public Employees Retirement Fund, the Teachers Retirement Fund, the Judicial Retirement Fund, the Alaska National Guard and Alaska Naval Militia Retirement Fund, and the Public School Fund. The statutes do not apply the "prudent institutional investor" standard to the University of Alaska Fund, but the 1963 Opinion No. 13 of the Attorney General held that the "prudent man rule" is the proper rule for guiding the investment of that fund and the Governor's delegation to the Commissioner (see Appendix C) imposed the "prudent institutional investor" as the applicable standard. The statutes do not impose either the "prudent man rule" or the "prudent institutional investor" rule on the Commissioner in investing the monies of the International Airports Revenue Fund or the State Mortgage Insurance Fund. The General Investment Fund, which is not in itself a trust fund, although it may include some commingled trusts, is also required by AS 37.10.070(b) to be invested under the "prudent institutional investor" rule, even though that would not be required necessarily under prevalent trust law. There are no statutory standards for the AHFC Pledged Fund or the International Airports Construction Fund.

B. Fiduciary Law

The extant body of fiduciary laws in U.S. jurisprudence (one of which is the "prudent man rule") impose additional criteria on the actions of investment managers of funds held in trust. The primary focus of the laws is to require the trustee to act independently and only in the best objective interests

of the beneficiaries of the trust, ignoring all considerations relating to the interests of others or the trustee's own self-interest, and avoiding all self-dealing and all conflicts of interest between the trustee and either the trustor or the trust beneficiaries. Similar obligations have been imposed by numerous federal and state laws (Securities and Exchange Commission, Investment Advisors Act, banking trust laws, etc.) and by professional self-regulatory bodies (Financial Analysts Federation, National Association of Securities Dealers, and others). These requirements are directly applicable to all but four of the eleven funds covered by this memorandum. The Commissioner and the staff of the Revenue department involved in the process of investment policy or investment selection decisions, or implementing, recording, or administering those decisions, are held accountable for compliance with the substance of the relevant laws. There is a significant risk that the statutory limitations on investment instruments and on allocations may be in conflict from time to time with the Commissioner's duties under the "prudent institutional investor" rule and the other fiduciary standards, to the extent that the limitations prevent investments that would be considered prudent.

C. Practical Considerations

The Commissioner's general responsibility is also partly constrained by a number of practical considerations.

1. Nature of the Funds

The size of the funds and their purposes can act to exclude or include various investments as part of a particular fund's portfolio.

2. Personnel

The number of qualified staff members affects the amount of time which can be expended in managing the investments of the funds.

3. Data

The adequacy of the content and the timeliness of the financial information available, whether internal or external, can also act to limit or extend the investment opportunities.

4. Budgets

Budgetary constraints can limit both the personnel and data requirements available to the Commissioner.

5. Administration

Required administrative procedures can act to impede some investment activity, which may obviate some opportunities and limit the investment results.

D. Personnel Standards

The Commissioner depends on the staff of the Treasury Division of the Department of Revenue in fulfilling the investment responsibility. In order to assure their compliance with the appropriate standards of conduct, the following requirements have been established:

1. Treasury Staff

All employees of the Treasury Division are required, as a condition of employment, to acknowledge and abide by the rules of conduct contained in the statement attached hereto as Appendix I.

In addition, all Treasury staff are subject to AS 39.52, the Alaska Executive Branch Ethics Act.

2. Treasury Officers

a. All officers of the Treasury Division are additionally required to conform to the applicable substantive provisions of "The Code of Ethics and the Standards of Professional Conduct" of the Financial Analysts Federation, attached hereto as Appendix J, with the exception of Part VI (c) which is superseded by the more restrictive AS 39.52-170(a) which prohibits any outside employment or service that is incompatible or in conflict with official duties.

b. In order to better ensure professional levels of knowledge, ability, and experience investment officers involved in marketable securities are required to be

Fellows of the Financial Analysts Federation
or Chartered Financial Analysts.

IV. THE INVESTMENT OBJECTIVE

The general objective of all financial investments is "to increase the amount of monies available for some purpose over some span of time." The specific objectives applicable to a certain fund depend primarily upon the nature of the fund. Derived from the general objective are a number of important considerations which are involved both in determining specific objectives and in developing specific investment policies.

A. The Amount of Monies

The amount of monies concerned in a particular fund's objective or policy may represent only the principal of the fund, or its income if it has not been distributed, or they may represent some combination of both principal and income--either separately or combined.

B. Increasing the Amount

1. Capital Preservation

Whether the concern is for the principal or the income, or some combination of them, increasing the amount of monies usually requires that at least the capital of the fund (principal contributions) will not be reduced. Funds whose capital is supposed to be consumed are, of course, an exception. This objective of preserving the capital relates to the following investment characteristics which are important in determining investment policy:

a. Credit Risk

Credit risk involves the investment issuer's willingness and ability to pay the income and principal of a fixed amount obligation as it becomes due and payable. Credit risks vary greatly from issuer to issuer and usually reflect the relative certainty of the issuer's ability to pay. Low credit risks imply a high degree of certainty that the obligations will be paid in full and on time. High credit risks for classes of investment or individual investment selections are accommodated in investment policy

by diversifying those investments among enough different issuers to reduce the fund's exposure to any single issuer's default, by holding marketable issues which can be sold if the issuer's credit risk rises substantially, and by continuing staff surveillance of the issuer's ability to pay.

b. Residual Risk

Equity investments are not fixed amount obligations. They are percentage ownerships of net income (after taxes) and the residue of assets remaining after retirement of all outstanding liabilities. The risk on equity investments is related to the future profitability of an enterprise and/or to its current or future liquidation value. Equities are usually diversified in order to reduce the fund's exposure.

c. Exchange Rate Risk

Exchange rate risk involves the fluctuations in the relative exchange rates between foreign currencies and the U.S. dollar and they are only involved when investments payable or valued in foreign currencies are held in a domestic portfolio. Exchange rates vary daily and reflect a number of factors. In the long run they are primarily determined by relative measures of economic productivity and prices, and trade and financial flows among countries. The risk to a fund is reduced by limiting the percentage exposure to the exchange rate, by diversifying the holdings among several foreign currencies, or by hedging the currency positions in the futures markets.

d. Market Risk

Market risk involves the market's valuation of an investment when it is voluntarily or involuntarily liquidated by the holder before its scheduled maturity date (in the case of fixed amount obligations) or at any time (in the case of equities). The valuation for a fixed amount obligation will reflect the market's perception of the credit risk (and exchange rate risk, if appropriate), the remaining time before

maturity of the issue, the fixed rate of pay on the issue, and the then current interest rate at which similar obligations are being purchased (sometimes referred to as the interest rate level risk). The valuation for an equity obligation will reflect the market's perception of the current and future profitability of the enterprise, the annual rate of income remittance (dividends), the liquidation value of the enterprise, the future expected price for the equity, the exchange rate risk when appropriate, and its probable return relative to alternative investments. Because market valuations change daily and only reflect the market's perceptions, they do not necessarily reflect the true relative value of alternative investments, nor do they reflect the historical returns for held investments, but they do reflect the probable price at which investments can be bought or sold at that time. Because investments are made to achieve realized returns rather than transitory perceived returns, the market valuation is not particularly relevant to held investments if they are not going to be imminently liquidated, but it is important in making new investments because it affects the probable returns that can be made on them in the future.

2. Returns on Investments

The return on an investment is not definite until the investment is terminated. The return is the difference in the amount of monies received from an investment as compared to the amount of monies invested in it. Returns may be divided into principal returns, or income returns, or some combination of income and principal returns, depending on the nature of the funds, the purpose of the investment, legal requirements, and accounting conventions. Investments are made based upon an expected level of return over a future time period. Calculating an imputed return based on the market valuation of a held investment which is not going to be imminently liquidated is not necessarily meaningful because it reflects neither the expected return basis on which the investment was made nor the return which will be realized when the investment is terminated.

The rate-of-return on investments is a comparative measure of annual returns among alternative investments. It is the percentage rate which mathematically represents the amount of annual increase or decrease in monies as compared to the amount invested. It is always stated as an annual rate regardless of whether the time period is a fraction of a year or a multiple number of years. Rates-of-return may reflect only income, or principal, or a combination of income and principal, and they may be expectational, imputed, or realized. They are used in investment management as a basis for reallocating the relative percentages of classes of investments in a fund and as a basis for selecting particular investments from among many alternatives. They are also used on an imputed or realized basis to compare the relative performances of various investments or classes of investments within a fund or among funds. The usual objective of portfolio management is to achieve a relatively high rate-of-return over a time period appropriate to the nature of the fund.

C. Availability

Availability is a restriction on the general objective. Increasing the amount of monies is useless if the monies are not available when they are needed for the purposes of the fund. The amount and timing of the need for monies depends mostly on the nature of the fund and varies greatly among funds. Known amounts at known times can be readily accommodated by either specific maturities or liquidations of unmatured or non-maturing issues. Unknown amounts or unexpected timing can only be accommodated by liquidations. Liquidating investments means selling them at the going market price to another investor. The ability to liquidate an investment will depend on its marketability. Securities in which ongoing secondary markets are maintained are readily marketable, and those rated as having either low credit or residual risks are highly marketable. Securities which do not have ongoing secondary markets and privately-placed non-security investments have either a very low degree of marketability or none at all. Marketability is also affected by the amount of the investment. Secondary markets presume certain ranges of amounts. Liquidating investments which are substantially larger or smaller than those ranges will

reduce both the marketability and the price. The ability of investment management to terminate some investments, procure others, realize returns, reallocate the fund's investments, and achieve high rates-of-return would be severely reduced if a fund was substantially invested in unmarketable investments.

D. For Some Purpose Over Some Span of Time

Both the purposes which are to be served and time over which they are to be served will vary greatly depending on the nature of the funds. Endowment type funds with a perpetual lifetime and no permissible withdrawals of principal are substantially different in purpose and time span than funds whose principal is committed to consumption within a near term period. The purpose and the time span are crucial factors in establishing the specific investment objectives and policies for a particular fund. They act to amplify or limit the classes of investments which can be considered and affect all of the characteristics previously mentioned, i.e., credit risk, residual risk, market risk, rates-of-return, and marketability.

V. THE NATURE OF INVESTMENT POLICIES

The strategic plan for achieving a particular fund's investment objectives is the fund's general investment policy. It is primarily concerned with the relative allocation of the classes of investments within the fund, but it can also be concerned with the structure or selections within a class of investments. Within the limits imposed by the nature of the fund, its investment objectives, and the constraints imposed by laws and practical considerations, the investment policy is designed to achieve a relatively high probable rate-of-return on the fund over some future time period. Although the imposed limits and constraints may be fairly static for long periods of time, the financial markets in which returns are realized are very dynamic. No matter how suitable and productive an investment policy may be at any point in time, subsequent changes in the financial markets can rapidly invalidate it. Consequently, investment policies have to be sufficiently flexible to quickly adapt to the dynamics of the marketplace if the desired rates-of-return are going to be achieved. The process of keeping the policies attuned to the probable future markets involves continuing reappraisals.

Investment policies are comprehensive derived strategies which represent evaluations of all of the significant factors utilized in selecting and managing investments. The most important of these factors is the probable rates-of-return which may be earned on particular investments between now and a future date. Those probabilities together with their relative degree of certainty and the risks associated with those investments are the essential considerations involved in determining the allocation of the fund among the potential classes of investments. The allocations are balanced within the policy with the intention of maximizing the fund's probable forward rate-of-return without permitting its probable risks to rise to an unacceptable level. Because investment policies are based on expected future events, their effectiveness in achieving the objectives can only be ascertained on an after-the-fact basis.

VI. THE FUNDS AND THEIR INVESTMENT POLICIES

The application of the general investment objective to specific funds or types of funds results in the development of specific investment policies for each fund. A summary of the nature of each fund and its investment policy follows:

A. The General Investment Fund

This does not include the unmarketable loans made under former State programs--all but one of which are no longer active.

1. Nature

The General Investment Fund is a reservoir which holds State revenues until they are disbursed. It contains five broad categories of monies:

- a. revenues which will only temporarily be in the fund because they are subject to imminent disbursement in order to satisfy operating budget expenses;
- b. revenue receipts in excess of appropriations, which are usually in the fund for less than a year because they are subsequently appropriated and disbursed;
- c. revenues appropriated for capital budget projects, which may be in the fund for several years as monies are disbursed on an as needed basis;

- d. past revenues not appropriated for specific expenditures but held in reserve for emergency purposes, e.g. budget reserve fund;
- e. special revenue, reserve, operating, and trust funds which are commingled in the General Investment Fund but are separately accountable. These monies have mixed characteristics, are usually continuing in duration, and are a small percentage of the total fund.

The purpose of the fund is to combine these money flows into a pool where disparate inflows and outflows will frequently be offsetting and, consequently, the more stable pool will be more readily investible. The reduction through the use of a pool of the number of accounts which need to be invested also increases the size of the investments, reduces the number of investments, and minimizes the transaction and personnel costs. The fund is invested with the intent of earning income on the principal monies until the time of their disbursement. The income earnings constitute an additional source of revenues which are available for appropriation.

2. Policy

Because the principal of the fund has been appropriated and any realized losses would lead to curtailment of intended expenditures, preservation of principal is the most important determinant of investment policy. Because the expenditures are frequently large and their exact dates of disbursement are unknown, the policy has to allow for very high liquidity. Because the \$1 billion to \$2 billion size of the fund is very large, investments have to be limited to classes of investments which have secondary markets that can readily accommodate large holdings. Because the projected income from the investments is also appropriated before it is received, the projected income for any fiscal year should be relatively stable and certain. These characteristics denote an investment policy which avoids residual risks, has low credit and market risks, avoids substantial exchange risks, concentrates on large yet very marketable issues, and seeks to achieve a relatively high but non-volatile investment return within a fiscal year.

The current investment policy limits the investment selections to non-residual, fixed amount obligations. The vast majority of holdings consist of U.S. Treasury issues, which have the lowest credit risks, the highest marketability, and the best secondary markets for large holdings. The remaining holdings consist of short-term commercial or bank paper issues which have exceptionally low credit risks although they yield more income than U.S. Treasuries. The daily volatility in fund balances is handled through overnight repurchase agreements with the limited number of prime dealers with whom the Treasury Division has binding written agreements. The repurchase agreements have almost no risk because they are fully collateralized by delivered U.S. Treasury securities. The maturity structure of the fund is designed to provide cash through maturities at the probable dates it will be needed. The estimating of probable cash outflows is a continuing process and the maturity structure is constantly being altered to match the probable outflows. The particular investment selections and the maturity structure are also designed to maximize the income flow and, consequently, the current structure of interest rates and the future expected structure of those rates are important determinants of investment selections and maturity structure. In order to keep the income relatively certain, issues are usually held to their maturity date, unless the maturity schedule needs to be restructured. Currently, about 62 percent of the fund is scheduled to mature within the following 12 months and the remainder within three years.

B. AHFC Pledged Fund

1. Nature

The monies held in this fund are State funds which were required under the terms of an outstanding AHFC bond issue. The amount required depends upon standards and certifications stated in the bond indenture and any excess can be withdrawn on November 30 of each year. Excess amounts have been withdrawn each year so the monies currently held are less than \$10 million. The indenture restricts the investment maturities to six months or less and limits the choices to the instruments noted in Appendix D.

2. Policy

The stringent maturity and instrument limitations leave little room for discretionary policy. Preservation of principal is the most important characteristic and it is being served by keeping the fund invested in U.S. Treasury obligations. The maturity restriction avoids any market risk. The current investment policy is to purchase issues maturing on either the indenture's semi-annual interest pay dates of May 30 and November 30 or the nearest practical date preceding those days.

C. International Airports Construction Fund

1. Nature

The construction fund holds the proceeds of construction bonds as well as monies appropriated for the same purposes. The monies are withdrawn as needed to repay contractors for construction expenses. Consequently, it is a declining fund which eventually pays out all of its principal and income.

2. Policy

The objective of the investment policy is to maximize the return on the monies while they are held in the fund without risking the principal or the presumed interest income. The investment restrictions (Appendix E) virtually eliminate credit risks, and market risks are minimized by attempting to match the schedule of maturities to the timing and amounts of anticipated withdrawals. The schedules of withdrawals are estimated by the architects or engineers involved in the projects. Section 3.03(c) of State Bond Committee Resolution No. 68-4 restricts maturities to no more than six months after the estimated dates on which the monies will be needed.

D. International Airports Revenue Fund

1. Nature

The Revenue Fund receives all of the revenues from the ongoing operations of the international airports. The monies are utilized to pay the continuing expenses of airport operations and

the principal and interest payments on outstanding airport revenue bonds. Although the bond payments are known amounts which are scheduled for the life of the issues, the revenue receipts and other expenditures are erratic in timing and highly variable in amount. Investment earnings are retained by the fund as an additional revenue.

2. Policy

The irregular, unforecasted cash flows out of the fund impose high liquidity and low risk requirements on its investments. These characteristics are met by investing solely in U.S. Treasury or money market issues due within no more than one year. The short maturities ensure minimal market risks, the issuers have very low credit risks, and the high marketability assures the availability of monies even if there are unexpected outflows. The separately invested Repair and Replacement Reserve Account, required under the terms of a bond indenture and subject to Section 5.04 of Resolution No. 68.4 of the State Bond Committee, is less subject to erratic flows and therefore may use maturities of up to five years duration. These stringent requirements effectively preclude maximizing the return on the investments. If reliable forecasts of probable cash flows were available, maturities might be lengthened and timed to take advantage of changing interest rate levels so a higher rate-of-return could be earned.

E. State Mortgage Insurance (Trust) Fund

1. Nature

The monies in this fund constitute a State insurance reserve supporting holders of AHFC Insured Mortgage Bonds. The amounts required to be held in the fund are specified in AS 18.-56.095. Monies may be withdrawn from the funds as needed to effectuate the mortgage insurance programs, and the fund may receive monies from either special mortgage loan commitment fees or special mortgage loan defaults which were charged against the fund or appropriations by the legislature to meet the fund's size requirements. The fund has an unknown duration, it may vary in size perpetually, or it may decline to

zero at some future date when all Insured Mortgage Bonds are retired.

2. Policy

Fund investments have to have the characteristics of safety of principal from credit risks because the monies are an insuring guarantee and of high marketability because money may be withdrawn at any time. These characteristics are served under the Mortgage Insurance Agreement of December 6, 1975 between the State and AHFC which limited the investments to highly marketable and low credit risk U.S. Treasury or money market investments (see Appendix F). Subject to that restriction, the Commissioner of Revenue delegated investment management of the fund to the National Bank of Alaska under the terms of a Custody and Investment Agreement dated July 30, 1976.

F. Retirement (Trust) Funds

This comprises the Public Employees Retirement Fund, the Teachers Retirement Fund, the Judicial Retirement Fund, and the Alaska National Guard and Alaska Naval Militia Retirement Fund, which are separately accounted and invested. Their natures are sufficiently similar to give them the same general investment policy. However, the two minor funds, the Judicial and the Alaska National Guard and Alaska Naval Militia, are too small to directly participate in equity and certain fixed amount investments. The Treasury Division has established a pooled account for domestic common stock investments of all the retirement and endowment funds to make participation by the minor funds practical. In the future, the Division may establish additional pools for other types of investments.

1. Nature

The retirement plans are defined benefit plans whose payment amounts for each enrolled employee are determined by their length of employment and their salary levels. They are joint contributory plans under which both the employee and the employer are required to make continuing contributions, with the exception of the Alaska National Guard and Alaska Naval Militia plan which is funded solely by employer contribu-

tions. According to law, the benefits payable under the retirement plans are contractual, deferred compensation arrangements which must be honored by the employers, who are Constitutionally prohibited from diminishing or impairing the accrued benefits. The employers are the effective guarantors of the benefits and they assume all of the financial risks concerning the adequacy of the contributions and the returns on the investments. Employees have a legal right to benefits immediately upon enrollment in the system, although their right to the employer's contributions is dependent on certain vesting requirements such as a minimum term of employment and the status of that employment (full-time, part-time, temporary, etc.). The plans are considered as being perpetual in nature because they apply to both current and future employees and the employers have the characteristics of perpetual existence.

The funds' invested assets are impounded monies dedicated to the payment of future benefits and are not subject to reversion to or use by the contributors, except when paid to beneficiaries under the terms of the plans. They are fiduciary trusts whose monies are held and invested only for the benefit of current and future retirees.

The investments represent the accumulated excess of contributions and realized income over benefits paid during the years since the plans' inceptions. The amount of additional monies contributed each year by the employees and employers are determined by consulting actuaries and are based on the expected future payments to current and future retirees, the amounts of the funds, and the expected future returns on investments. In order to determine the amounts of the funds, the actuaries annually value the funds' investments by utilizing a three year moving average of the ratios of total actuarial value to total book value, where total actuarial value is composed of market values for equities and book values for fixed amount obligations. This methodology decreases the annual volatility of both the valuations and the resultant levels of contributions. The actuarial method being utilized--projected unit credit method- requires contributions in the early years that exceed the accrual of benefits.

Cash inflows into the funds substantially exceed the current amounts of benefits payments and that condition is expected to continue for many years into the future. The net inflow is a typical situation for retirement plans who have a relatively low percentage of retired members. This is illustrated by the following statistics concerning the two major plans:

	<u>Public Employees Retirement System</u> (1)	<u>Teachers Retirement System</u> (1)	<u>Mean of U.S. Public Pension Funds</u> (2)
Average Age of Active Members	39.21	40.48	40.9
Average Years of Credited Service	5.96	9.81	11.6
% of Total Members Retired	14.4%	19.2%	29.3%
% of Active Members Vested	44.6%	48.0%	47.7%
Period in Years to Amortize Unfunded Accrued Benefits	25	25	30.1
% of Pension Obligation Funded	102.0%	93.2%	72.4%
Excess of Actuarial Interest Rate Assumption Over Salary Increase Assumption	2.8% (3) estimate	2.8% (3) estimate	1.8%

- (1) "Actuarial Valuation as of June 30, 1986," William M. Mercer-Meidinger, Inc.
- (2) "Public Pension Funds 1987," Greenwich Research Associates, Greenwich, Connecticut
- (3) 2.5% for the first five years of an employee's service and 3.5% per year thereafter.

2. Policy

The most important characteristic of the funds for investment policy purposes is their perpetual nature and the long number of years before they will encounter any net outflows

(probably 15 to 20 years). The long time span accommodates investments which should enjoy higher returns over the long-run, although they may be slow to materialize, or be erratic in the short-run, and it allows greater use of investments which may have substantial market valuation risks. This characteristic expands the universe of investment possibilities and increases the potential for achieving higher returns on the investments.

The primary objective of the investment policy is to maximize the returns on the funds' total investments over a long time span without undertaking an unreasonable degree of risk of reducing the principal of the funds or of realizing the lower returns which would necessitate raising the contribution levels. Higher investment returns over the years mean a larger fund, and a larger fund size relative to a retirement system's liability for future benefit payments is the beneficiaries' best security that the pensions will be paid when they are due. Returns which average higher than the actuarially assumed returns (currently 9 percent for the two major retirement plans) can lead to either increases in pension benefits or decreases in the amounts of annual contributions. The time span over which the objective seeks to maximize returns is highly variable but usually falls in the range of between three to eight years. The time span cannot be precise because both the separate investment markets and the economy experience independent fluctuations in price and performance. Economic cycles usually range between three to six years, stock market cycles from two to four years, interest rate cycles from three to seven years, exchange rate cycles from four to eight years, and real estate cycles from four to ten years. Investment risks are related to the entire portfolio of a fund's investments rather than to the classes of investments which are components of the portfolio. All investments bear some degree of risk and the risks vary not only with the class of an investment and the stage of its related cycle but with the alternative investments within each class. Investments having higher expected future returns usually contain a greater risk of disappointment (lower returns) than those expected to have lower future

returns. The reasonableness of risk for a fund's investment portfolio is a judgment concerning the greater probability of achieving the expected higher future returns than the probability of realizing lower than average future returns.

Because investment markets are constantly fluctuating, the ratio of probable rewards (higher returns) to probable risks (lower returns) for an investment, or class of investments, or a fund is also constantly changing. In order to achieve the primary objective of the retirement funds, the funds' investments need to be continuously reallocated between classes of investments and among individual investments. The reallocating requires continuous reevaluations of the probable levels of future markets as compared to the levels of current markets. Consequently, the investment policy is the result of a dynamic and continuing evaluation process, rather than a static allocation of assets which ignores the changing markets and focuses on the past rather than the future.

The general investment policy of the two major retirement funds consists of ranges of allocations by investment classes. The ranges provide the flexibility needed to continually adapt the allocations to changing markets and expectations. The current range for equity investments runs from a low of 25 percent of the funds to a high of 50 percent, and the current level is about 40 percent. The longer term strategy of holding substantial percentages in equities reflects the probability that equities will continue to earn the highest relative returns on a long term basis, a condition which has been true for longer term periods in the past. Large public pension funds were recently holding about 44 percent in equities and corporate pension funds were holding about 60 percent in equities (the higher returns which corporate pension funds have historically earned have been basically due to their higher percentages of equities). Within the equity area, common stock investments may range from 21 percent to 46 percent of the funds (domestic commons at 17 percent to 42 percent and international commons at 4 percent to 10 percent). All common stock investments are being managed under discretionary contracts by external managers who were

competitively selected primarily on the basis of their investment performance. In order to limit the residual risk exposure of the retirement funds, the contracts require adequate diversification of holdings and prevent substantial investments in smaller, less seasoned business corporations.

Real estate equities may range from 4 percent to 10 percent of the fund but the variance is less susceptible to short-term changes because of the long lead time needed to increase real estate equity investments and to realize the returns on those investments. Real estate equities are also managed by external managers. Although gold bullion investments are statutorily permissible, they are rarely, if ever, considered as reasonable investments by professional managers. The supply and demand factors which determine the price of gold are highly variable, essentially speculative, and are not usually susceptible to reasonable analysis or reliable forecasting. Consequently, the market risks are too great for gold to be considered as a component of the current policy.

The current range for fixed amount investments runs from a low of 50 percent of the funds to a high of 75 percent and is the complement of the equity investment range. The percent currently held in fixed amount investments is about 60 percent. The higher income yields available from fixed investments has given greater stability and certainty to the portfolios' annual returns and has helped avoid unnecessary volatility in the annual contribution rates. The current income yield of 10.10 percent on the fixed portion of the two major funds helps assure that even if the equity percentage is maximized the overall portfolio income yields will still meet the actuarial assumption for those funds of 9 percent per annum. The heavier reliance on fixed investments also reduces the overall return risks of the investment portfolios because the credit risks are substantially less than the residual risks of the equities. Within the fixed amount area, mortgage investments may range from a low of 2 percent of the funds to a high of 10 percent. Although the mortgage holdings usually are the highest income yielding segment of the fixed investments, they are essentially unmarketable and thereby limit the ability to reallocate the

portfolio holdings toward maximizing future returns. The current amount of 8 percent in mortgages is expected to decline toward the lower end of its range over the next several years. The remainder of the fixed amount area consists of fixed income securities which usually range from a low of 40 percent of the funds to a high of 73 percent. The securities include U.S. Treasury bonds, foreign government bonds, corporate bonds, and short-term money market issues. Bond investment management is aimed at maximizing income yields over interest rate cycles by lengthening maturities at high interest rate peaks and shortening them at low interest rate troughs. Because the corporate bonds and money market issues may entail significant credit risks, they are diversified to reduce the risk of default by any single issuer. The high marketability of the bonds facilitates limiting market risks by changing either the selections or the maturities. Alternatively, the market risks can be offset by hedging the holdings through the financial futures markets.

G. Public School (Endowment Trust) Fund

The Public School Fund is an endowment trust fund, separately accounted and invested.

1. Nature

The principal of endowment trust funds, including all subsequent principal contributions and principal gains, is retained in perpetuity in the funds, but the earned income is used for the purposes for which the trusts were established. The total retention of principal is a firmly established requirement of fiduciary law aimed at assuring perpetual income benefits by preventing diminution of the corpus of the trust. Additional principal contributions to the Public School Fund are made from State mineral revenues as compensation for land grant properties expropriated by the State. The total amount of compensation has not as yet been determined, but it will be a limited amount and at some future date additional contributions will cease. Income from the Public School Fund is used only for financing public education programs. Income earned on the principal of the fund is set aside in

income subaccounts and reinvested pending appropriation by the legislature and subsequent expenditure. In conformance with fiduciary principles, the distinction between principal and income is strictly maintained through accrual accounting with amortization of bond premiums and discounts on a constant yield-to-maturity basis in order to prevent unwarranted conversions of principal to income or income to principal.

2. Policy

The most important characteristic of the fund for investment policy purposes is its perpetual nature and the restriction that its principal can never be expended. As in the case of the retirement funds, this expands the universe of investment possibilities and increases the potential for achieving higher returns on the investments over the long run. The primary objective of investment policy should be to continuously increase the principal of the fund without severely reducing the current income flow available for the purposes of the trust. It is the typical objective of other endowment funds in the nation. The larger corpus over time leads to larger income flows, which in turn permit increased support of the activities for which the endowment was established. If the corpus were not to grow after the original contributions cease, the annual dollar income flows would be limited to the prevailing range of interest rates and would not be able to assist in financing any expansion of the activities or any increasing costs of the activities. The need for continuing growth of the principal of the fund in order to increase the available income is evident from the fact that the current income from the Public School Fund constitutes only about 1 percent of the total annual appropriations for public school programs.

Although the Public School Fund can invest as broadly as the retirement funds, until recent years it has been too small to effectively use the equity markets at reasonable transaction costs and the Commissioner of Revenue did not have the necessary discretionary authority. With the delegation of the authority from the Public School Fund Advisory board, required by

AS 37.14.170(a) and granted in September 1986 (see Appendix B), domestic common stock investments were initiated for the fund. Currently, the fund holds about 30 percent of its assets in common stocks and the remainder in straight corporate or federal government debt issues. The percentage held in equities will rise toward the retirement fund levels as opportunities develop in the equity markets. The corporate debt is diversified to reduce the exposure to credit risks and the debt maturities are structured to maximize interest income over interest rate cycles. Liquidity and market risks are not important elements of the policy, except to the extent necessary to preserve the ability to reallocate the investments within the funds. The fund's investment policy has been to maximize the realized return on the investments over a 10 to 20 year time span. Reduction of the perpetual life of the fund to a shorter time horizon is a practical necessity of the investment decision process.

Under the discretionary authority delegated to the Commissioner, the investment policy will shift to a predominant reliance upon equity issues. Educational endowment funds in the nation typically hold about two-thirds of their assets in equities. Because of the 50 percent statutory limitation on corporate obligations the policy range for equities is 30 percent to 50 percent. The equities currently are confined to domestic common stocks, through the consolidated investment pool which also includes the retirement funds' domestic common stock investments. When the fund grows larger, or when suitable pooled accounts are established by the Treasury Division, it may include real estate or international equities in its portfolio. This policy seeks to maximize the future income of the fund by increasing the principal of the trust. The greater potential exposure to residual risks is ameliorated through adequate diversification.

H. University of Alaska (Endowment Trust) Fund

This is a land grant endowment trust created by Acts of Congress dated January 21, 1929 and February 28, 1891 and amended by subsequent Acts dated September 19, 1966 and March 4, 1915 in which lands were

donated to the University of Alaska (as beneficiary) for the support of the Agricultural College and the School of Mines. The trust fund holds revenues from the use of the granted lands, proceeds from the sale of those lands, and any monetary gifts, bequests, or endowments made to the University of Alaska for the same purposes as the land grant.

1. Nature

The trust is a typical university endowment fund and has the same perpetual preservation of principal nature as the Public School Fund. The principal contributions to the trust are erratic in timing and amount, and they do not flow from legislated appropriations. Income is used by the University for the Agricultural College and the School of Mines. As in the case of the other endowment trusts, the distinction between principal and income is strictly maintained through appropriate accounting procedures.

2. Policy

The investment policy for this fund should be the same as the policy for the other endowment trust fund (IV.G.2) and for the same reasons. Unfortunately, such a policy would not be legal. Although the nature and purpose of the trust fund would most appropriately be served through equity investments, AS 14.40.400(b) restricts the fund's investments to interest-bearing securities. Opinion No. 13 (1963) of the Attorney General says "The prudent man rule is the proper rule for guiding the Commissioner of Revenue in the investment of the University's fund" and "In investing the endowment funds of the University of Alaska, the Commissioner of Revenue can obtain some guidance through observing the type of investments made throughout the United States by those responsible for the investment of university endowment funds." Since the time of that opinion, the prudent man rule has been upgraded to the prudent institutional investor rule through subsequent statutes affecting almost all funds. Because the nature or purpose of the trust, the prudent institutional investor rule, and the investment allocations of other university endowment funds are in conflict with the statutory limitation, it is strongly recommended that AS 14.40.400(b)

be repealed in favor of a new requirement limiting investments to the prudent institutional investor rule.

Within the constraints imposed by the interest-bearing statutory limitation, the fund's investment policy has been to maximize the income flow from the investments over one or more interest rate cycles. The fund now holds all of its assets in straight corporate or federal government debt issues.

If the interest-bearing limitation was removed, the new investment policy would move in the direction of heavier reliance on equity investments--as in the other endowment trust--in order to maximize the future income of the fund by increasing the principal of the trust.

VII. ADMINISTRATION OF INVESTMENT POLICY

As noted under the nature of investment policies (V, preceding), the strategic policies are comprehensive derived evaluations of all of the significant factors which may affect investment prices and yields over some future time period. Many of the factors involved have been specified in the foregoing presentation. The development and execution of dynamic investment policies aimed at achieving the investment objectives in a constantly changing marketplace requires continuing re-evaluations by the professional investment analysts and managers who are investment officers in the Treasury Division.

A. Development

Development of suitable investment policies for the various funds is primarily the ongoing responsibility of the professional staff of the Treasury Division. It requires review of large amounts of complex data concerning probable cash inflows and outflows from the funds, actuarial extensions, domestic and international economic developments and financial flows, industry and company financial studies, financial market pricings, and statutory, regulatory and tax law changes. The staff collects, organizes, analyzes, and evaluates the data in order to forecast the probable future movements of investment prices. The forecasts are revised as necessary and are the keystone underlying the formulation of investment policy for the retirement and endowment trust funds. They can also be a factor in the policies for the other shorter-term funds.

B. Execution

The authority to invest the State Mortgage Insurance Fund was delegated to the National Bank of Alaska by a Custody and Investment Agreement dated July 30, 1976. The authority to invest all other funds has been delegated to the investment officers of the Treasury Division of the Department of Revenue by the written delegations contained in Appendices K and L. The exceptions to the general authorization to the Treasury Division are the delegations of authority by contract to independent investment management firms of specific amounts for investment in domestic and international common stocks. The current contracts were initiated in the 1984 fiscal year through the competitive procedures required for State professional service contracts.

1. Equities

The amounts placed with the common stock management firms and the timing of those placements are determined by the applicable investment policies which look to both the probable long- and short-term benefits to the funds. The amounts so placed with the management firms are invested at their discretion but within the limitations imposed by the contracts. The amounts invested in real estate equity pools and the timing of those investments are also determined by the applicable investment policies. The selection of the particular real estate equity pools is made by the Real Estate Management Section of the Treasury Division.

2. Fixed Amount Obligations (Non-Equities)

All fixed amount investments are selected, executed, and managed by the Treasury Division in conformance with the appropriate investment policies and under established operating standards and procedures. Real estate mortgages are the responsibility of the Real Estate Management Section and all securities are the responsibility of the Portfolio Management Section. The only exceptions to these responsibilities are:

- a. unexpected daily cash surpluses which may arise at the master custodian bank and which are invested by it for an overnight period under the terms of our contract with the bank;

- b. privately-placed and unmarketable Alaska securities previously acquired under former State loan programs which are being held in the General Investment Fund until they mature.

C. Operating Standards and Policies

The Treasury Division has established a number of policies and standards relating to the selection and execution of investment purchases and sales.

1. Pricing

Transaction methods are aimed at achieving the highest sale prices and lowest purchase prices, or the prevailing rates for non-priced securities.

- a. All U.S. Treasury and federal agency issue transactions are executed in the national markets using competitive auction procedures with large U.S. primary dealers.
- b. Corporate debt issue transactions are also executed in the national markets using competitive auction procedures with large, well-established broker-dealers, except when the procedure is impractical because the secondary market debt issue being purchased is only available from one dealer.
- c. Common stock transactions are executed in national stock exchange auction markets or over-the-counter markets by the external contracted managers. The trades may alternatively be executed at the discretion of the managers in the block trade market when size of the transaction, greater speed of execution, better prices, or lower commission costs are relevant factors.
- d. Other investments such as repurchase agreements, commercial paper, marketable bank paper, futures, foreign exchange, mortgages, and security lending arrangements are executed at prevalent national (or international) rates or prices through either limited auction or negotiation procedures.
- e. Foreign investments utilize a combination of the aforementioned procedures depending

upon the structure of the foreign market, the size of the transaction, and the limitation on trading because of time zone differences.

2. Deliveries

In order to prevent the risk in settling trades of releasing investments or cash without receiving the offsetting cash or investments, all investment transactions are limited to delivery against simultaneous payment. No payments are made nor investments delivered against "due bills" (I.O.U.'s).

3. Credit Standards

a. Securities

The potential credit risks on all debt securities are determined by the Portfolio Management Section through financial analysis of the issuer. The standards of selection for acceptable credits are more demanding than those required by the relevant statutes and are primarily professional judgments concerning the probable ability of the issuer to avoid defaulting on the obligation. Regular financial reports are required of all issuers in whose obligations we invest. The credit standards are formulated, monitored, and revised as necessary by the analysts in the Portfolio Management Section.

b. Mortgages

In addition to statutory and regulatory requirements, all real estate mortgage loans must meet the standards contained in Appendix M. These standards are developed and revised by the Real Estate Management Section.

4. Underlying Agreements

Certain transactions are limited to and by the terms of underlying and binding agreements entered into between the Treasury Division and other parties.

a. Repurchase Agreements

Repurchase Agreements (Repo's) are only transacted with non-bank primary dealers who have signed our repurchase agreement, which protects each party's right to the collateral in the event the other party defaults or goes bankrupt. The agreement limits acceptable collateral to U.S. Treasury obligations and requires a 102 percent ratio of the collateral's market value to the loan amount. The agreements are revised as necessary by the Portfolio Management Section.

b. Lending Agreements

Lending agreements similar in protective provisions to the repurchase agreements but covering the lending of owned debt securities against acceptable collateral and at the prevailing percentage rate and margin may be entered into with broker-dealers. The agreements are developed and revised by the Portfolio Management Section.

c. Master Demand Note Agreements

Lending agreements with major, prime-rated, non-bank, commercial paper issuers covering day-to-day loans of variable amounts of money to the corporate issuer and evidenced by annotation to master notes held by our custodian bank. Rates on the notes may vary daily in response to market rates. The agreements are developed and revised by the Portfolio Management Section.

d. Mortgages

Mortgage loan sales and servicing agreements are required of all sellers from whom the Treasury Division purchases mortgages. The agreements are revised as necessary by the Real Estate Management Section.

e. Real Estate Equities

All investments in real estate equity pools require underlying negotiated agreements between the Treasury Division and the seller or manager of the properties. These agree-

ments are developed by the Real Estate Management Section and reviewed by the Attorney General.

5. Consolidated Investment Pools

The Treasury Division may establish pools for investment in particular types of assets by the various funds under management by the Division. The purpose of consolidated investment pools is to simplify administration, reduce costs, and provide a vehicle for diversified investment in these types of assets by smaller funds. Without such pools, small funds would be unable to invest in certain types of investments and would not be adequately diversified.

Currently, the Treasury Division maintains a domestic common stock consolidated investment pool. All domestic common stock holdings of the pension and endowment trust funds are represented by shares in this pool.

Each share is entitled to an equal portion of the pool's principal, realized gains or losses, and income. The pool shares, and therefore each fund's total holdings, are valued at the market value of the pool's principal at the end of each month. Contributions to, or withdrawals from, the pool (i.e., purchases or sales of pool shares) by a fund may be made at the end of each month at the pool shares' market value. Realized gains or losses are accounted for as a change in the book value of each fund's shares but are not distributed in cash. Income received is distributed in cash each month, first, to accrued income allocated to any withdrawal, and second, in proportion to each fund's remaining accrued income.

VIII. ACCOUNTABILITY

A. Audits of Accounts

An annual financial audit is conducted each fiscal year by an independent Certified Public Accounting firm for the General and Segregated Funds, the Public Employees Retirement Fund, and the Teachers Retirement Fund. The scope of the audit includes a review of internal controls and of securities custody and safekeeping practices and procedures.

B. Safekeeping of Assets

Marketable securities are held by custodial banks under contracts with the Treasury Division. A small amount of securities or cash may be held from time to time at a futures broker under the requirements and supervision of the exchange on which the futures are traded. Cash held at clearing or custodial banks is kept at minimal operating levels. Non-marketable securities, mortgages, and unmarketable privately-placed loans are held in a vault in the Treasury Division.

C. Reporting

1. Investment Status and Activity

The Comptroller of the Treasury Division prepares separate monthly financial reports for the General Investment Fund, Public Employees Retirement Fund, Teachers Retirement Fund, Public School Fund, and University of Alaska Fund. The reports consist of asset statements, income statements on the accrual basis of accounting, and sources and uses statements.

2. Performance Reviews

Under contract with the Treasury Division independent organizations perform comparative investment performance reviews of the Public Employees Retirement Fund, the Teachers Retirement Fund, and the Public School Fund. The reviews currently cover the portions of each fund which are managed by outside firms under contracts with the Treasury Division and the portions of each fund which are managed by the Treasury Division, excepting mortgage holdings. The reviews compare the investment performance against market indices and funds of a similar nature or against other managers.

APPENDIX A

State of Alaska
Memorandum of Understanding
between
Department of Revenue
and
Department of Administration

WHEREAS, Attorney General's opinions, file nos. 366-103-85 and 366-171-85, authorize the crediting of investment income to trust funds or accounts managed by the State, the fish and game fund, and the power development revolving loan fund (hereinafter, "Funds"); and

WHEREAS, these Funds are commingled for investment purposes with the State general fund and other funds in the General Investment Fund; and

WHEREAS, the Department of Revenue and the Department of Administration desire to formalize their agreement as to

- a. their respective responsibilities for crediting investment income of the General Investment Fund to these Funds; and
- b. the valuation of assets of these Funds in the event of their transfer from the General Investment Fund;

NOW, THEREFORE, BE IT RESOLVED BY the Department of Revenue and the Department of Administration that:

1. The Department of Revenue, Treasury Division will determine monthly the figures for:
 - (a) the book value at the end of the month of the marketable securities portfolio of the General Investment Fund; and
 - (b) the income during the month on the marketable securities portfolio of the General Investment Fund, including realized and accrued income, amortization of premiums, and accretion of discounts but excluding unrealized gains or losses attributable to changes in market values of securities.
2. The Department of Revenue, Treasury Division will calculate the amount of monthly investment income to be

credited to each Fund and the end of month balance for each Fund by:

- (a) calculating the pro rata share of each Fund by dividing
 - (i) the preliminary balance of the Fund at the end of the month by
 - (ii) the General Investment Fund balance for that month as reported under 1.(a) of this agreement less the income during the month on the General Investment Fund as reported under 1.(b) of this agreement;

the preliminary balance shall be the balance as of the end of the month as recorded on the State's automated accounting system (AKSAS) on the tenth business day following the end of the month, excluding the credit calculated in this agreement;

- (b) calculating the credit to each Fund for the month by multiplying each Fund's pro rata share as calculated in 2.(a) of this agreement by the General Investment Fund marketable securities portfolio income as reported under 1.(b) of this agreement; and
- (c) calculating the balance of each Fund at the end of each month by adding the credit calculated in 2.(b) of this agreement to the preliminary balance at end of the month.

The Department of Revenue, Treasury Division will provide documentation showing the amounts and calculations determined under 1 and 2 of this agreement to agencies desiring to verify the calculations as listed in Attachment A.

- 3. The Department of Administration, Division of Finance at the end of each fiscal year will record in the State's annual financial report, AKSAS, and any other books or accounts of record:
 - (a) the total investment income credited to each Fund (and debited to the general fund), which shall be the total of the credits calculated for each month during the fiscal year; and
 - (b) the balance of each Fund at the end of the fiscal year.

4. The Department of Administration, Division of Finance may delegate its responsibilities under this agreement to a State agency. The Division of Finance may record, or permit a delegated agency to record, credits, debits, and balances at a more frequent interval than annually.
5. In the event any assets of any Fund are transferred from the general fund to another State fund or in liquidation or partial liquidation of the Fund, the amount of cash transferred shall be the market value of the assets. The market value of the assets transferred shall be determined by multiplying the market value of the marketable securities portfolio of the General Investment Fund by the ratio of the Fund balance or portion of Fund balance being transferred, to the General Investment Fund balance as reported under 1.(a) of this agreement. Balances used in this calculation shall be as of the end of the month in which the transfer is made and shall include all credits to the Funds due under this agreement as of the date of transfer.
6. The funds listed on Attachment A are subject to this agreement. Other funds may become subject to this agreement upon the approval of the Attorney General. Funds which are clearly trust funds or clearly contain a statutory dedication of investment income will become subject to this agreement automatically.

This agreement takes effect July 1, 1986.

Department of Administration
Eleanor L. Andrews, Commissioner

Department of Revenue
Mary A. Nordale, Commissioner

 /s/ Eleanor Andrews
(Signature)

 /s/ Mary A. Nordale
(Signature)

 July 30, 1986
(Date)

 August 8, 1986
(Date)

Attachment A

Funds and Accounts With Dedicated Earnings
Revised as of January 29, 1988

<u>Fund or Account</u>	<u>Statutory Citation</u>	<u>Agency Verifying Credit Calculation</u>	<u>Frequency of Verification</u>	<u>Agency Responsible for AKSAS Entry</u>	<u>Frequency of Recordation</u>
Student Loan Fund	AS 14.42.210	Alaska Student Loan Corp.	Annually	Administration (Finance)	Annually
Alaska Clean Water Fund (exclusive of non-matching funds)(effective July 1, 1987)	AS 46.03.032	Administration (Finance)	Annually	Administration (Finance)	Annually
Fish and Game Fund	AS 16.05.110	Administration (Finance)	Annually	Administration (Finance)	Annually
Power Development Revolving Loan Fund	AS 44.33.600	Administration (Finance)	Annually	Administration (Finance)	Annually
Mental Health Trust Income Account	Ch. 132 SLA 1986 and AS 37.14.011(a)	Administration (Finance)	Annually	Administration (Finance)	Annually
Permanent Fund Dividend Trust Accounts	AS 43.23.105(e)	Revenue (Fiscal)	Quarterly	Administration (Finance)	Annually
Miscellaneous Trust Account (Department of Law)		Revenue (Fiscal)	Monthly	Administration (Finance)	Annually
Unlicensed Vessel Personnel Annuity Retirement Fund		Administration (Retirement & Benefits)	Semi-annually	Administration (Finance)	Annually
Warner Trust Fund		Community & Regional Affairs	Quarterly	Administration (Finance)	Annually
Exxon Trust Fund		Community & Regional Affairs	Quarterly	Administration (Finance)	Annually
Railbelt Energy Fund ^{1/}	AS 37.05.153	Administration (Finance)	Annually	Administration (Finance)	Annually
Budget Reserve Fund ^{1/}	AS 37.05.156(d)	Administration (Finance)	Annually	Administration (Finance)	Annually

^{1/} Income is only to be calculated (step 2.(c) of the agreement is to be omitted) unless the legislature appropriates the income to the fund, in which case it will be credited. As a result interest will be compounded annually at best.

APPENDIX B

Public School Fund Advisory Board
Resolution No. _____

Providing for the Authorization of the
Commissioner of Revenue to Invest
the Public School Fund in the Manner
Specified in AS 39.35.110.

WHEREAS, AS 37.14.170 authorizes the Commissioner of Revenue, with the approval of the Public School Fund Advisory Board, to invest the principal of the Public School Fund in the manner specified in AS 39.35.110 for the Public Employees Retirement Fund;

WHEREAS, the Department of Revenue has provided to the Board of Education its General Investment Policies dated January 1986 which sets forth the authority, objectives, and investment policies for each fund which is invested by the Commissioner of Revenue;

NOW, THEREFORE, BE IT RESOLVED that the Public School Fund Advisory Board hereby concurs with the objectives and investment policies proposed for the Public School Fund by the Department of Revenue in its General Investment Policies; and

BE IT FURTHER RESOLVED that the Public School Fund Advisory Board hereby authorizes the Commissioner of Revenue to invest the Public School Fund in the manner specified in AS 39.35.110.

BY: /s/ Ernestine Griffin
Chairman, Public School Fund
Advisory Board
DATE: September 26, 1986

ATTEST:

/s/ Marshall L. Lind
Commissioner, Department of Education

APPENDIX D

The General Investment Fund Permissible Investment Instruments (AS 37.10.070)

Investments limited to:

1. obligations of, or obligations insured or guaranteed by, the United States or agencies or instrumentalities of the United States;
2. obligations secured by reserves paid in by the United States or agencies or instrumentalities of the United States or obligations of corporations in which the United States is a shareholder or member;
3. certificates of deposit issued by United States domestic banks which are members of the Federal Deposit Insurance Corporation for which a generally recognized secondary market exists or which are secured fully at all times as to the payment of principal and interest in accordance with Alaska law;
4. corporate debt securities with a minimum rating of "BAA" or the equivalent by a nationally recognized rating organization and the preferred and common stocks of companies which have paid dividends continuously for the last three years;
5. commercial paper bearing the highest rating of a nationally recognized rating organization;
6. securities of foreign governments, foreign governmental agencies, and foreign corporations the principal, interest, or dividends of which are payable in either United States dollars or foreign currencies;
7. bankers acceptances drawn on and accepted by banks with a combined capital and surplus aggregating at least \$200,000,000;
8. shares of federally chartered savings and loan associations in Alaska which are fully secured at all times as to the payment of principal and interest in accordance with Alaska law;
9. savings certificates issued by state-chartered savings and loan associations in Alaska which are fully secured at all times as to the payment of principal

and interest in accordance with Alaska law;

10. deposits with mutual savings banks in Alaska which are fully secured at all times as to the payment of principal and interest in accordance with Alaska law;
11. fixed-term certificates of indebtedness of federally insured credit unions in Alaska which are fully secured at all times to the payment of principal and interest in accordance with Alaska law;
12. foreign time deposits of both United States-owned and foreign-owned banks and trust companies denominated in either United States dollars or foreign currencies;
13. mortgages of the Alaska Rural Rehabilitation Corporation which secure agricultural loans, agricultural business loans, and agricultural processing loans;
14. futures contracts for the sale of investments only for the purpose of hedging an existing equivalent ownership position in investments of the types described above.

APPENDIX E

AHFC Pledged Fund Permissible Investment Instruments (Section 508 of AHFC General Housing Mortgage Bond Resolution)

Investments limited to:

1. direct obligations of or obligations guaranteed by the United States of America;
2. deposits in interest-bearing time deposits or certificates of deposit secured by obligations of, or unconditionally guaranteed by, the United States of America or by obligations described in 1 or 3 hereof;
3. bonds, debentures, notes, or participation certificates issued by any of the following Federal agencies: Bank for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Banks System, Federal Land Banks, Export-Import Bank, Tennessee Valley Authority, Government National Mortgage Association, and Farmers Home Administration;
4. Public Housing Bonds issued by Public Housing Authorities and fully secured as to the payment of both principal and interest by a pledge of annual contributions under an annual contribution contract or contracts with the United States of America, or Temporary Notes issued by Public Housing Authorities or Preliminary Loan Notes issued by Local Public Agencies, in each case, fully secured as to the payment of both principal and interest by a requisition or payment agreement with the United States of America;
5. direct and general obligations of or obligations guaranteed by the State to the payment of the principal of and interest on which the full faith and credit of the State is pledged;
6. deposits in interest-bearing time deposit or certificates of deposit secured by obligations of or guaranteed by the State;
7. bankers acceptances drawn on and accepted by banks with a combined capital and surplus of at least \$200,000,000;

8. corporate obligations of prime or equivalent quality as rated by a nationally recognized rating agency; and
9. bank certificates of deposit which are secured as to payment of principal and interest in accordance with Alaska law.

APPENDIX F

International Airports Funds Permissible Investment Instruments (State Bond Committee Resolution No. 68-4)

Instruments for the Construction Fund, the Revenue Trust Fund, and the Repair and Replacement Reserve Account are limited to:

1. time or demand deposits in any bank or trust company authorized to accept deposits of public funds and secured at all times by such obligations as are required by law and to the fullest extent required by law;
2. direct obligations of the United States of America, obligations the principal of and interest on which are guaranteed by the United States of America;
3. obligations issued by federal land banks or federal intermediate credit banks established under the Federal Farm Loan Act, as amended;
4. bonds or debentures of the Federal Home Loan Bank Board or of any federal home loan bank established under the Federal Home Loan Bank Act;
5. obligations of the Federal National Mortgage Association established under the National Housing Act, as amended; and
6. debentures and consolidated debentures issued by the Central Bank for Cooperatives or banks for cooperatives established under the Farm Credit Act of 1933, as amended.

APPENDIX G

State Mortgage Insurance Fund Permissible Investment Instruments (AS 18.56.095(b) and AS 37.10.070(a))

Although the permissible instruments include all of those specified for the General Fund (Appendix E), the Mortgage Insurance Agreement dated December 6, 1975 between the State and AHFC has further limited investments to:

1. direct obligations of, or obligations insured or guaranteed by, the United States of America or agencies or instrumentalities of the United States;
2. bankers acceptances drawn on and accepted by banks and certificates of deposit of banks, with a combined capital and surplus aggregating at least \$200,000,000; or
3. interest bearing time deposits or certificates of deposit of a bank or trust company continuously secured and collateralized by obligations of the type described in paragraph 1 or by obligations of the State having a market value at least equal at all times to the amount of such deposit or certificate, to the extent such deposit or certificate is not insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation, or any successors thereto.

APPENDIX H

Public Employees Retirement Fund
Teachers Retirement Fund
Judicial Retirement Fund
Alaska National Guard and Alaska Naval Militia Retirement Fund
Public School Fund
Permissible Investment Instruments
(AS 39.35.110, AS 14.25.180, AS 37.14.170,
AS 22.25.048(c), AS 26.05.228(c))

1. shares of federally chartered savings and loan associations in Alaska, to the extent that the investment is insured by the federal government or by an agency of the federal government;
2. deposits with mutual savings banks in Alaska, to the extent that the investment is insured by the federal government or an agency of the federal government;
3. deposits with state and national banks in Alaska to the extent that the investment is insured by the federal government or an agency of the federal government;
4. the guaranteed portion of Small Business Administration loans;
5. first lien real estate mortgages guaranteed by the federal Veterans Administration;
6. notes secured by mortgages of commercial or residential buildings if the mortgages are insured by a private mortgage insurance corporation which is authorized to do business in Alaska and has combined capital, surplus, and reserves aggregating at least \$20,000,000; however,
 - a. no mortgage insurance is necessary for commercial loans having loan-to-value ratios of less than 50 percent and the minimum coverage of other commercial loans shall be 10 percent for those having a loan-to-value ratio of 50-60 percent and 15 percent for those having a loan-to-value ratio greater than 60 percent but no more than 75 percent, and
 - b. no mortgage insurance is necessary for residential loans having a loan-to-value ratio of less than 70 percent and the minimum coverage of other residential loans shall be 10 percent for those having a

loan-to-value ratio greater than 70 percent but less than 90 percent and 20 percent for those having a loan-to-value ratio of 90 percent;

7. conventional residential mortgages if the originating financial institution retains at least 25 percent of the mortgage for a minimum of two years;
8. notes secured by mortgages of commercial buildings if the originating financial institution retains at least 25 percent of the mortgage until maturity;
9. FHA guaranteed portion of business and industrial loans made under the Rural Development Act of 1972;
10. bankers' acceptances which are eligible for discount at the Federal Reserve Bank and certificates of deposit issued by United States domestic banks which are members of the Federal Deposit Insurance Corporation if a generally recognized secondary market exists for the certificates of deposit;
11. obligations of, or obligations insured by or guaranteed by, the United States or agencies or instrumentalities of the United States;
12. obligations secured by reserves paid in by the United States or agencies or instrumentalities of the United States or obligations of corporations in which the United States is a shareholder or member;
13. corporate debt securities with a minimum rating of "A" or an equivalent rating by a nationally recognized rating organization;
14. preferred and common stock of companies which have paid dividends in each of the three years immediately preceding the investment; Stocks eligible for purchase are restricted to stocks which, except for bank stocks and insurance stocks, are listed upon an exchange registered with the Federal Securities and Exchange Commission;
15. commercial paper bearing the highest rating of a nationally recognized rating organization;
16. securities of foreign governments, foreign governmental agencies, and foreign corporations the principal, interest, or dividends on which are payable in either United States dollars or foreign currencies;

17. foreign time deposits of both United States-owned and foreign-owned banks and trust companies denominated in either United States dollars or foreign currencies;
18. gold bullion certified as to fineness of at least 99 1/2 percent;
19. futures contracts for the sale of investments only for the purpose of hedging an existing equivalent ownership position in investments of the types described above; and
20. a trust which is qualified under Sec. 401(a) of the Internal Revenue Code (26 U.S.C. Sec. 401(a)) and exempt from taxation under Sec. 501(a) of the Internal Revenue Code (26 U.S.C. Sec. 501(a)) and which is maintained as a medium for pooling a portion of the funds of pension and profit-sharing trusts for diversifying investments in real estate and interests in real estate.

APPENDIX I

State of Alaska
Department of Revenue
Treasury Division

Mandatory Agreement For All Treasury Personnel

The Treasury Division of the Department of Revenue is responsible for managing large amounts of investments and cash for either the State of Alaska or the beneficiaries of fiduciary trusts. The responsibility cannot be faithfully discharged if the integrity of the function is impaired through financial conflicts of interests or unnecessary dissemination of privileged information by the personnel of the Treasury Division. I voluntarily agree to adhere to the following behavioral standards as a condition of employment and with the understanding that any violations may constitute grounds both for dismissal and for any other penalties provided by law:

1. I will not engage in, nor recommend or suggest that others engage in, personal investment transactions which have an adverse effect upon the Treasury Division's investment transactions.
2. I may in the course of my employment obtain privileged information concerning recent, contemporaneous or impending Treasury Division investment transactions, or investment advice or counsel furnished to the Treasury Division, or tax payments, but I will not provide that information to others who do not have a functional need or a legal right to know it, nor will I utilize the information as a basis for making personal investments or for recommending or suggesting to other parties that they make investments whose returns are partly or wholly dependent upon similar or contrary investment transactions undertaken or to be undertaken by the Treasury Division. I understand that this restriction does not apply if the information has been disseminated to the public.
3. I will not accept from parties doing business with the Treasury Division any personal gifts or valuable considerations as a reward or inducement for any Treasury business done with them. The occasional unsolicited distribution by financial institutions of token gifts to their substantial customers, and meals or refreshments furnished while business is being transacted, may be accepted, subject to the reporting requirements of AS 39.52.130(b) if the gift or consideration exceeds \$50 and the recipient may take official action that affects the giver.

Acknowledged by:

Signature

Date

APPENDIX J

1

THE CODE OF ETHICS AND THE STANDARDS OF PROFESSIONAL CONDUCT

Adopted by The Federation of Financial Analysts and The Institute of Chartered Financial Analysts. Revised April 29, 1984.

THE FAF RESOLUTION

WHEREAS, the profession of financial analysis and investment management has evolved because of the increasing public need for competent, objective, and trustworthy advice with regard to investments and financial management; and

WHEREAS, those engaged in this profession have joined together in an organization known as The Financial Analysts Federation; and

WHEREAS, despite a wide diversity of interest among analysts employed by brokers and securities dealers, investment advisers, banks, insurance companies, investment companies and trusts, pension trusts, and other institutional investors and investment entities, there are nevertheless certain fundamental standards of conduct which should be common to all engaged in the profession of financial analysis and investment management and accepted and maintained by them; and

WHEREAS, the members of The Financial Analysts Federation adopted a Code of Ethics and Standards on May 20, 1962, which have been amended from time to time; and

WHEREAS, The Financial Analysts Federation provides for individual membership in it, requires that all of its member societies adopt its Code of Ethics and Standards of Professional Conduct, and requires that all individual members comply with them;

THE ICFA RESOLUTION

WHEREAS, the profession of financial analysis and investment management has evolved because of the increasing public need for competent, objective, and trustworthy advice with regard to investments and financial management; and

WHEREAS, The Institute of Chartered Financial Analysts was organized to establish educational standards in the field of financial analysis, to conduct examinations of financial analysts and to award the professional designation of Chartered Financial Analyst, among other objectives; and

WHEREAS, despite a wide diversity of interest among analysts employed by brokers and security dealers, investment advisers, banks, insurance companies, investment companies and trusts, pension trusts, and other institutional investors and investment entities, there are nevertheless certain fundamental standards of conduct which should be common to all engaged in the profession of financial analysis and investment management and accepted and maintained by them; and

WHEREAS, The Institute of Chartered Financial Analysts adopted a Code of Ethics and Standards on March 14, 1964, which have been amended from time to time;

NOW, THEREFORE, The Institute of Chartered Financial Analysts hereby adopts the following Code of Ethics and Standards of Professional Conduct:

NOW, THEREFORE, the following are the Code of Ethics and Standards of Professional Conduct of The Financial Analysts Federation:

Members of The Financial Analysts Federation are obligated to conduct their professional activities in accordance with the following Code of Ethics and Standards of Professional Conduct. Disciplinary sanctions may be imposed for violations of the Code or Standards.

Members of The Institute of Chartered Financial Analysts are obligated to conduct their professional activities in accordance with the following Code of Ethics and Standards of Professional Conduct. Disciplinary sanctions may be imposed for violations of the Code or Standards.

THE CODE OF ETHICS

A financial analyst/Chartered Financial Analyst should conduct himself with integrity and dignity and act in an ethical manner in his dealings with the public, clients, customers, employers, employees, and fellow analysts.

A financial analyst/Chartered Financial Analyst should conduct himself and should encourage others to practice financial analysis in a professional and ethical manner that will reflect credit on himself and his profession.

A financial analyst/Chartered Financial Analyst should act with competence and should strive to maintain and improve his competence and that of others in the profession.

A financial analyst/Chartered Financial Analyst should use proper care and exercise independent professional judgment.

THE STANDARDS OF PROFESSIONAL CONDUCT

I. Obligation to Inform Employer of Code and Standards.

The financial analyst/Chartered Financial Analyst shall inform his employer through his direct supervisor, that he is obligated to comply with the Code of Ethics and Standards of Professional Conduct, and is subject to disciplinary sanctions for violations thereof. He shall deliver a copy of the Code and Standards to his employer if the employer does not have a copy.

*Masculine pronouns, used throughout the Code and Standards, as well as throughout the Handbook, to simplify sentence structure, shall apply to all persons, regardless of sex.

II. Compliance with Governing Laws and Regulations and the Code and Standards.

A. Required Knowledge and Compliance.

The financial analyst/Chartered Financial Analyst shall maintain knowledge of and shall comply with all applicable laws, rules, and regulations of any government, governmental agency, and regulatory organization governing his professional, financial, or business activities, as well as with these Standards of Professional Conduct and the accompanying Code of Ethics.

B. Prohibition Against Assisting Legal and Ethical Violations.

The financial analyst/Chartered Financial Analyst shall not knowingly participate in, or assist, any acts in violation of any applicable law, rule, or regulation of any government, governmental agency, or regulatory organization governing his professional, financial, or business activities, nor any act which would violate any provision of these Standards of Professional Conduct or the accompanying Code of Ethics.

C. Prohibition Against Use of Material Non-Public Information.

The financial analyst/Chartered Financial Analyst shall comply with all laws and regulations relating to the use of material non-public information. (1) If the analyst acquires such information as a result of a special or confidential relationship with the issuer, he shall not communicate the information (other than within the relationship), or take investment action on the basis of such information, if it violates that relationship. (2) If the analyst is not in a special or confidential relationship with the issuer, he shall not communicate or act on material non-public information if he knows or should know that such information was disclosed to him in breach of a duty. If such a breach exists, the analyst shall make reasonable efforts to achieve public dissemination of such information.

D. Responsibilities of Supervisors.

A financial analyst/Chartered Financial Analyst with supervisory responsibility shall exercise reasonable supervision over those subordinate employees subject to his control, to prevent any violation by such persons of applicable statutes, regulations, or provisions of the Code of Ethics or Standards of Professional Conduct. In so doing the financial analyst/Chartered Financial Analyst is entitled to rely upon reasonable procedures established by his employer.

III. Research Reports, Investment Recommendations and Actions.

A. Reasonable Basis and Representations

1. The financial analyst/Chartered Financial Analyst shall exercise diligence and thoroughness in making an investment recommendation to others or in taking an investment action for others.
2. The financial analyst/Chartered Financial Analyst shall have a reasonable and adequate basis for such recommendations and actions, supported by appropriate research and investigation.
3. The financial analyst/Chartered Financial Analyst shall make reasonable and diligent efforts to avoid any material misrepresentation in any research report or investment recommendation.
4. The financial analyst/Chartered Financial Analyst shall maintain appropriate records to support the reasonableness of such recommendations.

B. Research Reports.

1. The financial analyst/Chartered Financial Analyst shall use reasonable judgment as to the inclusion of relevant factors in research reports.
2. The financial analyst/Chartered Financial Analyst shall distinguish between facts and opinion in research reports.
3. The financial analyst/Chartered Financial Analyst shall indicate the basic characteristics of the investment involved when preparing for general public distribution a research report that is not directly related to a specific portfolio or client.

C. Portfolio Investment Recommendations and Actions.

The financial analyst/Chartered Financial Analyst shall, when making an investment recommendation or taking an investment action for a specific portfolio or client, consider its appropriateness and suitability for such portfolio or client. In considering such matters, the financial analyst/Chartered Financial Analyst shall take into account (1) the needs and circumstances of the client, (2) the basic characteristics of the investment involved, and (3) the basic characteristics of the total portfolio. The financial analyst/Chartered Financial Analyst shall use reasonable judgment to determine the applicable relevant factors. The financial analyst/Chartered Financial Analyst shall distinguish between facts and opinion in presentation of investment recommendations.

D. Prohibition Against Plagiarism.

The financial analyst/Chartered Financial Analyst shall not, when presenting material to his employer, associates, customers, clients, or the general public, copy or use in substantially the same form, material prepared by other persons without acknowledging its use and identifying the name of the author or publisher of such material. The analyst may, however, use without acknowledgment factual information published by recognized financial and statistical reporting services or similar sources.

E. Prohibition Against Misrepresentation of Services.

The financial analyst/Chartered Financial Analyst shall not make any statements, orally or in writing, which materially misrepresent (1) the services that the analyst or his firm is capable of performing for the client, (2) the qualifications of such analyst or his firm, (3) the investment performance that the analyst or his firm has accomplished or can reasonably be expected to achieve for the client, or (4) the expected performance of any investment. The financial analyst/Chartered Financial Analyst shall not make any unsupported oral or written statement that assures or guarantees any investment or its return either explicitly or implicitly.

F. Fair Dealing With Customers and Clients.

The financial analyst/Chartered Financial Analyst shall act in a manner consistent with his obligation to deal fairly with all customers and clients when (1) disseminating investment recommendations, (2) disseminating material changes in prior investment advice, and (3) taking investment action.

IV. Priority of Transactions.

The financial analyst/Chartered Financial Analyst shall conduct himself in such a manner that transactions for his customers, clients, and employer have priority over personal transactions, and so that his personal transactions do not operate adversely to their interests. If a financial analyst/Chartered Financial Analyst decides to make a recommendation about the purchase or sale of a security, he shall give his customers, clients, and employer adequate opportunity to act on this recommendation before acting on his own behalf.

V. Disclosure of Conflicts.

The financial analyst/Chartered Financial Analyst, when making investment recommendations, or taking investment actions, shall disclose

to his customers and clients any material conflict of interest relating to him and any material beneficial ownership of the securities involved which could reasonably be expected to impair his ability to render unbiased and objective advice.

The financial analyst/Chartered Financial Analyst shall disclose to his employer all matters which could reasonably be expected to interfere with his duty to the employer, or with his ability to render unbiased and objective advice.

The financial analyst/Chartered Financial Analyst shall also comply with all requirements as to disclosure of conflicts of interest imposed by law and by rules and regulations of organizations governing his activities and shall comply with any prohibitions on his activities if a conflict of interest exists.

VI. Compensation.

A. Disclosure of Additional Compensation Arrangements.

The financial analyst shall inform his customers, clients, and employer of compensation arrangements in connection with his services to them which are in addition to compensation from them for such services.

B. Disclosure of Referral Fees.

The financial analyst shall make appropriate disclosure to a prospective client or customer of any consideration paid to others for recommending his services to that prospective client or customer.

C. Duty to Employer.

The financial analyst shall not undertake independent practice for compensation in competition with his employer unless he has received written consent from both his employer and the person for whom he undertakes independent employment.

VII. Relationships with Others.

A. Preservation of Confidentiality.

A financial analyst shall preserve the confidentiality of information communicated by the client concerning matters within the scope of the confidential relationship, unless the financial analyst receives information concerning illegal activities on the part of the client.

B. Maintenance of Independence and Objectivity.

The financial analyst, in relationships and contacts with an issuer of securities, whether individually or as a member of a group, shall use particular care and good judgment to achieve and maintain independence and objectivity.

C. Fiduciary Duties.

The financial analyst, in relationships with clients, shall use particular care in determining applicable fiduciary duty and shall comply with such duty as to those persons and interests to whom it is owed.

VIII. Use of Professional Designation.

FAF

The qualified financial analyst may use the professional designation "Fellow of The Financial Analysts Federation," and is encouraged to do so, but only in a dignified and judicious manner. The use of the designation may be accompanied by an accurate explanation (1) of the requirements that have been met to obtain the designation and (2) of The Financial Analysts Federation.

ICFA

The Chartered Financial Analyst may use the professional designation Chartered Financial Analyst, or the abbreviation CFA, and is encouraged to do so, but only in a dignified and judicious manner. The use of the designation may be accompanied by an accurate explanation (1) of the requirements that have been met to obtain the designation and (2) of The Institute of Chartered Financial Analysts.

IX. Professional Misconduct.

The financial analyst shall not (1) commit a criminal act that upon conviction materially reflects adversely on his honesty, trustworthiness, or fitness as a financial analyst in other respects or (2) engage in conduct involving dishonesty, fraud, deceit, or misrepresentation.

APPENDIX K

State of Alaska
Department of Revenue
Delegation of Investment Authority

I, Milton B. Barker, Acting Commissioner of Revenue for the State of Alaska, do hereby delegate the authority vested in me by the Alaska Statutes and the Resolutions of various State boards and committees to invest and reinvest the assets of State funds to the state officers whose signatures appear below.

James R. Wilson
State Investment Officer /s/ James R. Wilson

Kenneth L. Shaffer
State Investment Officer /s/ Kenneth L. Shaffer

James A. Corrao
State Investment Officer /s/ James A. Corrao

Steven C. Verschoor
State Investment Officer /s/ Steven C. Verschoor

The officers designated above are authorized to open an account or accounts with one or more firms or banks for the purpose of engaging in transactions to purchase, sell, assign, transfer or otherwise enter into agreements, contracts, commitments or similar arrangements, for cash or forward settlement or future contracts relating to the investment of assets.

The designated officers are authorized to commit, bind, and obligate the State of Alaska for investment transactions, to execute those transactions, and in connection therewith to deliver securities and monies, to sign and deliver agreements, contracts, commitments and confirmations and other necessary, desirable or customary documents. Other parties to the transactions may rely and act upon any verbal or written orders and instructions from the designated officers in connection with such accounts and transactions.

This delegation is effective November 5, 1986 and shall continue in force until amended or revoked in writing by the Commissioner of Revenue.

 /s/ Milton B. Barker
Milton B. Barker
Acting Commissioner of Revenue
November 5, 1986

APPENDIX L

State of Alaska
Department of Revenue
Delegation of Investment Authority

I, Milton B. Barker, Acting Commissioner of Revenue for the State of Alaska, do hereby delegate the authority vested in me by the Alaska Statutes to invest and reinvest the assets of the State of Alaska General and Segregated Funds, the Public Employees Retirement System and Fund, and the Teachers Retirement System and Fund to the state officers whose signatures appear below.

Martin W. Lentz
State Investment Officer

/s/ Martin W. Lentz

OR

Karen Ann L. Carlson
Loan Examiner

/s/ Karen Ann L. Carlson

The officers designated above are authorized to open an account or accounts with one or more firms or banks for the purpose of engaging in loan and mortgage transactions to purchase, sell, convey, assign, transfer or otherwise enter into agreements, contracts, commitments or similar arrangements, for cash or forward settlement or future contracts relating to the investment of the assets of the above funds. The officers designated above are also authorized to convey any and all real property acquired by the State of Alaska as a result of any of the above described transactions.

For all accounts authorized above, the designated officers are authorized to commit, bind and obligate the State of Alaska for conveyances of real property and loan and mortgage transactions, to execute such transactions, and in connection therewith to deliver securities and monies, to sign and deliver agreements, contracts, deeds, commitments, confirmations and other necessary, desirable or customary documents. Other parties to the transactions may rely and act upon any verbal or written orders and instructions from the designated officers in connection with such accounts and transactions.

This delegation is effective October 3, 1986 and shall continue in force until amended or revoked in writing by me or my successor.

/s/ Milton B. Barker
Milton B. Barker
Acting Commissioner of Revenue
October 3, 1986

APPENDIX M

REAL ESTATE MORTGAGES REQUIREMENT & POLICIES

GENERAL INFORMATION

- ** Approved Seller/Serviceers cannot submit new loans when their 60 day delinquency ratio reaches more than 1/2 of 1% of the portfolio.
- ** No refinancings or interest rate reductions of an existing investment by a fund are allowed, except for bankruptcies, sale of properties acquired through foreclosure to a new borrower, or interest rate buydowns.
- ** Discounts for early payoff are not allowed.

COMMERCIAL LOANS

1. In addition to regular commercial real estate loans, anything non-owner occupied and of five or more units, whether owner-occupied or not, is considered a commercial loan.
2. Maximum loan-to-value ratio is 75 percent.
3. Maximum term is 25 years.
4. Loans must be secured by real estate improvements.
5. All loans must have private mortgage insurance down through 50 percent LTV or a minimum bank participation of 25 percent. An original participation certificate is required for each participation loan.
6. Commitments will be for six months with allowance for an additional six months.
7. Commitment fee of 1 percent (for six months) must be submitted with request for approval. Additional commitment of 1/6 of 1 percent for each month extension for a maximum of 2 percent for a total commitment period of one year.
8. No take-out refinances will be purchased except in the case of construction loans.
9. Minimum debt service coverage of 1.25 percent.

10. Banks must certify there is at least 75 percent occupancy prior to our funding.
11. All loans will be purchased at par.
12. After approval, final loan packages must be received by the 10th with disbursement made near the 25th of each month. The purchase date must be verified each month before preparing the delivery schedule.
13. Service charge will be 3/8 of 1 percent on loans under \$100,000; 1/4 of 1 percent on loans \$100,000 to \$299,000; and 1/8 of 1 percent on loans \$300,000 to a maximum of \$1,000,000.
14. All loans purchased will be serviced by seller from one office.
15. Participation in any one loan is a maximum of \$1,000,000.
16. Condo project take-out (AHFC approval):

1 of 3 or 4 units	4 of 9 through 12 units
2 of 5 or 6 units	5 of 13 through 20 units
3 of 7 or 8 units	maximum 10 units in any one project
17. Audited financial statements and tax returns as follows:
 - a. Total loan of \$500,000 to \$1,500,000 - at least one year financial statements and two years tax returns.
 - b. Total loan of \$1,500,000 or more - three years of financial statements and tax returns.

The audited financial statements requirement applies to companies only. The opinion must be unqualified unless it is the first audit or for some other reason no opinion has been rendered on the prior year. In this case the State will accept a qualified opinion. Tax returns will be required in the case of individuals in accordance with the above schedule. If the personal assets of individual owners have been pledged to secure a company loan, the State will further require tax returns of the owners covering the prior three calendar years for both categories above. In special cases, the State will consider a loan without audited financial statements provided the owners are pledging all of their personal assets to secure the loan and that the required tax returns are supplied. Records that reflect the life of the company if less than two years will be considered.

18. The State will not issue or repurchase:
- a. Standby Commitments
 - b. Development Loans
 - c. Construction Loans

DELINQUENCIES AND FORECLOSURES

DELINQUENCIES

Each Seller/Servicer is required to take progressive actions against borrowers that are delinquent one or more payments and provide to the State a monthly written delinquency report. The actions and reports thereon are broken down into the following three categories:

- a. 30 day (1 payment) - These loans are reported to the State. The Seller/Servicer automatically issues late notices to the borrowers on the 16th day and demand notices on the 30th day. On the 45th day they send a notice of intent to foreclose.
- b. 60 day (2 payments) - Details of collection efforts are sent to the State. The Seller/Servicer issues to the borrower a second demand notice. When the loan reaches this level the Seller/Servicer contacts the borrower and if financially possible, a modification of the loan terms is considered and, if not, a "Request for Legal Action" form is sent to the State with the Seller/Servicer's recommendations on foreclosure. If applicable, an Assignment of Rents is put into effect at this time.
- c. 90 days (3 payments) - At this level the Seller/Servicer provides detailed reports and other correspondence. Loans are either on a Seller/Servicer or State approved workout, have a modification in process, have filed bankruptcy, or have a legal action pending. Each report details the activity that the Seller/Servicer is pursuing and if the loan is on an approved workout, the status of the payments on the workout.
- d. over 90 days (4 or more payments) - These loans have had some type of action finalized. Foreclosure has been initiated, bankruptcy has delayed collection, or a modification is in the final stages of approval. The Seller/Servicer has to follow very strict collection policies set down under the Federal Truth

in Lending Laws and the Fair Debt Collection Practices Act (P.L. 95-109) and their guidelines.

Each month Treasury investment staff consult with Seller/ Servicer personnel on resolution of delinquencies.

BANKRUPTCIES

In the collection process the borrowers often file for protection under the United State bankruptcy laws and this stops all direct contact with the borrower. The Seller/Servicer then hires an attorney and proceeds under very rigid guidelines in the continuation of the collection process through the bankruptcy court. The State must evaluate the value of the collateral versus the debt and, when applicable, file for a relief from stay. This process is very time consuming and costly as the bankruptcy court requires a formal appraisal to verify the value in order to consider a relief from stay. The bankruptcy court must evaluate the State's claim to the asset as well as other creditors', secured or otherwise, and determine the best course of action for all parties concerned.

FORECLOSURES

This process may take one of the following three forms:

- a. Deed in Lieu: The borrower offers their property back to the Seller/Servicer willingly without the time delays or the cost of a legal foreclosure. This process is only considered if the borrowers can give a title clear of any other obligations and the value of the collateral plus insurance is at least sufficient to cover the debt. The private mortgage insurance company must concur with this action, and the amount of the claim settlement is considered when evaluating possible loss in this transaction.
- b. Non-Judicial Foreclosure: This is also referred to as a summary foreclosure and allows the State to foreclose on the collateral. This eliminates all other liens following the State's first deed of trust position. This process takes a minimum of 120 days from the Notice of Intent to Foreclose and includes filing for foreclosure and the actual sale. This process is considered when the value of the collateral is at least sufficient to cover the debt but the title is encumbered. Private mortgage insurance on the loan is also taken into consideration and may cover any possible loss to the State.
- c. Judicial Foreclosure: This process allows the State to foreclose on the collateral and on any other

current or future assets that the borrower may have. This process takes one year to foreclose and then has a one year right of redemption for the borrower. A deficiency judgement is issued for any possible loss and filed against the other remaining assets of the borrower. This judgement is valid for 10 years. The costs to do this type of foreclosure are very high, and it is only considered when the loss level is extreme and the chance of recovery on the deficiency judgement exists. Again, private mortgage insurance will in some cases offset some of the losses, but they do not have to pay on the claim until given clear title which does not occur until the end of the second year.

Each loan is reviewed and analyzed for the proper procedure from the first 60 day notice through the delinquency and foreclosure process.

MODIFICATIONS

Each loan that is presented for modification to receive some type of temporary relief will be reviewed on a case by case basis. Each loan presented to the State for modification must have the following information and it is evaluated on the merits of that particular loan:

Two years tax returns on the individuals and the corporate entity, if applicable

Financial statements on all participants

Cashflow analysis for the past year on the subject property

Cashflow projection for at least the next six months to one year

Written analysis from the borrower explaining in detail their financial problems and their request for modification

A letter from the Seller/Service recommending a modification whether it conforms with the borrower's request or not.

These packages are thoroughly analyzed and, if feasible, a modification may be allowed. If the borrowers can subsidize the loan payment from other sources of income, the State will require this. Not every request is approved. Some are rejected and the borrower told to resume regular payments, whereas others are changed to meet a minimum level of modification that the State will allow.

Some modifications call for a permanent rate reduction and if the borrower or the individuals assuming the loan can afford the process, the State will allow the interest rate to be bought down under the following guidelines.

BUYDOWN POLICY

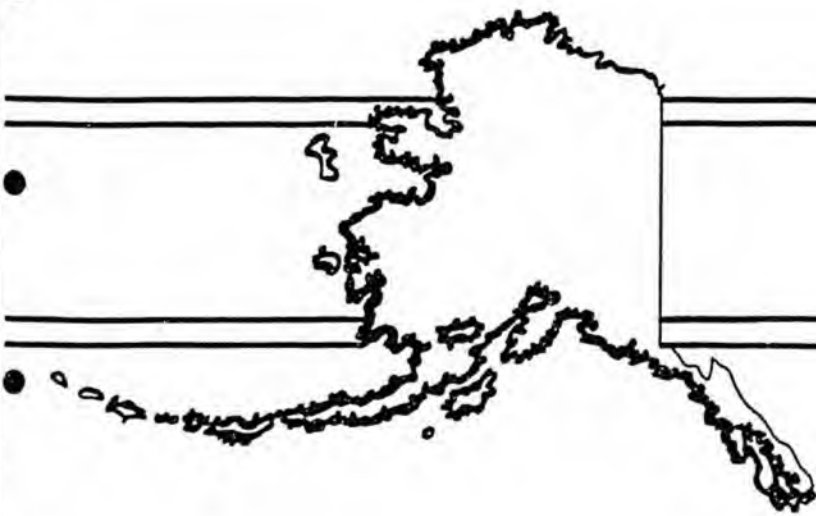
The interest rate on loans can be bought down to the current interest rate or a maximum of two points if the rate is to be bought down below the current market rate for the fund, whichever affords the greatest reduction to the borrower.

1. Cost of buydown to the borrower or assumptor is a percent of the outstanding principal balance per point bought down depending on the age of the loan as follows:
 - a. 4% per point through the first 5 years of the mortgage
 - b. 3.5% per point 6 years through 8 years of the mortgage
 - c. 3% per point 9 years through 11 years of the mortgage
 - d. 2.5% per point 12 years through 14 years of the mortgage
 - e. 2% per point 15 years through 17 years of the mortgage
 - f. 1.5% per point 18 years through 20 years of the mortgage
 - g. 1% per point 21 years to maturity of the mortgage
2. Depending upon the age of the mortgage, equity position, and current market opinion/appraisal, the buydown expenses may be capitalized at the request of the investor under the following conditions:
 - a. no other liens will be in place at the time of capitalization or those lien positions will be subordinate to the modification;
 - b. whenever feasible, the capitalized amount will not take the balance to more than the original loan amount;

- c. whenever feasible, the new balance will be reamortized so that the maturity on the loan will remain the same but in no case more than 25 years for commercial and 30 years for residential;
- d. if reamortization is not economically feasible, a balloon payment will be required at maturity for the remaining unpaid balance.

All of the above processes and procedures are the responsibilities of the Seller/Service and they are addressed in the Sales and Servicing Agreement and Sales and Servicing Agreement Addendum which is signed by each of the Seller/Service that do business with the State.

It is the discretionary responsibility of the investment staff that manages the mortgage loan portfolios to implement these policies. The Sales and Servicing Agreements follow industry standards and specifically address the Alaska Statutes. Updates to the contracts may take place as the industry changes.



PERS AND TRS FINANCIAL PROJECTIONS

FEBRUARY 29, 1988

WILLIAM M.
MERCER-Meidinger-Hansen
INCORPORATED

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WILLIAM M.
MERCER-Meidinger-Hansen
INCORPORATED

February 29, 1988

Mr. James R. Wilson
Statement Investment Officer
State of Alaska
Department of Revenue
Treasury Division
P.O. Box SB
Juneau, AK 99811

Re: PERS and TRS Financial Projections

Dear Jim:

Enclosed you will find projections of financial results for both PERS and TRS for the next 15 years. As with any long-term financial projections, care should be exercised in using these results. Their greatest value lies in determining the sensitivity of contribution rates and funding ratios due to different investment performance and salary increases.

TRS

Table 1 for TRS shows projections based upon the current actuarial assumptions. These projections assume that there will be no actuarial gains or losses in future years. Thus, the funding ratio remains virtually unchanged. Note the decrease in member contribution rate as the number with supplemental contribution decreases.

Table 2 for TRS assumes the overall investment performance of the fund each year will be 10% . . . 1% greater than our 9% actuarial assumption. Greater-than-anticipated investment performance will result in an actuarial gain. These gains will lead to an increasing funding ratio and decreasing employer contribution rate.

Table 3 for TRS assumes actuarial gains from salary increases which are 1% less than our actuarial assumption. A one percent difference in salary increases is not as important as a one percent difference in investment return. Table 4 for TRS assumes both actuarial gains from both investment return and salary increases.

PERS

Unlike TRS, PERS has a small unfunded liability, with a funding ratio of 98.5%. Based upon the current actuarial assumptions, this small unfunded liability will gradually get amortized and the funding ratio will stay very close to 100%, assuming that there are no actuarial gains or losses.

Mr. James R. Wilson
February 29, 1988
Page Two

Table 2 for PERS shows projections assuming an extra 1% investment return each year. The funding ratio for PERS increases 11.2% (from 98.5% to 109.7%) after 15 years.

Tables 3 and 4 for PERS project similar results to the TRS tables. Please note that the financial projections for PERS are less "responsive" to this decrease in projected salary increases than for TRS. This is primarily because benefits to retirees, under the automatic PRPA, will continue to be provided even though benefits to new retirees will be relatively smaller because of the lower salary increase assumption.

Summary

Actuarial gains, primarily from greater-than-anticipated investment performance, as well as the prudent and disciplined funding procedures adopted by both TRS and PERS Boards, have contributed to the excellent funding progress of both plans. Both PERS and TRS are virtually 100% funded. In the ensuing years, employer contribution rates will continue to decrease if the system continues to realize actuarial gains. The two most important sources of actuarial gains are investment performance and salary increases. Actuarial gains and/or losses from other sources are relatively minor when compared to the importance of these two assumptions.

Sincerely,

Robert F. Richardson

Robert F. Richardson, ASA
Principal

RFR:js

Enclosures

State of Alaska PERS- TABLE 1
Financial Projections ('000 omitted)

Year	Investment Return 9.00% (nominal)			Salary Increases 6.04% (6.5/5.5 assumed)							Ending Asset Valuation
	--Valuation Amounts on July 1--			-----Flow Amounts During Flowing 12 Months-----							
	Assets	Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contris	Employee Contris	Total Benefit Contris	Net Investment Contris	Earnings		
1987	1,898,253	1,926,488	(28,235)	891,300	88,927	60,876	149,802	87,347	62,455	181,341	2,142,049
1988	2,142,049	2,164,620	(22,570)	945,135	92,559	64,553	157,112	95,459	61,654	204,234	2,407,937
1989	2,407,937	2,425,131	(17,194)	1,002,221	96,560	68,452	165,012	104,231	60,781	229,202	2,697,920
1990	2,697,920	2,709,914	(11,994)	1,062,755	100,921	72,586	173,507	113,715	59,793	256,430	3,014,142
1991	3,014,142	3,021,014	(6,871)	1,126,945	105,638	76,970	182,608	123,764	58,644	286,119	3,358,905
1992	3,358,905	3,360,639	(1,733)	1,195,013	110,708	81,619	192,328	135,036	57,291	318,483	3,734,680
1993	3,734,680	3,731,175	3,505	1,267,191	116,634	86,549	203,184	146,994	56,189	353,775	4,144,645
1994	4,144,645	4,135,199	9,446	1,343,730	123,144	91,777	214,921	159,904	55,017	392,280	4,591,941
1995	4,591,941	4,575,492	16,449	1,424,891	129,981	97,320	227,301	173,837	53,465	434,278	5,079,684
1996	5,079,684	5,055,060	24,624	1,510,934	137,161	103,198	240,360	188,869	51,490	480,061	5,611,235
1997	5,611,235	5,577,146	34,089	1,602,216	144,701	109,431	254,132	205,084	49,048	529,944	6,190,227
1998	6,190,227	6,145,251	44,977	1,698,990	152,616	116,041	268,657	222,568	46,089	584,265	6,820,582
1999	6,820,582	6,763,155	57,427	1,801,609	160,925	123,050	283,975	241,416	42,559	643,391	7,506,532
2000	7,506,532	7,434,938	71,593	1,910,426	169,646	130,482	300,128	261,728	38,399	707,717	8,252,649
2001	8,252,649	8,165,004	87,644	2,025,816	178,797	138,363	317,160	283,614	33,546	777,671	9,063,866
2002	9,063,866	8,958,105	105,761	2,148,175	188,399	146,720	335,119	307,189	27,930	853,713	9,945,510

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----				---As % of Assets---	
		Employer Contris	Employee Contris	Total Benefit Contris	Net Investment Contris	Earnings	
1987	98.5	9.98%	6.83%	16.81%	9.80%	3.10%	9.00%
1988	99.0	9.79%	6.83%	16.62%	10.10%	2.72%	9.00%
1989	99.3	9.63%	6.83%	16.46%	10.40%	2.39%	9.00%
1990	99.6	9.50%	6.83%	16.33%	10.70%	2.10%	9.00%
1991	99.8	9.37%	6.83%	16.20%	11.00%	1.84%	9.00%
1992	99.9	9.26%	6.83%	16.09%	11.30%	1.62%	9.00%
1993	100.1	9.20%	6.83%	16.03%	11.60%	1.43%	9.00%
1994	100.2	9.16%	6.83%	15.99%	11.90%	1.26%	9.00%
1995	100.4	9.12%	6.83%	15.95%	12.20%	1.11%	9.00%
1996	100.5	9.08%	6.83%	15.91%	12.50%	0.97%	9.00%
1997	100.6	9.03%	6.83%	15.86%	12.80%	0.83%	9.00%
1998	100.7	8.98%	6.83%	15.81%	13.10%	0.71%	9.00%
1999	100.8	8.93%	6.83%	15.76%	13.40%	0.60%	9.00%
2000	101.0	8.88%	6.83%	15.71%	13.70%	0.49%	9.00%
2001	101.1	8.83%	6.83%	15.66%	14.00%	0.39%	9.00%

State of Alaska PERS- TABLE 2
Financial Projections ('000 omitted)

Year	Investment Return 10.00% (nominal)			Salary Increases 6.04% (6.5/5.5 assumed)					Ending Asset Valuation		
	--Valuation Amounts on July 1--			-----Flow Amounts During Following 12 Months-----							
	Assets	Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Benefit Payments	Net Contribs		Investment Earnings	
1987	1,898,253	1,926,488	(28,235)	891,300	88,927	60,876	149,802	87,347	62,455	202,439	2,163,147
1988	2,163,147	2,164,620	(1,472)	945,135	87,583	64,553	152,136	95,459	56,677	229,964	2,449,709
1989	2,449,789	2,425,131	24,658	1,002,221	90,202	68,452	158,654	104,231	54,423	259,949	2,764,161
1990	2,764,161	2,709,914	54,247	1,062,755	93,026	72,586	165,612	113,715	51,897	292,832	3,108,689
1991	3,108,887	3,021,014	87,876	1,126,945	95,810	76,970	172,780	123,964	48,816	328,874	3,486,580
1992	3,486,580	3,360,639	125,941	1,195,013	98,537	81,619	180,157	135,036	45,120	368,347	3,900,047
1993	3,900,047	3,731,175	168,872	1,267,191	101,190	86,549	187,739	146,994	40,745	411,542	4,352,334
1994	4,352,334	4,135,199	217,135	1,343,730	103,747	91,777	195,523	159,904	35,619	458,776	4,846,729
1995	4,846,729	4,575,492	271,237	1,424,891	106,185	97,320	203,505	173,837	29,668	510,390	5,386,787
1996	5,386,787	5,055,060	331,727	1,510,954	108,479	103,198	211,677	188,869	22,808	566,753	5,976,348
1997	5,976,348	5,577,146	399,202	1,602,216	110,600	109,431	220,032	205,084	14,948	628,264	6,619,560
1998	6,619,560	6,145,251	474,309	1,698,990	112,518	116,041	228,559	222,568	5,991	695,353	7,320,904
1999	7,320,904	6,763,155	557,749	1,801,609	114,196	123,050	237,246	241,416	(4,169)	768,486	8,085,221
2000	8,085,221	7,434,938	650,283	1,910,426	115,598	130,482	246,080	261,728	(15,648)	848,166	8,917,739
2001	8,917,739	8,165,004	752,734	2,025,816	116,680	138,363	255,043	283,614	(28,571)	934,934	9,824,102
2002	9,824,102	8,958,105	865,997	2,148,175	117,395	146,720	264,116	307,189	(43,073)	1,029,377	10,810,405

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----				---As % of Assets---	
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings
1987	98.5	9.98%	6.83%	16.81%	9.80%	3.09%	10.00%
1988	99.9	9.27%	6.83%	16.10%	10.10%	2.46%	10.00%
1989	101.0	9.00%	6.83%	15.83%	10.40%	2.09%	10.00%
1990	102.0	8.75%	6.83%	15.58%	10.70%	1.77%	10.00%
1991	102.9	8.50%	6.83%	15.33%	11.00%	1.48%	10.00%
1992	103.7	8.25%	6.83%	15.08%	11.30%	1.22%	10.00%
1993	104.5	7.99%	6.83%	14.82%	11.60%	0.99%	10.00%
1994	105.3	7.72%	6.83%	14.55%	11.90%	0.78%	10.00%
1995	105.9	7.45%	6.83%	14.28%	12.20%	0.58%	10.00%
1996	106.6	7.18%	6.83%	14.01%	12.50%	0.40%	10.00%
1997	107.2	6.90%	6.83%	13.73%	12.80%	0.24%	10.00%
1998	107.7	6.62%	6.83%	13.45%	13.10%	0.09%	10.00%
1999	108.2	6.34%	6.83%	13.17%	13.40%	-0.05%	10.00%
2000	108.7	6.05%	6.83%	12.88%	13.70%	-0.18%	10.00%
2001	109.2	5.76%	6.83%	12.59%	14.00%	-0.31%	10.00%

State of Alaska PERS- TABLE 3
Financial Projections ('000 omitted)

Year	Investment Return 9.00% (nominal)			Salary Increases 5.04% (5.5/4.5 assumed)					Ending Asset		
	--Valuation Amounts on July 1--			-----Flow Amounts During Following 12 Months-----							Valuation
	Assets	Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Benefit Contribs	Net Investment Contribs	Earnings		
1987	1,898,253	1,926,488	(28,235)	891,300	88,927	60,876	149,802	87,347	62,455	181,341	2,142,049
1988	2,142,049	2,152,141	(10,092)	936,222	88,794	63,944	152,738	94,558	58,179	204,078	2,404,306
1989	2,404,306	2,397,803	6,503	983,407	90,161	67,167	157,328	102,274	55,053	228,602	2,687,962
1990	2,687,962	2,665,110	22,852	1,032,971	93,209	70,552	163,761	110,528	53,233	255,198	2,996,393
1991	2,996,393	2,955,832	40,561	1,085,033	96,360	74,108	170,468	119,354	51,114	284,111	3,331,619
1992	3,331,619	3,271,882	59,737	1,139,718	99,617	77,843	177,459	128,708	48,671	315,529	3,695,819
1993	3,695,819	3,615,323	80,495	1,197,160	102,980	81,766	184,746	138,871	45,875	349,656	4,091,350
1994	4,091,350	3,988,390	102,960	1,257,497	106,451	85,887	192,338	149,642	42,696	386,713	4,520,759
1995	4,520,759	4,393,494	127,265	1,320,875	110,031	90,216	200,246	161,147	39,100	426,937	4,986,795
1996	4,986,795	4,833,243	153,553	1,387,447	113,720	94,763	208,483	173,431	35,052	470,585	5,492,433
1997	5,492,433	5,310,453	181,980	1,457,374	117,519	99,539	217,058	186,544	30,514	517,936	6,040,833
1998	6,040,833	5,828,171	212,712	1,530,826	121,429	104,555	225,934	200,538	25,446	569,290	6,635,619
1999	6,635,619	6,389,690	245,929	1,607,979	125,448	109,825	235,272	215,469	19,803	624,971	7,280,393
2000	7,280,393	6,998,568	281,825	1,689,021	129,575	115,360	244,935	231,396	13,539	685,330	7,979,263
2001	7,979,263	7,658,654	320,609	1,774,148	133,810	121,174	254,984	248,381	6,604	750,747	8,735,613
2002	8,735,613	8,374,109	362,504	1,863,565	138,150	127,282	265,432	266,490	(1,058)	821,631	9,557,166

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----				---As % of Assets---	
		Employer Contribs	Employee Contribs	Total Benefit Contribs	Net Investment Contribs	Earnings	
1987	98.5	9.98%	6.83%	16.81%	9.80%	3.10%	9.00%
1988	99.5	9.48%	6.83%	16.31%	10.10%	2.57%	9.00%
1989	100.3	9.17%	6.83%	16.00%	10.40%	2.17%	9.00%
1990	100.9	9.02%	6.83%	15.85%	10.70%	1.88%	9.00%
1991	101.4	8.88%	6.83%	15.71%	11.00%	1.62%	9.00%
1992	101.8	8.74%	6.83%	15.57%	11.30%	1.39%	9.00%
1993	102.2	8.60%	6.83%	15.43%	11.60%	1.18%	9.00%
1994	102.6	8.47%	6.83%	15.30%	11.90%	0.99%	9.00%
1995	102.9	8.33%	6.83%	15.16%	12.20%	0.82%	9.00%
1996	103.2	8.20%	6.83%	15.03%	12.50%	0.67%	9.00%
1997	103.4	8.08%	6.83%	14.89%	12.80%	0.53%	9.00%
1998	103.6	7.93%	6.83%	14.76%	13.10%	0.40%	9.00%
1999	103.8	7.80%	6.83%	14.63%	13.40%	0.29%	9.00%
2000	104.0	7.67%	6.83%	14.50%	13.70%	0.18%	9.00%
2001	104.2	7.54%	6.83%	14.37%	14.00%	0.08%	9.00%

State of Alaska PERS- TABLE 4
Financial Projections ('000 omitted)

Year	Investment Return 10.00% (nominal)			Salary Increases 5.04% (5.5/4.5 assumed)							Ending Asset Valuation
	--Valuation Amounts on July 1--			-----Flow Amounts During Following 12 Months-----							
	Assets	Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	
1987	1,898,253	1,926,488	(28,235)	891,300	88,927	60,876	149,802	87,347	62,455	202,439	2,163,147
1988	2,163,147	2,152,141	11,006	936,222	85,385	63,944	149,329	94,558	54,771	229,869	2,447,787
1989	2,447,787	2,397,803	49,984	983,407	86,100	67,167	153,267	102,274	50,992	259,567	2,758,347
1990	2,758,347	2,665,110	93,237	1,032,971	86,635	70,552	157,187	110,528	46,659	291,959	3,096,966
1991	3,096,966	2,955,832	141,133	1,085,033	86,967	74,108	161,075	119,354	41,721	327,267	3,465,954
1992	3,465,954	3,271,882	194,073	1,139,718	87,070	77,843	164,913	128,788	36,125	365,731	3,867,810
1993	3,867,810	3,615,323	252,487	1,197,160	86,916	81,766	168,682	138,871	29,812	407,611	4,305,233
1994	4,305,233	3,988,390	316,843	1,257,497	86,475	85,887	172,362	149,642	22,720	453,185	4,781,138
1995	4,781,138	4,393,494	387,644	1,320,875	85,712	90,216	175,928	161,147	14,781	502,759	5,298,678
1996	5,298,678	4,833,243	465,435	1,387,447	84,591	94,763	179,354	173,431	5,923	556,657	5,861,258
1997	5,861,258	5,310,453	550,805	1,457,374	83,072	99,539	182,611	186,544	(3,933)	619,235	6,472,560
1998	6,472,560	5,828,171	644,389	1,530,826	81,111	104,555	185,667	200,538	(14,871)	678,875	7,136,564
1999	7,136,564	6,389,690	746,874	1,607,979	78,661	109,825	188,486	215,469	(26,983)	747,990	7,857,571
2000	7,857,571	6,998,568	859,003	1,689,021	75,669	115,360	191,029	231,396	(40,367)	823,027	8,640,230
2001	8,640,230	7,658,654	981,576	1,774,148	72,078	121,174	193,252	248,381	(55,129)	904,468	9,489,569
2002	9,489,569	8,374,109	1,115,460	1,863,565	67,827	127,282	195,108	266,490	(71,382)	992,836	10,411,023

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----				---As % of Assets---	
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings
1987	98.5	9.98%	6.83%	16.81%	9.80%	3.09%	10.00%
1988	100.5	9.12%	6.83%	15.95%	10.10%	2.38%	10.00%
1989	102.1	8.76%	6.83%	15.59%	10.40%	1.96%	10.00%
1990	103.5	8.39%	6.83%	15.22%	10.70%	1.60%	10.00%
1991	104.8	8.02%	6.83%	14.85%	11.00%	1.27%	10.00%
1992	105.9	7.64%	6.83%	14.47%	11.30%	0.99%	10.00%
1993	107.0	7.26%	6.83%	14.09%	11.60%	0.73%	10.00%
1994	107.9	6.88%	6.83%	13.71%	11.90%	0.50%	10.00%
1995	108.8	6.49%	6.83%	13.32%	12.20%	0.29%	10.00%
1996	109.6	6.10%	6.83%	12.93%	12.50%	0.11%	10.00%
1997	110.4	5.70%	6.83%	12.53%	12.80%	-0.06%	10.00%
1998	111.1	5.30%	6.83%	12.13%	13.10%	-0.22%	10.00%
1999	111.7	4.89%	6.83%	11.72%	13.40%	-0.36%	10.00%
2000	112.3	4.48%	6.83%	11.31%	13.70%	-0.49%	10.00%
2001	112.8	4.06%	6.83%	10.89%	14.00%	-0.61%	10.00%

State of Alaska TRS - TABLE 1
Financial Projections ('000 omitted)

Year	Investment Return 9.00% (nominal)			Salary Increases 6.04% (6.5/5.5 assumed)				Ending Asset Valuation			
	--Valuation Total Assets	Amounts on July 1-- Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Amounts During Following 12 Months-- Total Contribs		Benefit Payments	Net Investment Earnings	
1987	1,225,009	1,215,568	9,441	348,606	30,981	26,250	57,231	78,672	(21,441)	114,247	1,317,816
1988	1,317,816	1,306,100	11,715	369,662	32,693	27,725	60,418	80,539	(20,121)	123,035	1,420,730
1989	1,420,730	1,406,534	14,196	391,989	34,502	29,282	63,784	117,266	(53,483)	131,213	1,498,460
1990	1,498,460	1,481,548	16,912	415,666	36,412	30,926	67,338	137,433	(70,095)	137,776	1,566,141
1991	1,566,141	1,546,390	19,751	440,772	38,442	32,661	71,103	138,119	(67,016)	144,280	1,643,405
1992	1,643,405	1,620,744	22,661	467,394	40,603	34,494	75,097	153,207	(78,110)	151,047	1,716,342
1993	1,716,342	1,690,672	25,670	495,625	42,903	36,428	79,331	147,132	(67,801)	158,371	1,806,912
1994	1,806,912	1,778,164	28,748	525,561	45,351	38,471	83,822	153,540	(69,717)	166,803	1,903,997
1995	1,903,997	1,872,043	31,955	557,305	47,953	40,628	88,581	156,968	(68,388)	175,994	2,011,603
1996	2,011,603	1,976,301	35,303	590,966	50,717	42,904	93,621	175,007	(81,386)	185,529	2,115,747
1997	2,115,747	2,076,927	38,820	626,660	53,651	45,308	98,959	176,888	(77,929)	195,479	2,233,297
1998	2,233,297	2,190,819	42,478	664,510	56,769	47,845	104,614	187,376	(82,762)	206,317	2,356,852
1999	2,356,852	2,310,538	46,313	704,647	60,079	50,523	110,602	194,637	(84,034)	217,880	2,490,698
2000	2,490,698	2,440,363	50,335	747,207	63,594	53,351	116,944	191,111	(74,167)	230,913	2,647,444
2001	2,647,444	2,592,878	54,566	792,339	67,324	56,335	123,659	184,536	(60,877)	246,253	2,832,019
2002	2,832,019	2,773,740	58,279	840,196	71,276	59,486	130,762	193,912	(63,150)	261,585	3,033,254

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----			--As % of Assets--		
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Investment Earnings	
1987	100.8	8.89%	7.53%	16.42%	22.57%	-1.69%	9.00%
1988	100.9	8.84%	7.50%	16.34%	21.79%	-1.47%	9.00%
1989	101.0	8.80%	7.47%	16.27%	29.92%	-3.67%	9.00%
1990	101.1	8.76%	7.44%	16.20%	33.06%	-4.58%	9.00%
1991	101.3	8.72%	7.41%	16.13%	31.34%	-4.18%	9.00%
1992	101.4	8.69%	7.38%	16.07%	32.78%	-4.69%	9.00%
1993	101.5	8.66%	7.35%	16.01%	29.69%	-3.85%	9.00%
1994	101.6	8.63%	7.32%	15.95%	29.21%	-3.76%	9.00%
1995	101.7	8.60%	7.29%	15.89%	28.17%	-3.50%	9.00%
1996	101.8	8.58%	7.26%	15.84%	29.61%	-3.95%	9.00%
1997	101.9	8.56%	7.23%	15.79%	28.23%	-3.59%	9.00%
1998	101.9	8.54%	7.20%	15.74%	28.20%	-3.61%	9.00%
1999	102.0	8.53%	7.17%	15.70%	27.62%	-3.47%	9.00%
2000	102.1	8.51%	7.14%	15.65%	25.58%	-2.89%	9.00%
2001	102.1	8.50%	7.11%	15.61%	23.29%	-2.22%	9.00%
2002	102.1	8.48%	7.08%	15.56%	23.08%	-2.16%	9.00%

State of Alaska IRS - TABLE 2
Financial Projections ('000 omitted)

Year	Investment Return 10.00% (nominal)			Salary Increases 6.04% (6.5/5.5 assumed)					Ending Asset Valuation		
	--Valuation Total Assets	Amounts on Accrued Liability	July 1-- Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments		Net Contribs	Investment Earnings
1987	1,225,009	1,215,568	9,441	348,606	30,981	26,250	57,231	78,672	(21,441)	127,554	1,331,122
1988	1,331,122	1,306,100	25,022	369,662	31,450	27,725	59,175	80,539	(21,364)	138,700	1,448,458
1989	1,448,458	1,406,534	41,924	391,989	31,912	29,282	61,194	117,266	(56,072)	149,284	1,541,670
1990	1,541,670	1,481,548	60,122	415,666	32,377	30,926	63,302	137,433	(74,131)	158,169	1,625,708
1991	1,625,708	1,546,390	79,318	440,772	32,878	32,661	65,540	138,119	(72,579)	167,070	1,720,199
1992	1,720,199	1,620,744	99,455	467,394	33,431	34,494	67,925	153,207	(85,282)	176,357	1,811,274
1993	1,811,274	1,690,672	120,602	495,625	34,036	36,428	70,465	147,132	(76,667)	186,350	1,920,957
1994	1,920,957	1,778,164	142,793	525,561	34,700	38,471	73,171	153,540	(80,369)	197,682	2,038,270
1995	2,038,270	1,872,043	166,227	557,305	35,413	40,628	76,040	156,968	(80,928)	209,972	2,167,314
1996	2,167,314	1,976,301	191,013	590,966	36,174	42,904	79,078	175,007	(95,929)	222,772	2,294,157
1997	2,294,157	2,076,927	217,230	626,660	36,988	45,308	82,296	176,888	(94,592)	236,157	2,435,722
1998	2,435,722	2,190,819	244,903	664,510	37,863	47,845	85,708	187,376	(101,668)	250,667	2,584,721
1999	2,584,721	2,310,538	274,183	704,647	38,797	50,523	89,320	194,637	(105,317)	266,130	2,745,534
2000	2,745,534	2,440,363	305,171	747,207	39,793	53,351	93,143	191,111	(97,967)	283,383	2,930,950
2001	2,930,950	2,592,878	338,071	792,339	40,845	56,335	97,180	184,536	(87,356)	303,382	3,146,976
2002	3,146,976	2,773,740	373,236	840,196	41,935	59,486	101,421	193,912	(92,492)	325,808	3,380,292

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	---As % of Salaries---			---As % of Assets---		
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings
1987	100.8	8.89%	7.53%	16.42%	22.57%	-1.68%	10.00%
1988	101.9	8.51%	7.50%	16.01%	21.79%	-1.54%	10.00%
1989	103.0	8.14%	7.47%	15.61%	20.92%	-3.76%	10.00%
1990	104.1	7.79%	7.44%	15.23%	33.06%	-4.69%	10.00%
1991	105.1	7.46%	7.41%	14.87%	31.34%	-4.34%	10.00%
1992	106.1	7.15%	7.38%	14.53%	32.78%	-4.84%	10.00%
1993	107.1	6.87%	7.35%	14.22%	29.69%	-4.11%	10.00%
1994	108.0	6.60%	7.32%	13.92%	29.21%	-4.07%	10.00%
1995	108.9	6.35%	7.29%	13.64%	28.17%	-3.85%	10.00%
1996	109.7	6.12%	7.26%	13.38%	29.61%	-4.31%	10.00%
1997	110.5	5.90%	7.23%	13.13%	28.23%	-4.01%	10.00%
1998	111.2	5.70%	7.20%	12.90%	28.20%	-4.06%	10.00%
1999	111.9	5.51%	7.17%	12.68%	27.62%	-3.96%	10.00%
2000	112.5	5.33%	7.14%	12.47%	25.58%	-3.46%	10.00%
2001	113.0	5.15%	7.11%	12.26%	23.29%	-2.88%	10.00%
2002	113.5	4.99%	7.08%	12.07%	23.08%	-2.84%	10.00%

State of Alaska TRS - TABLE 3
Financial Projections ('000 omitted)

Year	Investment Return 9.00% (nominal)			Salary Increases 5.04% (5.5/4.5 assumed)				Ending Asset Valuation			
	--Valuation Total Assets	Amounts on July 1-- Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Benefit Payments		Net Investment Earnings		
1987	1,225,009	1,215,568	9,441	348,606	30,981	26,250	57,231	78,672	(21,441)	114,247	1,317,816
1988	1,317,816	1,301,220	16,596	366,176	31,910	27,463	59,382	80,497	(21,115)	122,990	1,419,691
1989	1,419,691	1,395,499	24,192	384,631	32,896	28,732	61,628	117,178	(55,550)	131,022	1,495,163
1990	1,495,163	1,462,895	32,267	404,016	33,913	30,059	63,972	137,293	(73,321)	137,321	1,559,162
1991	1,559,162	1,518,443	40,719	424,379	34,985	31,446	66,432	137,922	(71,490)	143,422	1,631,094
1992	1,631,094	1,581,589	49,505	445,768	36,120	32,898	69,017	152,947	(83,930)	149,628	1,696,791
1993	1,696,791	1,638,129	58,662	468,234	37,318	34,415	71,733	146,803	(75,070)	156,205	1,777,926
1994	1,777,926	1,709,757	68,169	491,833	38,587	36,002	74,589	153,135	(78,546)	163,679	1,863,059
1995	1,863,059	1,784,965	78,094	516,622	39,925	37,662	77,587	156,480	(78,893)	171,671	1,953,837
1996	1,953,837	1,867,378	88,459	542,659	41,337	39,397	80,734	174,427	(93,693)	179,730	2,041,875
1997	2,041,875	1,942,574	99,300	570,009	42,825	41,212	84,036	176,208	(92,172)	187,891	2,137,594
1998	2,137,594	2,026,997	110,596	598,738	44,395	43,109	87,504	186,587	(94,082)	196,562	2,235,093
1999	2,235,093	2,112,700	122,393	628,914	46,052	45,093	91,145	193,728	(102,583)	205,594	2,338,105
2000	2,338,105	2,203,401	134,704	660,611	47,799	47,168	94,967	190,072	(95,105)	215,619	2,458,619
2001	2,458,619	2,311,060	147,558	693,906	49,642	49,337	98,978	183,355	(84,377)	227,436	2,601,678
2002	2,601,678	2,440,643	161,035	728,879	51,579	51,605	103,184	192,577	(89,393)	240,665	2,752,951

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	--As % of Salaries--			--As % of Assets--		
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Investment Earnings	
1987	100.8	8.89%	7.53%	16.42%	32.57%	-1.69%	9.00%
1988	101.3	8.72%	7.50%	16.22%	21.98%	-1.55%	9.00%
1989	101.7	8.55%	7.47%	16.02%	30.47%	-3.82%	9.00%
1990	102.2	8.39%	7.44%	15.83%	33.98%	-4.81%	9.00%
1991	102.7	8.24%	7.41%	15.65%	32.50%	-4.49%	9.00%
1992	103.1	8.10%	7.38%	15.48%	34.31%	-5.05%	9.00%
1993	103.6	7.97%	7.35%	15.32%	31.35%	-4.33%	9.00%
1994	104.0	7.85%	7.32%	15.17%	31.14%	-4.32%	9.00%
1995	104.4	7.73%	7.29%	15.02%	30.29%	-4.14%	9.00%
1996	104.7	7.62%	7.26%	14.88%	32.14%	-4.69%	9.00%
1997	105.1	7.51%	7.23%	14.74%	30.91%	-4.42%	9.00%
1998	105.5	7.41%	7.20%	14.61%	31.16%	-4.54%	9.00%
1999	105.8	7.32%	7.17%	14.49%	30.80%	-4.49%	9.00%
2000	106.1	7.24%	7.14%	14.38%	28.77%	-3.97%	9.00%
2001	106.4	7.15%	7.11%	14.26%	26.42%	-3.34%	9.00%
2002	106.6	7.08%	7.08%	14.16%	26.42%	-3.34%	9.00%

State of Alaska TRS - TABLE 4
Financial Projections ('000 omitted)

Year	Investment Return 10.00% (nominal)			Salary Increases 5.04% (5.5/4.5 assumed)				Ending Asset Valuation			
	--Valuation Total Assets	Amounts on Accrued Liability	July 1-- Surplus* (Deficit)	-----Flow Total Salaries	Employer Contris	Employee Contris	Amounts During Following 12 Months-- Total Contris		Benefit Payments	Net Contris	Investment Earnings
1987	1,225,009	1,215,568	9,441	348,606	30,981	26,250	57,231	78,672	(21,441)	127,554	1,531,122
1988	1,331,122	1,301,220	29,903	366,176	30,676	27,463	58,139	80,497	(22,358)	138,650	1,447,414
1989	1,447,414	1,395,499	51,915	384,631	30,307	28,732	59,039	117,178	(58,140)	149,072	1,538,346
1990	1,538,346	1,462,895	75,451	404,016	29,880	30,059	59,939	137,293	(77,354)	157,659	1,618,651
1991	1,618,651	1,518,443	100,208	424,379	29,429	31,446	60,876	137,922	(77,046)	166,106	1,707,710
1992	1,707,710	1,581,589	126,121	445,768	28,964	32,698	61,861	152,947	(91,086)	174,755	1,791,380
1993	1,791,380	1,638,129	153,250	468,234	28,484	34,415	62,899	146,803	(83,905)	183,900	1,891,375
1994	1,891,375	1,709,757	181,617	491,833	27,991	36,002	63,993	153,135	(89,142)	194,137	1,996,370
1995	1,996,370	1,784,965	211,405	516,622	27,475	37,662	65,136	156,480	(91,344)	205,052	2,110,078
1996	2,110,078	1,867,378	242,700	542,659	26,932	39,397	66,329	174,427	(108,098)	216,153	2,218,133
1997	2,218,133	1,942,574	275,559	570,009	26,363	41,212	67,574	176,208	(108,634)	227,472	2,336,972
1998	2,336,972	2,026,997	309,974	598,738	25,774	43,109	68,883	186,587	(117,704)	239,497	2,458,765
1999	2,458,765	2,112,700	346,065	628,914	25,161	45,093	70,255	193,728	(123,473)	251,997	2,587,288
2000	2,587,288	2,203,401	383,888	660,611	24,526	47,168	71,694	190,072	(118,378)	265,746	2,734,657
2001	2,734,657	2,311,060	423,596	693,906	23,860	49,337	73,197	183,355	(110,158)	281,631	2,906,130
2002	2,906,130	2,440,643	465,487	728,879	23,145	51,605	74,749	192,577	(117,827)	299,252	3,087,555

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

Year	Funding Ratio	-----As % of Salaries-----				--As % of Assets--	
		Employer Contris	Employee Contris	Total Contris	Benefit Payments	Net Contris	Investment Earnings
1987	100.8	8.09%	7.53%	16.42%	22.57%	-1.68%	10.00%
1988	102.3	8.38%	7.50%	15.88%	21.98%	-1.61%	10.00%
1989	103.7	7.88%	7.47%	15.35%	30.47%	-3.90%	10.00%
1990	105.2	7.40%	7.44%	14.84%	33.96%	-4.91%	10.00%
1991	106.6	6.93%	7.41%	14.34%	32.50%	-4.64%	10.00%
1992	108.0	6.50%	7.38%	13.88%	34.31%	-5.21%	10.00%
1993	109.4	6.08%	7.35%	13.43%	31.35%	-4.56%	10.00%
1994	110.6	5.69%	7.32%	13.01%	31.14%	-4.59%	10.00%
1995	111.8	5.32%	7.29%	12.61%	30.29%	-4.45%	10.00%
1996	113.0	4.96%	7.26%	12.22%	32.14%	-5.00%	10.00%
1997	114.2	4.62%	7.23%	11.85%	30.91%	-4.78%	10.00%
1998	115.3	4.30%	7.20%	11.50%	31.16%	-4.91%	10.00%
1999	116.4	4.00%	7.17%	11.17%	30.80%	-4.90%	10.00%
2000	117.4	3.71%	7.14%	10.85%	28.77%	-4.45%	10.00%
2001	118.3	3.44%	7.11%	10.55%	26.42%	-3.91%	10.00%
2002	119.1	3.18%	7.08%	10.26%	26.42%	-3.94%	10.00%